

CHAPTER 2 – LITERATURE REVIEW

2.1. Framework of Thinking



Figure 2. 1 Framework of Thinking
Source: Author, 2021

2.2. Theory of Planned Behaviour

Over many years, the Theory of Planned Behaviour (TPB) is widely known and used in different fields before, including human social behaviour, marketing and health-related behaviour (Shen et al., 2019). Icek Ajzen proposed this theory in 1985 and has been modified to analyse individuals with pro-environmental behaviour (Ajzen, 2002). This theory was also derived from the Theory of Reasoned Action (TRA) that gives the analytical framework for understanding and predicting the social behaviour and / or intentions of an individual. To be more specific, the Theory of Reasoned Action (TRA) assumes that behavioural intention, which is the predecessor variable to behaviour, is a feature of important information or assumptions about the probability that engaging to a behaviour will lead to specific result. Furthermore, Fishbein and Ajzen (1975) stated that the predecessor variables to behavioural intention is divided into two sets that are distinctive, they are behavioural and normative. The behavioural beliefs are the influence of an individual's attitude toward performing the behaviour, whereas the normative beliefs are discussing on the influence of individual's subjective norm or the external pressure, regarding performing the behaviour. Thus, it is believe that the attitudes and subjective norms can affect intentions and / or behaviour (Madden et al., 1992).

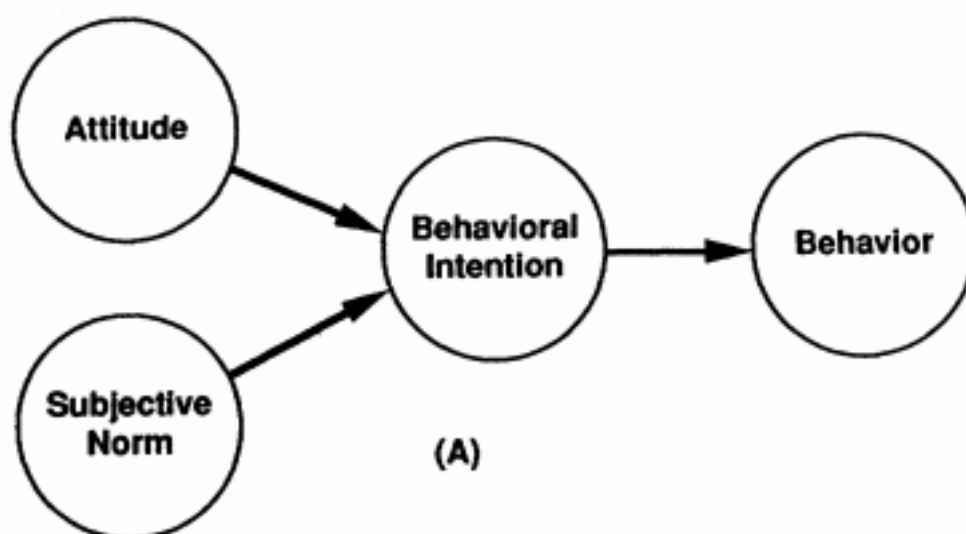


Figure 2. 2 Model of Theory of Reasoned Action.
 Source: A Comparison of the Theory of Planned Behaviour and the Theory of Reasoned Action (Madden et al., 1992)

However, there are certain limitations to TRA that can cause it to overlook the volitional control (Ajzen, 1985, 1991). Ajzen, therefore, suggested that the idea to expand the theory of reasoned action by adding the variables such as perceived behavioural control as a determinant of behavioural intention (Madden et al., 1992). Moreover, along the years after the publication of “*From Intentions to Actions: A Theory of Planned Behaviour*” by Icek Ajzen (1985); in 1991, Ajzen published “*Theory of Planned Behaviour*” (Ajzen, 1991), which marked as the maturation of this theory (Shen et al., 2019). Different from its origin theory, the TRA suggest that a person’s behaviour is determined by their intention to execute the behaviour, and is based by two factors, attitude and subjective norms, while as the Theory of Planned Behaviour (TPB) suggest that individual behaviour is primarily determined by intention, which mainly influenced by three factors; attitude, subjective norms and perceived behavioural control (Ajzen, 1991).

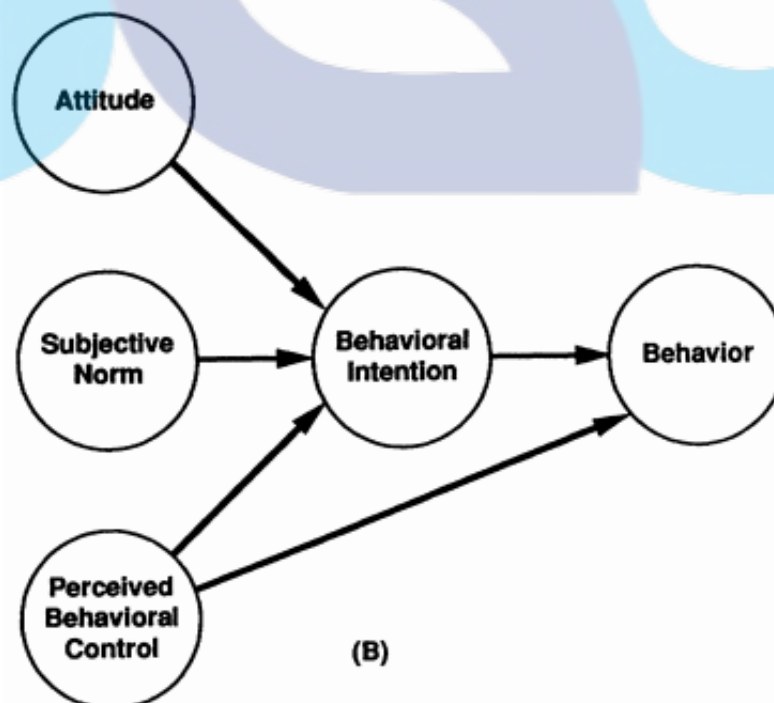


Figure 2. 3 Models of the theory of planned behaviour
 Source: A Comparison of the Theory of Planned Behaviour and the Theory of Reasoned Action (Liobikiene et al., 2016)

The TPB extends the conceptual framework from the Theory of Reasoned Action. This is achieved by including beliefs of having the necessary resources and opportunities to perform a certain behaviour. Individuals assumed that with more resources and opportunities they possessed, the greater their perceived behaviour control. Moreover, TPB has been used in the areas of environmental behaviour research (Liobikiene et al., 2016), energy efficiency and emission reduction behaviour (Y. Wang et al., 2016), e-waste recycling behaviour (Z. Wang et al., 2016), sustainable consumption behaviour (Joshi & Rahman, 2019), environmental innovation (Long et al., 2017) and low-carbon consumption (Mi et al., 2019). This means that the TPB model has been studied throughout pro-environmental behaviour. Nevertheless, there are still few studies that implement the TPB model with behavioural intention of household waste sorting that correlate with the problems occurring in the corrugated box industry.

Waste sorting aids in the prevention and reuse of waste, as well as increasing resource efficiency by implementing reverse logistics from consumers to producers, promoting cleaner manufacturing and sustainable growth (Y. Wang et al., 2016). It is important to investigate the factors that influence behavioural intentions towards household waste sorting and to develop recommendations for fostering waste sorting (Q. Wang et al., 2020), especially in Indonesia. According to Shen et al (2019), although previous researches have validated the TPB's effectiveness and applicability, the TPB has been criticized for making inadequate assumptions about individual intention and action. Hence, additional variables should be used to increase the TPB's interpreting ability (Tonglet, Phillips, & Read, 2004). As stated by Ellen et al (1991) and Zsóka (2008), individuals with a high level of environmental concern will have a deep desire to protect the environment. As a result, they added up environmental concern in the basic mode of TPB and confirmed that environmental concern has a significant impact on one's pro-environmental behaviour. Additionally, Gold (2011) and Kaiser & Scheutle (2003) claimed that a model that incorporates moral obligation would help predict an individual's willingness and actions, which should be included in TPB as well. Therefore, with these additional variables expanded in the TPB model, it will

increase the efficiency of TPB to analyse and predict the intention and behaviour in household waste sorting.

2.2.1. Attitude

Ajzen has many definitions to describe individual's attitude, in one of his journals, "Attitude Structure and Behavior", he defines attitude is an "*individual's disposition to respond favourably or unfavourably to an object, person institution, or an even, or to any other discriminable aspect of the individual's world*" (Ajzen, 1989). Moreover, refer it back to Ajzen's previous journal, "*From Intentions to Actions: A theory of Planned Behaviour*", Ajzen (1985) refer it as "*the individual's positive or negative evaluation of performing behaviour*".

McEachan et al (2011) also similarly refer to attitude as the positive or negative attitude when engaging in specific behaviour. Moreover, it was also mentioned by Chan (1998), that personal attitude was based upon the individual's perception on whether the action is right or wrong, good or bad, beneficial, attractive, friendly, and interesting to the person; moreover, it was the most important determinant of behaviour (McEachan et al., 2011).

In a study based from Tonglet et al (2004), noted that pro-environmental attitudes have a significant influence on people engaging in waste recycling. Thus, residents would be more likely to recycle waste if they are mindful and knowledgeable regarding the environmental harm created by the municipal waste (Chan, 1998). In the context of pro-environment behaviour, individual attitudes toward environmental sustainability represent personal norms towards environmental protection (Garcés et al., 2002). Moreover, according to a study conducted in the UK, having a pro-recycling attitude is the most important factor in recycling behaviour (Davis et al., 2006). Apart from other variables such as environment concern and past recycling experience, the availability of appropriate facilities and knowledge influences the individual's attitude towards waste sorting.

Therefore, this research will be using the theory of attitude by Chan (1998). It provides a clear understanding on what attitude is, as he defines attitude as an individual's perception on whether the action is right or wrong, good or bad, important, attractive, friendly, and interesting to the person. There are some indicators that identify attitude further, such as, wise, meaningful, good idea and beneficial. These indicators will be used to see if attitude has a positive influence toward behavioural intention of household waste sorting.

2.2.2. Subjective Norms

In the Theory of Planned Behaviour, it was mentioned that one of the extrinsic influences affecting the household waste sorting is the subjective norm, which emphasizes the influence of others that are important to the individuals (Park & Ha, 2014). Those extrinsic influences, such as friends and family, will promote individual waste recycling (Park & Ha, 2014). Formerly, subjective norms were derived from unit leaders, or people in authorities such as government workers and managers and other authorities who provide essential references and examples for a person to consider when making decisions (McEachan et al., 2011). Individuals' feelings about the social pressure they experience about a particular action are captured by subjective norms. Furthermore, consumers who have positive subjective norms against a given action are more likely to have a positive behaviour intention than those who do not (Han & Kim, 2010). Moreover, Gao et al (2017) similarly refer to a subjective norm as to an individual's perception of social pressure from people who are important to him or her, who believe that a specific individual should or should not do something. Based on previous studies, it was shown that with greater external social pressure, the stronger the willingness of an individual to participate in a specific behaviour (Vinning & Ebreo, 1990).

A subjective norm, according to Ajzen and Fishbein (1980), "*is the sum of normative belief and each individual's motivation to comply*". Normative belief refers to the individual's belief of those who consider them as important, in the individual's viewpoint. According to Fischbein and Ajzen journal (1975), subjective norms comprised of: the expectation of the views of other influential people in the views of

those specific individuals, normative belief and the extent to which an individual is tend to agree with these viewpoints, as well as the motivations for compliance. This determinant factor of behavioural intention, has been used in several studies of household waste sorting behaviour. Some of the findings, subjective norm became the most influential factor that influence behavioural intention of household waste sorting (Li et al., 2018; Liao et al., 2018; Shen et al., 2019; B. Zhang et al., 2019).

Therefore, for the purpose of this study will be using the definition of subjective norms from Gao et al (2017), as it provides a clear and a constructive understanding on what subjective norms are. The indicators that will define subjective norms further are the people who are important to the individuals, family, and friends' suggestions on doing household waste sorting, and families and friends are doing household waste sorting.

2.2.3. Perceived Behavioural Control

Previously, Fishbein and Ajzen (1975) mentioned that the theory of planned behaviour evolved from the theory of reasoned action, which was believed that almost all human social behaviour is under volitional influence and can therefore be predicted solely on the basis of intentions. Afterwards, the perceived behavioural control construct was added in an effort to address contexts in which people might lack full volitional control over the actions of interest (Ajzen, 2002). Therefore, when perceived behavioural control is correct, it offers valuable information about the actual influence an individual has over a situation, and thus, can be used as a new direct predictor of actions (Ajzen, 1985).

According to Ajzen (1991), the concept of perceived behavioural control is most compatible with the concept of perceived self-efficacy from Bandura's (1977), which was "*the person's concerned with judgements of how well one can execute courses of action required to deal with prospective situations*". According to these studies, people's action is heavily motivated by their belief in their abilities to perform something. Additionally, when a person does seem to have the ability and the desire to commit a behaviour, rather than either one or neither, the behaviour is more likely

to occur (Zhou et al., 2013). Self-efficacy beliefs can impact activity selection, planning, effort spent during performance, as well as thinking patterns and emotional responses (Bandura, 1982). Perceived behavioural control includes two aspects, which is, control belief and perceived intensity. The control belief are mostly based on variables that they consider to discourage or encourage their role on waste sorting, such as time, resources and other resource constraints, while the perceived intensity referred to as the self-efficacy that young people perceive from waste sorting, or their self-confidence in their ability to engage in waste sorting (Bandura, 1982, 1991). Therefore, for this research, the definition from Ajzen (1991) will be used as it mentioned perceived behavioural control in a constructive and detailed manner. There are some indicators that will evaluate the influence of perceived behavioural control towards behaviour intention such as relevant resources of time, opportunity to perform household waste sorting behaviour, and effortless.

2.2.4. Environmental Concern

There are some pro-environmental behaviours that can be found, such as the reduction of garbage, reduction the use of a car and reduction the use of gas. Although the determinants mentioned above are supposed to influence different kinds of behaviour that relate to pro-environmental move, some of these determinants may have no impact towards pro-environmental behaviour, while some of the determinants may have only some of the pro-environmental behaviour (Fujii, 2006). In order to better comprehend pro-environmental actions, previous studies have emphasized the significance of concern for the environment (Fransson & Garling, 1999). Environmental concern has traditionally been viewed by previous researchers as an assessment of, or attitude toward, one's behaviour, or the behaviour of individuals that has an understanding of environmental implications (Ajzen, 1989; Takala, 1991). As a result, it appears that environmental concern may refer to either a specific attitude that specifically determines the intention, or a more general attitude. Previously, Stern (1992) has identified four distinct meaning of the value orientations. The first of these is concerned with the climate, which reflects a modern way of thinking also known as New Environmental Paradigm (NEP) (Dunlap & Van Liere, 1978). The second value orientation, it was mentioned that environmental concern

links to anthropocentric altruism; meaning that people seem to care about environmental sustainability, mainly because they believe that a polluted environment poses a threat to people's health (Black et al., 1985). Moreover, as the third value orientation, Stern (1992) mentioned that environment concern reflects self-interest. This means that environmental deterioration acts as a perceived personal threat to individuals since they feel environmentally responsible. Lastly, Stern (1992) described environmental concern as a view of religious belief or post-materialistic values.

Although previous research refers to environmental attitude as a specific attitude that determines the intention, an empirical study conducted by Fuji (2006) suggested that environmental concern appears to have a significant impact on pro-environmental action or behavioural intent. Through the findings, Fuji (2006) found that environmental concern is significant towards some pro-environmental behaviours, such as the reduction of garbage. In addition, according to previous research, it was shown that environmental concerns have a direct impact on consumers' attitude toward environmentally friendly products or services that resulted in the influence of their purchase intention (Han et al., 2009; Hartmann & Apaolaza-Ibáñez, 2012). Similarly, this study expects that individuals with high concern for the environment will motivate them to do waste sorting in their own houses.

In addition, some researchers have their own interpretations of environmental concern such as Crosby (1981) defines environmental concern as a "*positive attitude toward environmental protection*". Examining consumer views on environmental issues and how these views are expressed in their green purchases can be a good starting point for better understanding the receptiveness of the green movement in a country. Dunlap and Jones (2002), referred to an environmental concern as "*one's attitudes toward specific environmental topics that are distinct in some ways, but are ultimately reflections of a single, broad environmental attitude*". Additionally, Shen et al (2019) described environmental concern as a holistic and systematic approach to environmental issues, meaning that individuals who cares about the environment are likely to take pro-environmental steps since they realize that their actions could impact the environment.

Therefore, this study will be using the definition based from Dunlap and Jones (2002). As it was mentioned, Dunlap and Jones described environmental concern as “one’s attitude toward specific environmental topics that are distinct in some ways, but are ultimately reflections of a single, broad environment attitude”. The indicators defining environmental concern include environmental issues related to human survival, human activities affecting the environment, concern about the environment, and environmental protection. These indicators will be used as a tool to gather the data indicating whether environmental concerns have a positive influence towards behavioural intention.

2.2.5. Personal Moral Obligation

Many studies have extended TPB by adding additional variables, such as personal moral norms or personal moral obligation, to evaluate its efficacy (Y. C. Huang et al., 2014; Shi et al., 2017). According to Schwartz (1977), personal norms can be defined as “*one’s beliefs about oneself and can be felt like a moral obligation to exhibit righteous behaviour*”. In certain research, the personal moral obligation is used as a social pressure metric, similar to the subjective norm; however, it emphasizes aspects of individual internalization and emotion (Bamberg et al., 2007; Shi et al., 2017). It refers to a sense of responsibility that people have, which motivates them to take certain actions (S. Wang et al., 2016). Moreover, individual self-expectations and attitudes toward particular behaviour are derived from personal norms and values, and personal moral obligation represents those expectations and attitudes (B. Zhang et al., 2019). Unlike subjective norms, which are primarily influenced by external social pressure, personal moral obligation is primarily influenced by internal pressures such as duty and obligation. If one’s acts are in line with personal moral obligation, the individual will feel proud or satisfied; otherwise, the individual will feel guilty (Onwezen et al., 2013). In the original TPB model, personal moral obligation can also significantly increase the proportion of perception variance (Bamberg et al., 2007; Ru et al., 2019).

In the research of norm activation theory (NAM) by Schwartz (1977), the theory was used to specifically explain the environmentally conscious decision-making processes of both airline and restaurant customers. Afterwards, Han and Hyun (2017) suggested

that the theory promotes the idea that an individual's personal moral obligation is the primary motivator for pro-social intention and actions. In addition, a recent study found that consumers who are predominantly young seem to have clear personal moral obligation that guide their actions toward becoming environmentally responsible (Nguyen et al., 2018).

Problem awareness, ascribed responsibility, and personal moral norms are the components of the norm activation theory (Schwartz, 1977). This theory's framework proposes that a person's personal moral norm is the deciding factor of pro-social intention and behaviour, and that this personal moral norm is triggered by an issue recognition and ascribed obligation relationship, which is referred to as a norm activation procedure (Bamberg et al., 2007; Steg & de Groot, 2010). Moreover, according to Gkargkavouzi et al (2019) and Klockner (2013), personal moral obligation is an intrinsic indicator of pro-social conduct. It refers to a person's sense of duty to carry out a specific action based on the individual's own principles, which ultimately benefits the common good (Han & Hyun, 2017). Additionally, Moser (2015) also denotes personal moral obligation as the moral standard and obligations that people consider when engaging in the concerning behaviour.

Therefore, for this study, the theory personal moral obligation will be using the definition from Han and Hyun (2017), which refers to a person's sense of duty to carry out a specific action based on the individual's own principles, which ultimately benefits the common good. The indicators that can be used to identify what personal moral obligation are the person's sense of duty to conduct household waste sorting, responsibility to conduct waste sorting, having principles in line with conducting household waste sorting, and guilt for not being involved in household waste sorting. These indicators will be used further to identify whether personal moral obligation positively influences behavioural intention.

2.2.6. Behavioural Intention

The original TPB predicts real behaviour using behavioural intention as a model. As it was mentioned above, there are three factors that influence the behavioural intention, those are attitude, subjective norm and perceived behavioural control (Ajzen, 1991). It

was mentioned before that the desire of the person to carry out the behaviour is an important key in the TPB. Moreover, intentions are thought to control the motivational variables that influence a specific behaviour. Intention is the indicator for individuals of how willing they are to perform the behaviour. In summary, the stronger the desire to engage in a particular behaviour, the more likely it is that the behaviour will be carried out (Ajzen, 1991). There are few definitions that describe behavioural intention. Fishbein and Ajzen (1975), refer to behavioural intention as “*a person's subjective probability that he will perform some behaviour*”. Additionally, Anderson (1983) also defines behaviour intention as people's expectations or intentions, for their own actions in a given situation. To have in mind goals that the individual wants to do, use or to offer and many more, can also be defined as intention according to Webster (1972). In addition, Warshaw and Davis (1985), define behavioural intention as “*the degree to which a person has formulated conscious plans to perform or not perform some specified future behaviour*”.

According to the TPB, people may have the intention to participate in a behaviour because they have a favourable evaluation of the behaviour, there is a social pressure, and they feel they have the potential to do so (Ajzen, 2005). Therefore, the more positive attitude and subjective norm, when combined with perceived behavioural control, it can increase a person's desire to engage in a specific behaviour. Moreover, previous researches have conducted research on the influencing factors towards behavioural intention of waste sorting, the findings were proven that factors such as attitude, subjective norms, perceived behavioural control, and additional factors added in TPB model such as environmental concern and personal moral obligation, were positively influenced behavioural intention (Liao et al., 2018; Shen et al., 2019; B. Zhang et al., 2019).

Behavioural intention is the dependent variable for this study, because as stated before by TPB, people may have the intention to participate in a behaviour because they have a favourable evaluation of the behaviour, there is a social pressure, and they feel they have the potential to do so. This means that the driving factors influencing behavioural intention are the attitude, subjective norms as the social pressure, and perceived behavioural control as the potential willingness to do the behaviour, and

additional driving factors such as environmental concern and personal moral obligation that influence behavioural intention of household waste sorting behaviour.

2.3. Previous Studies

No.	Research Title	Author(s)	Variables	Findings
1.	Factors Influencing Young People's Intention toward Municipal Solid Waste Sorting	Lin Shen Hongyun Si Lei Yu Haolun Si (2019)	- Attitude - Subjective Norms - Perceived Behavioural Control - Environmental Concern - Personal Moral Obligation - Behavioural Intention	Subjective norm, personal moral obligation, and perceived behavioural control in this research, was proven to have a positive impact on young people's intention toward municipal waste sorting. However, attitude and environmental concern have no significant positive impact on young people's intention toward municipal

				waste sorting.
2.	Extending theory of planned behaviour in household waste sorting in China: the moderating effect of knowledge, personal involvement, and moral responsibility	Yixuan Wang Xingle Long Liang Li Qinglin Wang Xiping Ding Saijia Cai (2020)	<ul style="list-style-type: none"> - Environmental regulation - Attitude toward household waste sorting - Subjective norm - Perceived behavioural control - Knowledge - Involvement - Moral obligation - Intention for household waste sorting - Behaviour for household waste sorting 	Attitude and perceived behavioural control toward household waste sorting has a significant effect towards intention for household waste sorting. Moral obligation also seems to have a positive impact on household waste sorting behaviour. Subjective norm, however, has an insignificant effect on behavioural intention for household waste sorting.
3.	From intention to action: How do personal	Bin Zhang Kee-hung Lai	<ul style="list-style-type: none"> - Waste sorting behaviour 	The path from perceived

	attitudes, facilities accessibility, and government stimulus matter for household waste sorting?	Bo Wang Zhaohua Wang (2019)	<ul style="list-style-type: none"> - Behavioural intention - Subjective norm - Personal attitude - Facilities accessibility - Government stimulus - Perceived behavioural control 	<p>behavioural control to behaviour intention seems to be not significant. Also, subjective norms to behavioural intention are significant, but only at a 10% level. Personal attitudes towards behavioural intention, however, are statistically significant.</p>
4.	Psychological and Conditional Factors Influencing Staff's Takeaway Waste Separation Intention: an Application of the Extended Theory of Planned Behaviour	Chuanhui Liao Dingtao Zhao Shuang Zhang (2018)	<ul style="list-style-type: none"> - Environmental concern - Attitude - Subjective norm - Perceived behavioural control - Separation intention - Facilities and 	<p>Environmental concern in this study became the factors affecting attitude, subjective norms, and perceived behavioural control.</p>

			Time pressure as the conditional factors	Moreover, environmental concern has a significant impact towards attitude, subjective norms, and perceived behavioural control. Attitude and perceived behavioural control, both positively impact behavioural intention, but subjective norms did not have a positive impact towards behavioural intention.
5.	From intention to behaviour: Comprehending residents' waste sorting intention and behaviour formation process	Shanyong Wang Jinpeng Wang Shu Yang Jun Li Kaile Zhou (2020)	- Waste sorting knowledge - Attitudes - Perceived behavioural control - Subjective	It was stated in the research that personal moral norms have a significant and positive effect

			<ul style="list-style-type: none"> norms - Personal moral norms - Waste sorting intention - Incentive measures - Waste sorting behaviour 	<p>towards waste sorting intention. It was also stated that attitudes, subjective norms and perceived behavioural control are positively significant towards waste sorting intention.</p>
6.	<p>Determinants of residents' e-waste recycling behaviour intentions: Evidence from China</p>	<p>Zhaohua Wang Dongxue Guo Xiaomeng Wang (2016)</p>	<ul style="list-style-type: none"> - Environmental awareness - Convenience of recycling - Attitude towards recycling - Income - Norms of publicity - Perceptions of informal recycling - Other demographic variables - Cost of 	<p>According to the results of the study, environmental awareness, attitude towards recycling, perceptions of informal recycling, income, and cost of recycling are significantly affected e-waste</p>

			recycling	recycling behaviour intentions.
7.	Young people's behaviour intentions towards reducing PM2.5 in China: Extending the theory of planned behaviour	Xingjun Ru Haibo Qin Shanyong Wang (2019)	<ul style="list-style-type: none"> - Affect - Subjective norm - Personal moral norm - Perceived behavioural control - Behavioural intention 	<p>It was shown from the result of the research that attitude, perceived behavioural control, subjective norm and personal moral obligation are all directly affect behavioural intention. However, in the study, the authors are trying to correlate subjective norm and attitude, and the result was indirectly affected.</p>
8.	Recycling attitude and behaviour in university campus: a case study in	Calvin Wan Ronnie Cheung	<ul style="list-style-type: none"> - Attitude - Subjective norm 	<p>In this research, the findings</p>

	<p>Hong Kong</p>	<p>Geoffrey Qiping Shen (2012)</p>	<ul style="list-style-type: none"> - Perceived behavioural control - Consequence awareness - Moral norm - Convenience - Behavioural intention - behaviour 	<p>regarding the factors influencing behavioural intention were that the coefficient of the path from attitude to behavioural intention was significant with low effect size, the path from subjective norm to behavioural intention was significant, in addition, perceived behavioural control to behavioural intention was also significantly correlated. Lastly, the path from moral norm to</p>
--	------------------	------------------------------------	---	--

				behavioural intention was also significantly correlated.
9.	Application of the Extended Theory of Planned Behaviour Model to Investigate Purchase Intention of Green Products among Thai Consumers	Kamonthip Maichum Surakiat Parichatnon Ke-Chung Peng (2016)	<ul style="list-style-type: none"> - Environmental concern - Environmental knowledge - Attitude towards purchasing green products - Subjective norm - Perceived behavioural control - Purchase intention for green products 	Regarding the results of the testing of factors that influence the behavioural intention; attitude, subjective norms and perceived behavioural control were found to have a significant positive effect on purchase intention of green products. Moreover, environmental concern was also found to be positively influence purchase intention for

				green products.
10.	Predicting green product consumption using theory of planned behavior and reasoned action	Justin Paul Ashwin Modi Jayesh Patel (2016)	<ul style="list-style-type: none"> - Attitude - Subjective norm - Perceived behavioural control - Environmental concern - Purchase intention 	According to the study, environmental concern was found to have an impact on attitude, subjective norm, perceived behavioural control and purchase intention for green products.

Table 2. 1 List of Previous Studies
Source: Author, 2021

2.4. Study Differences

Description	Previous Research	This Research
Variable Relationship	Focuses on how factors such as attitude, subjective norms, perceived behavioural control, environmental concern and personal norm influenced the behavioural intention of young people in China, specifically in Hebei province towards municipal solid waste sorting (Shen et al., 2019).	Focuses on how attitude, subjective norm, perceived behavioural control, environmental concern, personal moral obligation can influence behavioural intention of household waste sorting in

	<p>Focuses on how personal attitudes, facilities accessibility, government stimulus can affect the household waste sorting (B. Zhang et al., 2019).</p>	Jabodetabek, Indonesia.
	<p>Focuses on how environmental concern can influence attitude, subjective norm and perceived behavioural control that can influence the waste separation intention, with the additional factors of facilities and times pressure that can also influence the separation intention (Liao et al., 2018).</p>	
	<p>Focuses on how environmental concern and knowledge can influence attitude towards purchasing green products, subjective norms and perceived behavioural control that can affect the purchase intention for green products (Maichum et al., 2016).</p>	
Context of the journal	<p>Household waste sorting (Liao et al., 2018; Shen et al., 2019; B. Zhang et al., 2019).</p> <p>Green Products (Maichum et al., 2016).</p>	Household waste sorting behaviour affecting the corrugated box industry
Location	<p>China (Liao et al., 2018; Shen et al., 2019; B. Zhang et al., 2019).</p> <p>Thailand (Maichum et al., 2016).</p>	Jabodetabek, Indonesia

*Table 2. 2 Comparison of Previous Studies with the Current Studies
Source: Author, 2020*

2.5. Research Model

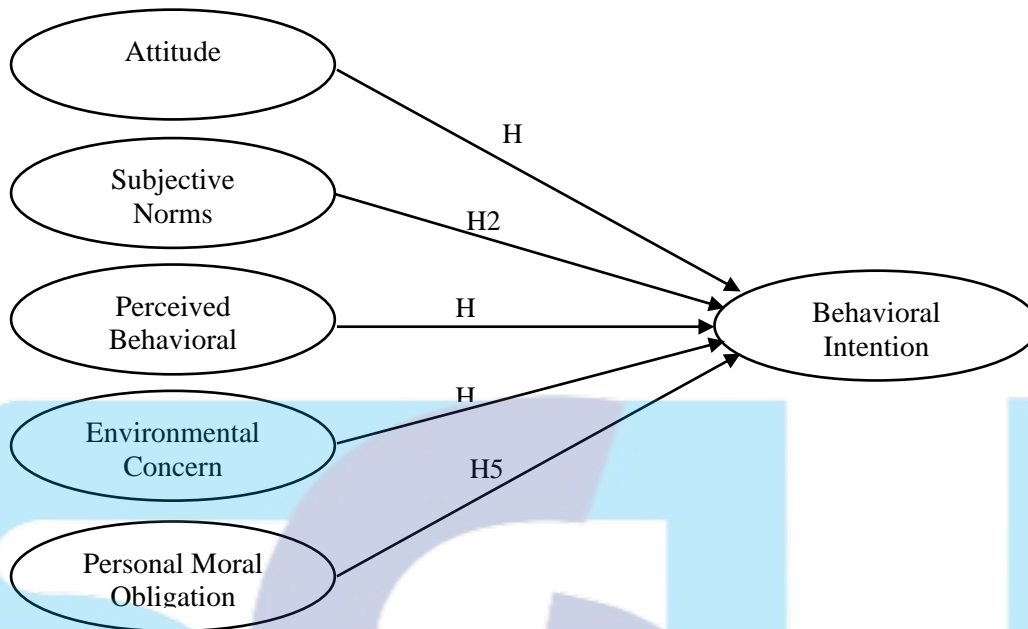


Figure 2. 4 Research Model
Source: Shen et al (2019)

2.6. Hypothesis Development

Based on the previous research that was conducted by Shen et al (2019), attitude has no significant positive impact towards waste sorting. In the findings, it was mentioned that although young people recognize the importance of garbage sorting, their intention has not significantly improved. However, other researchers found otherwise, where human behaviour is driven by attitude. According to TPB; the more favourable one considers a particular behaviour, the more likely one plans to participate in it (Y. Zhang et al., 2014). Hu et al (2018) specify that attitude towards waste sorting is positively correlated with waste reduction and recycling intentions. Zhang et al (2019) also discovered that residents' intention to engage in waste sorting activities are influenced by their attitudes, and that resident's waste sorting management intentions are a direct indicator of waste management behaviour. Moreover, several empirical studies have shown from past researches that attitude is the most influential and the

antecedent of human behavioural intention in a variety of contexts, including employee information exchange (Bock et al., 2005), household energy savings (Abrahamse & Steg, 2009), decreased vehicle usage for commuting (Abrahamse et al., 2009), and paying for green electricity (Hansla et al., 2008). Similarly, we can expect attitude toward waste sorting to influence positively toward behavioural intention of household waste sorting. As a result, it's reasonable to assume that residents are more likely to sort their waste when they understand the benefits of waste sorting and have a positive attitude toward waste sorting.

H0#1: Attitude does not positively influence Behavioural Intention.

H1#1: Attitude does positively influence Behavioural Intention.

The subjective norm factor examines all that surrounds the individual, including social norms, peer pressure, cultural norms, and group belief (Fornara et al., 2011). From previous study, the findings of Liao et al (2018) showed that subjective norm and waste separation intention is not statistically significant. The reason was because the Chinese government had initiated a campaign regarding solid waste separation that had failed over the past 17 years of implementation. In another journal, however, according to Ramayah et al (2012), subjective norms are the significant predictor for recycling behaviour. Moreover, based on several previous studies, individual recycling behaviour is strongly affected by social norms, which are derived from important others' perceptions or actions toward recycling behaviour (Botetzagias et al., 2015; Mondéjar-Jiménez et al., 2016). Moreover, Hu et al (2018) also indicated that the subjective norm towards waste management is positively associated with intentions for waste reduction and recycling. Shen et al (2019) has also proven in his studies regarding the factors influencing young people's intentions toward municipal waste sorting, that subjective norm significantly and positively affect people's intention toward sorting waste. As a result, subjective norms give a positive direct impact towards behavioural intention of household waste sorting, when the social norms also give a positive influence toward the individuals regarding sorting wastes in their household.

H0#2: Subjective Norms does not positively influence with Behavioural Intention.

H1#2: Subjective Norms does positively influence with Behavioural Intention.

The third factor of TPB is perceived behavioural control (PBC). PBC, as it was mentioned before in this study, refers to a person's perception of how simple or difficult it is to display a certain behaviour. It is thought to represent both prior knowledge and expected obstacles (Ajzen, 1991). Furthermore, PBC is also considered to have a direct impact toward household waste sorting behaviour (Mondéjar-Jiménez et al., 2016). In addition, the relative importance of attitude, subjective norm and perceived behavioural control in predicting intention is likely to differ across behaviours and contexts (Razali et al., 2020). Nonetheless, previous researches have proven the importance and significance of PBC as a factor in influencing behavioural intention, such as, Karim Ghani et al (2013), where the researcher studied regarding the influencing factors of participation in source separation of food waste and Oztekin et al (2017), where the researchers studied regarding the factors predicting recycling behaviour. Moreover, Hu et al (2018) also indicated that perceived behavioural control towards waste management is positively associated with intentions for waste reduction and recycle.

H0#3: Perceived Behavioural Control does not positively influence with Behavioural Intention.

H1#3: Perceived Behavioural Control does positively influence with Behavioural Intention.

Previous studies from Rex & Bauman (2017) and P. Wang et al (2014) mentioned that, people with high level of environmental concern have been shown to be more likely to respond to environmental problems and engage in pro-environmental behaviours. According to Maichum et al (2016), it was confirmed that environmental concern has a positive impact on consumers' willingness to purchase environmentally friendly products. Moreover, based on the findings from Paul et al (2016), environmental concern was found to be significant and positive towards purchase intention. Similarly, we can expect environmental concern to have a positive influence towards behavioural intention of household waste sorting.

H0#4: Environmental Concern does not positively influence with Behavioural Intention.

H1#4: Environmental Concern does positively influence with Behavioural Intention.

According to Ru et al (2019) and Wan et al (2012), they added personal moral obligation to TPB to analyse people's intention of reducing PM2.5 and takeaway waste. In their findings, it was shown that personal moral obligation has a significant positive impact towards pro-environmental behaviour intention. Moreover, Shen et al (2019) also include personal moral obligation to TPB in order to find the factors influencing young people's intention towards municipal waste sorting. In the findings, it was shown that personal moral obligation and perceived behavioural control are the most critical factors influencing young people's intention toward municipal waste sorting.

H0#5: Personal Moral Obligation does not positively influence with Behavioural Intention.

H1#5: Personal Moral Obligation does positively influence with Behavioural Intention.