

MASTER'S THESIS

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Antecedents of consumers' intention to purchase
secondhand clothing: An empirical study.

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Abstract

Little research has been conducted to understand secondhand clothing shopping behavior of consumers. Extant research extensively focused on beliefs, motivation, and psychographic characteristics, but little has been known about factors influencing consumers' purchase intention in the context of secondhand clothing specifically.

This study examined factors that impact consumers' intention to purchase secondhand clothing. Adopting the theory of planned behavior (TPB) as the conceptual framework, with additional antecedents, an extended research model was proposed and tested. According to the research model, consumers' intentions are influenced by attitude, subjective norm, perceived behavioral control (PBC), environmental awareness, past behavior, price sensitivity, and self-congruity. Control variables were also included in the research model.

A self-administrative questionnaire, based on measures from previous research, was employed to collect data from 146 students currently studying at Nord university. To analyze the data and test the hypothesis, SPSS, a data analysis software, was employed.

The result of multiple regression analysis exhibited good explanatory power, accounting for 56.5% of the variance in consumers' secondhand clothing purchase intention. The results showed that subjective norm, past behavior, price sensitivity, and self-congruity are the major antecedents of students' intention to purchase secondhand clothing. Attitude was not statistically significant on intention in the proposed research model; however, attitude had some effect on intention in the analysis of the original TPB model. In contrast, PBC and environmental awareness did not show any statistically significant impact on purchase intention.

Both theoretical and practical contributions are made by the study's findings. The paper discusses the limitations and provides recommendations for future research.

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1.0 Introduction

1.1 Background and research question

The market for used apparel is expanding and becoming more popular with consumers all around the world. Secondhand clothing refers to items such as t-shirts, shirts, Jeanes, jackets, blazers, etc. that have already been used and owned by someone else before the present user (Cervellon et al., 2012; Chipambwa et al., 2016), which results in giving those goods a second life. The most common places to purchase secondhand clothing includes thrift shops, flea markets, secondhand shops, vintage shops, auctions, garage sales (Rucker et al., 1995), and the Internet (Charbonneau, 2008). According to Guiot and Roux (2010, p. 356) secondhand shopping is defined as “the acquisition of secondhand objects through methods and places of exchange that are generally distinct from those for new products.” An article in Forbes in 2017 stated that secondhand apparel was an \$18 billion industry, which was expected to become a \$33 billion industry by 2021 with an 11% forecasted growth per year (Kestenbaum, 2017). According to that report, the growth of the online resale market was higher compared to the traditional thrift store market, where the growth rate for both the online and offline was 35% and 8% per year, respectively (Kestenbaum, 2017).

Over the decades, a lot of research regarding secondhand buying has been conducted that was mostly related to understanding consumer motives (Guiot & Roux, 2010; Raszka & Borusiak, 2020), their psychographic characteristics (Yan et al., 2015) for consuming secondhand clothing. Researchers argue that the motivations to consume secondhand clothing are complex and generated by many factors, which include critical, economic, hedonic (Guiot & Roux, 2010; Roux & Guiot, 2008), and fashion reasons (Ferraro et al., 2016).

Herjanto et al. (2016) conducted a study by examining the content of 131 academic articles that had been published, and the results showed that research on secondhand clothing had a strong focus on topics like consumption behavior, textile disposal behavior, and issues related to secondhand clothing trading. Despite the amount of research, scholars postulate that the number of studies on secondhand clothing is still limited (Herjanto et al., 2016). Moreover, past research lacks generating conclusive findings regarding the consumption of secondhand clothing (Herjanto et al., 2016; Yan et al., 2015). Previously, used clothing was considered a low-level fashion (Herjanto et al., 2016), and numerous studies found that the dominant

reason for buying clothing from the flea market was the lower price. Further, studies argued that secondhand clothing was one of the best options for economically deprived consumers (Roux & Guiot, 2008).

Recently, researchers argued that sustainability and the trends to consume green products play a vital role in buying secondhand clothing (Kang et al., 2013; Maichum et al., 2016). A study conducted by Yan et al. (2015) on college students in the USA found that environmentally concerned students shopped from secondhand clothing stores. Furthermore, the findings indicate that those students were more price-sensitive and inclined to dress vintage-style and environmentally friendly by consuming old apparel. Another study by Xu et al. (2014) also found that environmental concerns significantly influence consumer willingness to purchase secondhand clothing. On the contrary, a study identified secondhand buying as an impulse behavior that may not be very rational nor driven by economic reasons (Parguel et al., 2017).

As not much research has used students as samples for the study, I, therefore, studied students at Nord university to understand their intention in terms of buying secondhand clothing. The findings of this study can show which factors affect their purchase intention of secondhand clothing.

Relatively few studies were done using the theory of planned behavior to understand consumers' intentions to buy secondhand products and fashion items (Seo & Kim, 2019; Xu et al., 2014). The existing studies mainly focused on items, such as shoes, bags, clothing and consumer apparel, accessories, and a variety of secondhand products. However, little is known regarding the factors that influence consumers' intention to buy secondhand clothing (Herjanto et al., 2016).

Though the fast fashion industry offers a variety of fashionable new clothing as cheaply as secondhand clothing, the secondhand clothing industry is gaining popularity among consumers (Kestenbaum, 2017). A clear understanding of the consumers of secondhand clothing can be obtained by studying the factors that influence their intention to prefer secondhand clothing over new cheap clothing. It is reasonable to say that consumers buy used clothing not for its lower price only, but for many other reasons. The industry of secondhand clothing is expanding day by day however, it is still small compared to the new clothing industry (the fast fashion industry). Therefore, it is essential to have a comprehensive

understanding of the behavioral intentions of both current and potential customers in order to draw in a substantial customer base.

While there has been much research on consumers' motivation and beliefs regarding secondhand products, clothing, and consumer apparel, it still requires more research to know the factors that influence the intention of consumers to purchase secondhand clothing specifically. Therefore, to fill the gap in the literature, this paper aims to investigate the research question: “*What are the antecedents of consumers' intention to purchase secondhand clothing?*” I studied consumers' intentions to purchase secondhand clothing within the next 6 months.

Among many theories to predict human behavior, the theory of reasoned action (Ajzen & Fishbein, 1980), and the theory of planned behavior (TPB) (Ajzen, 1991) is widely used. Among all these theories, I adopted the theory of planned behavior as the main theoretical framework for this research as it is simple and well-established to predict human behavior with accuracy (Ajzen, 1991). According to this theory, attitudes toward behavior, subjective norm, and perceived behavioral control can predict intention. Eventually, perceived behavioral control along with intention, the actual behavior can be measured. Ajzen (1991) stated that it is possible to include other determinants in the theory in addition to the current variables if those newly added determinants can capture a significant proportion of the variance in intention or behavior. Thus, I included four more independent variables in the model they are environmental awareness, past behavior, price sensitivity, and self-congruity to predict consumers' intention to purchase used clothing.

Data were gathered from students at Nord University utilizing a survey questionnaire in order to address the research question. By studying the factors that influence the secondhand clothing purchasing intention of consumers, this paper makes both theoretical and practical contributions. First, very little is known from previous studies about factors that influence consumers' intention to buy secondhand clothing using Ajzen (1991) TPB (Herjanto et al., 2016). Thus, this thesis provides new insights to understand consumers' behavioral intention toward buying secondhand clothing. Second, by integrating four additional concepts with the original model, this paper has extended the original TPB model and provides sufficient information to explain consumers' intention behind purchasing used clothing quite accurately and contributes new insights to the theory. Third, this study provides information to

practitioners and marketers to understand why consumers prefer to buy secondhand clothing and which factors impact their intention towards consuming used clothes. Hence, marketers can segment customers accurately and adopt marketing strategies accordingly. Meanwhile, marketers will be able to meet demands, enhance consumer satisfaction, and maximize profitability.

A total of five chapters make up this master's thesis. The background of the study, the knowledge gap, the research question, and contributions was presented in Chapter one, "introduction". Chapter two, "theoretical framework" consists of the background of the theory, hypotheses development, and the proposed research model for the study. Chapter three, "methodology" focuses on research design, sampling design, measurements, and methods of data analysis. The data analysis and significant findings connected to the theoretical framework of the research are presented in chapter four, "analysis and discussion". The conclusion, implications, and recommendations for research are presented in Chapter five. Chapter five expresses the conclusion, implications, and recommendations for future research.

2.0 Theoretical framework

2.1 Theory of planned behavior

The theory of planned behavior (Ajzen, 1991) is a continuation of the theory of reasoned action (TRA), (Ajzen & Fishbein, 1980) which was designed to anticipate human behavior that is under volitional control. In terms of the theory of reasoned action, it is assumed that human beings usually behave sensibly, and they consider available information before the execution of their actions (Ajzen, 1985). As a result, intention is seen as the primary factor in determining whether or not to take a certain action. According to the TRA, attitude toward the behavior and subjective norm are the factors that determine intention. The applicability of the TRA was questioned as the theory was able to predict a quite narrow range of behaviors (Armitage & Conner, 1999). Many behaviors are not under volitional control and some behaviors are difficult to execute even though they are under volitional control. To overcome this limitation of the TRA and to predict human behavior more accurately, perceived behavioral control was added later by Ajzen (1985).

According to the TPB, behavior is a function of salient information or beliefs that are pertinent to the behavior. These salient beliefs are the prevailing determinants of a person's intentions and actions, and according to this theory, salient beliefs can be distinguished by behavioral beliefs, normative beliefs, and control beliefs (Ajzen, 1991). Here, behavioral beliefs influence attitudes toward the behavior, while normative beliefs form the underlying determinants of subjective norms, and control beliefs serve as the foundation of perceived behavioral control.

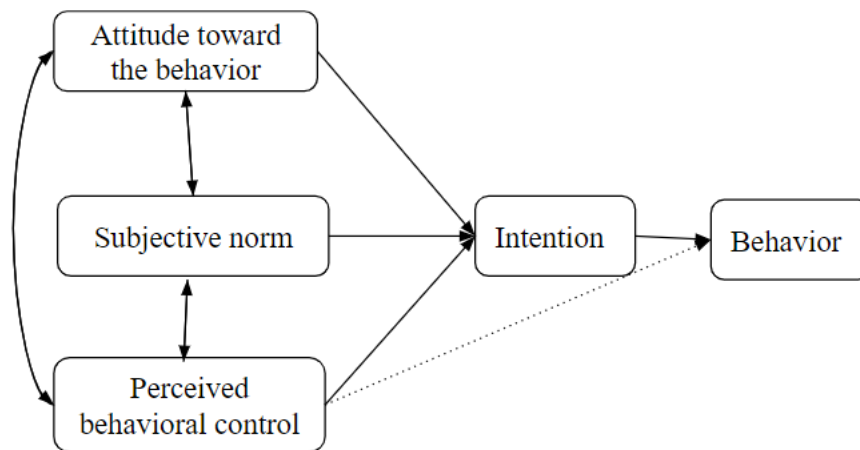


Figure 1: The model of the theory of planned behavior. (Ajzen, 1991, p. 182)

This model generally shows that attitudes toward a behavior, subjective norm, and perceived behavioral control can all be used to predict a person’s intention to engage in that action. Eventually, perceived behavioral control along with intention, the actual behavior is measured (Ajzen, 1985). The theory of planned behavior is one of the most widely used models of predicting cognitive antecedents of behavior (Ajzen, 1985, 1991) which, according to Armitage and Conner (2001), explains almost 27% of the different variances in behavior across studies.

The first determinant of intention is attitude toward the behavior which is defined as “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” (Ajzen, 1985, p. 188). It is the positive or negative perception regarding performing the behavior in question (Ajzen & Fishbein, 1980).

The second determinant of intention is subjective norm which is defined as “the perceived social pressure to perform or not to perform the behavior” (Ajzen, 1991, p. 188). Human behavior is mostly influenced by self-interest, it is however often affected by social pressure. Generally, people intend to perform a behavior when their overall evaluation is positive and when they believe that important others in their life expect them to do so (Ajzen, 1985).

The third determinant of intention is Perceived behavioral control which refers to “the perceived ease or difficulty of performing the behavior” (Ajzen, 1991, p. 188). In other

words, PBC is the extent to which people have control to perform a behavior or they think themselves capable of performing the behavior.

The importance of attitude, subjective norm, and perceived behavioral control to predict an intention might vary across behaviors and consumers. A person is more likely to carry out a behavior when the intention is stronger (Ajzen, 1991; Fishbein & Ajzen, 2010).

The TPB can be explained with a detailed definition of the behavior of interest in terms of its target, the action involved, the context in which it occurs, and the time frame (TACT) (Ajzen, 2002). Each of these elements is recommended to use at varying levels of specificity or generality (Ajzen, 2002). The research question of this thesis "...to purchase secondhand clothing within the next 6 months" can be described by the TACT elements. According to the TACT elements, an action is purchasing, the time element is the next 6 months, while target and context are aggregated as secondhand clothing to increase the generality. Ajzen mentioned that it is possible to make the question general by aggregating the target and context (Ajzen, 2002). Moreover, he did not recommend any specific timeframe that must be followed during constructing a research problem. Research found that behavioral intention is more predictable when using a timeframe of the distant future (Cooke & French, 2011). According to the finding of that research, the time frame of 3 months, 6 months, and 5 years have the maximum time frame effects on salient belief generation (Lutchyn & Yzer, 2011). A time frame of 3 months is too short, similarly, a time frame of 5 years is too long to predict the consumers' intention to purchase secondhand clothing. Thus, I decided to use a "6 months" time frame in my research.

2.2 Intention to purchase secondhand clothing

In the TPB, an individual's intention is a central factor to perform or not performing a given behavior. Attitude towards the behavior, subjective norm, and PBC are determinants of intention to perform a certain behavior (Ajzen, 1991). People with a stronger intention to purchase clothes from secondhand stores are more likely to perform the behavior. Intentions and behavior are supposed to have a strong relationship if they are measured in the same context and timeframes (Fishbein and Ajzen, 1975). According to Ajzen (1991) an individual's intention to perform a certain behavior will be stronger if attitude and subjective

norm with respect to that behavior are favorable, and that individual possesses greater perceived behavioral control.

A number of investigators have begun to rely on the theory of planned behavior in their attempts to predict and understand people's intention to engage in various activities (Ajzen, 1991).

2.3 Attitude towards the behavior and intention

According to Fishbein and Ajzen (1975) people develop attitudes toward any objects based on the belief they hold. Generally, people form beliefs by associating certain attributes with the object, and those beliefs are linked with some outcomes that are considered positive or negative by the person. Consequently, people prefer behavior that may result in desirable outcomes and have unfavorable attitudes towards behavior that may lead to undesirable consequences.

Attitude toward the behavior can be described as a person's overall view of purchasing secondhand clothing as pleasant or unpleasant (Ajzen, 1991). If consumers believe secondhand clothing is good for them then they will show a positive attitude toward secondhand clothing. There are many factors that influence attitudes toward the behavior in question such as knowledge (Kang et al., 2013). Consumer knowledge is one of the key factors that impact in the decision-making process (Kang et al., 2013). Consumers with product-specific knowledge change their consumption towards the sustainable options available because their attitudes are influenced by their knowledge (Bator & Cialdini, 2000). There is evidence to suggest that a person's attitude and their purpose to do something are related. Empirical evidence has shown that positive attitudes have an effect on purchasing products such as organic food (Arvola et al., 2008), shoes (Wang, 2014), luxury products (Zhang & Kim, 2013), and counterfeit goods (Kim & Karpova, 2010). In terms of purchasing green products, attitude plays a significant role to predict consumer intention (Maichum et al., 2016). In addition, Park and Choo (2012) found that attitude of consumers toward secondhand goods has a significant effect on purchase intention. Similarly, Guiot and Roux (2010) argued that negative attitude was one of the reasons to reject the consumption of secondhand clothing. That is because some people do not consider purchasing secondhand clothing as those clothes have been worn by previous owners, which leads to thoughts of unsanitary and poor product quality (Roux & Guiot, 2008).

The theory argues that consumers with favorable attitudes toward secondhand clothing would more likely intend to purchase secondhand clothing within the next 6 months. Based on this assumption, the following hypothesis is deduced:

Hypothesis 1: There is a positive relationship between attitude towards secondhand clothing and intention to purchase secondhand clothing within the next 6 months.

2.4 Subjective norm and intention

Normative beliefs refer to the approval or disapproval of performing any behavior from the referent group of individuals (Ajzen, 1985). Social pressures influence the perception and decision-making of individuals in a given situation (Childers & Rao, 1992). In regard of, decisions making, people think about many factors, and reference groups are one of the most important among all the factors. Regarding thrift shopping, consumers think what their reference group will think about consuming used clothes. Ajzen (1991) stated that salient referents are friends, parents, family members, boyfriend/girlfriend.

Research found that purchasing intention is related to the positive or negative opinion of reference groups, and consumers showed greater buying intention of organic cotton clothing when their referents had opinioned positively (Han & Chung, 2014; Kang et al., 2013).

Subjective norm positively impacts the intention to purchase green products (Eze & Ndubisi, 2013; Maichum et al., 2016), and it results in decreasing sustainable product consumption due to negative peer pressure. Connell (2010) argued that negative peer pressure decreases sustainable product purchases. According to Xu et al. (2014) intention to purchase used products increases based on peer pressure, and consuming secondhand products is considered a socializing process. Purchasing secondhand clothing consists of a higher degree of social risk because used clothing may have some defects or could be outdated, which leads individuals to consider the opinion of reference groups that may affect the intention to purchase (Seo & Kim, 2019).

The theory argues that a consumer who decides to purchase secondhand clothing believes the opinions or recommendations from important others are essential. Therefore, it is feasible to assume that the greater the consumers prioritize the opinion of important others, the stronger

the intention will be to purchase secondhand clothing within the next 6 months. Based on this argument, I deduced the following hypothesis:

Hypothesis 2: There is a positive relationship between subjective norm and intention to purchase secondhand clothing within the next 6 months.

2.5 Perceived behavioral control and intention

Perceived behavioral control is the function of control beliefs that ultimately determine intention and action of the behavior in question. PBC stands for a person's perception of the opportunities and resources that are needed to carry out an action (Ajzen, 1991).

When someone believes he has access to required resources and opportunities, then the chance of performing the behavior is greater. Behavioral control measures a person's controllability and self-efficacy in terms of performing a behavior (Ajzen, 1991). Together with perceived behavioral control and behavioral intention, behavioral achievement can be directly predicted, according to the TPB.

As a result, the intention to consume secondhand clothing depends on the individual's perception of ease or difficulty to perform. If a consumer has enough resources, physical or mental ability, and opportunity he is more likely to participate in the consumption of secondhand clothing even if many internal or external factors arise to hamper (or facilitate) the performance. Ajzen (1991) stated that control belief might be related to past experience but usually, this control belief is influenced by information gathered from friends and family or by other factors that increase or reduce the perceived difficulty of performing the behavior in question. Moreover, a higher level of PBC is associated with a greater possibility to perform the behavior (Ajzen, 1991).

The assumption is that consumers may believe they have opportunity and necessary resources and face minimal barriers to buy used clothing. Therefore, it was reasonable to expect that within the next 6 months, consumers will be intended to buy used clothing. Based on this argument, I deduced the following hypothesis:

Hypothesis 3: There is a positive relationship between perceived behavioral control and intention to purchase secondhand clothing within the next 6 months.

2.6 Environmental awareness and intention

Environmental awareness can be defined as a person's attitude regarding the environmental consequences of human behavior where people consider protecting the environment by reacting in a certain manner (Ham et al., 2016). In the literature, the same concept is described by different names such as environmental awareness, environmental consciousness, and environmental concern (Ham et al., 2016). In this paper, environmental awareness and environmental concerns are used interchangeably. For many years, environmental concerns have attracted the attentions of marketers. The concepts of sustainability, sustainable consumption, and sustainable marketing are related to environmental awareness for marketing practitioners and academics. In consumer behavior research, the environment has been taken into consideration to find out any link between environmental awareness and consumer behavior. Xu et al. (2014) argues that individuals are influenced by their environmental values.

Environmental awareness is one of the key factors of secondhand product consumption as modern consumers are environmentally careful, so they presume to "save the world" by consuming recycled products or secondhand apparel (Grasso et al., 2000). Many studies support the view that people with a higher level of environmental consciousness are more likely to engage in environmentally friendly behaviors (Czap & Czap, 2010). Similarly, Wang et al. (2018) found a positive impact of environmental concern on intention to visit green hotels. Consumers regardless of age purchase products from secondhand stores due to environmental motivations (Connell, 2011). Yan et al. (2015) found in their study that environmentally conscious college students prefer to purchase secondhand clothing. Additionally, Yan et al. (2015) state that consumers concerned about sustainability tend to purchase from thrift stores more than their counterparts.

According to the theory, a consumer who has a higher degree of environmental awareness would more likely intend to purchase secondhand clothing within the next 6 months.

Therefore, I deduce the following hypothesis:

Hypothesis 4: There is a positive relationship between environmental awareness and intention to purchase secondhand clothing within the next 6 months.

2.7 Past behavior and intention

One of the best predictors of any form of future behavior is past behavior (Ajzen, 1991). A repeated performance of any behavior is assumed to become a habit because prior judgment is not required to perform that particular behavior in the future. A habit is defined as “an action or behavioral tendency that is enacted spontaneously, with little conscious, awareness or reflection, in response to a set of associated conditions or contextual cues” (Hagger et al., 2018, p. 86). It is assumed that repeated performance of behavior results in the establishment of a habit (Ajzen, 1991); thus, it can be said that if consumers purchase secondhand clothing once or more than that, it may convert into a habit. Joshi and Rahman (2015) argue that buying behavior of a consumer is influenced by their habit or experiences gained previously. If a consumer develops a habit of buying new products and never consuming used products, then that consumer will be hindered by his or her habit of not consuming used products in the future (Tsakiridou et al., 2008; Vermeir & Verbeke, 2006). Herjanto et al. (2016) stated that past experience influences a consumer’s secondhand clothing consumption significantly. Herjanto et al. (2016) argued that past behavior plays a significant role to influence the intention of buying secondhand goods. Further, Triandis (1980) said that based on the frequency of past performance, future behavioral intention is possible to predict and past experience determines the desire to buy secondhand clothing further (Xu et al., 2014).

Here, it is assumed that a consumer will have a stronger intention to purchase secondhand clothing in the future if that consumer performs a similar behavior in the past. Based on this, I deduce the following hypothesis:

Hypothesis 5: There is a positive relationship between past behavior and intention to purchase secondhand clothing within the next 6 months.

2.8 Price sensitivity and intention

Price sensitivity refers to the degree to which consumers desire to purchase a product (Anglin et al., 1994) and how they deem to pay the price for that product (Goldsmith & Newell, 1997). Consumers who are high in price sensitivity will have lesser demand if the price increase, and vice versa (Goldsmith & Newell, 1997). Secondhand products such as clothing and price are deeply connected in terms of making decisions for consumption. Secondhand

products have always been a preferable option for economically deprived consumers since good quality products can often be purchased by expending very little money (Roux & Guiot, 2008). Frugal consumers intend to buy secondhand products because those products are cheap and most are of good quality (Cervellon et al., 2012; Roux, 2006). Frugality refers to “a unidimensional consumer lifestyle trait characterized by the degree to which consumers are both restrained in acquiring and in resourcefully using economic goods and services to achieve longer-term goals” (Lastovicka et al., 1999, p. 88). Research support that frugality is a key driver for consumers to engage in secondhand goods (Cervellon et al., 2012). Many college students prefer buying clothes from secondhand stores due to cheaper prices (Yan et al., 2015). Roux and Guiot (2008) argue that price sensitivity heavily influences the consumption of used goods. Raszka and Borusiak (2020) found in their study that lower price is the most common motivating factor to buy used products.

Here, it is assumed that price sensitive consumers prefer buying secondhand clothing because the price of used clothing is cheaper than that of new clothing which allows them to expend less money to buy a piece of cloth. Therefore, it is reasonable to assume that if a consumer is very price-sensitive then the intention of that consumers will be stronger to purchase secondhand clothing within the next 6 months. Based on that, the following hypothesis is deduced:

Hypothesis 6: There is a positive relationship between price sensitivity and intention to purchase secondhand clothing within the next 6 months.

2.9 Self-congruity and intention

In consumer behavior study, self-congruity theory explain the self-image congruence idea, which is based on symbolic or value-attributes of products (Sirgy, 1986). Consumer self-concept researchers theorized that “a product-user image interacts with the consumer's self-concept generating a subjective experience referred to as self-image/product-image congruity or self-image congruence or self-congruity for short” (Sirgy et al., 1997, p. 229). Consumer self-concept and self-image was used interchangeably in the study conducted by Sirgy et al. (1997). Moreover, Sirgy (1986) stated that self-identity is a core part of self-congruity. Self-congruity is defined by Sirgy (1986) as the degree of match between the consumer’s self-image and brand, store, product, or user image. According to self-congruity theory, people

choose products to express themselves and validate perceptions of their own self-image. As a result, they are likely to choose products that reflect their own perceived characteristics and self-image. When measuring self-congruity, two major constructs such as self-image and brand-user image are involved (Sirgy, 1982). A self-concept is “the totality of the individual’s thoughts and feelings having reference to himself as an object” (Rosenberg, 1979, p. 7). Self-concept consists of four self-image components, such as an actual self-image, an ideal self-image, an actual social self-image, and an ideal social self-image (Sirgy, 1982). Actual self-image refers to how consumers perceive themselves, whereas ideal self-image refers to how consumers would prefer to perceive themselves. Actual social self-image is how consumers are being seen by others, while ideal social self-image is how consumers would like to be seen by others (Sirgy, 1982). While actual social self-image and ideal social self-image are public constructs, actual self-image and ideal self-image are private constructs. A consumer is more likely to buy a product when the product image and consumer self-image matched (Shin et al., 2016).

In terms of thrift shopping, if consumers think consuming used clothing reflects their self-image; then they tend to purchase secondhand clothing. In several studies self-concept is used as an additional variable of TPB in food industry (Shin et al., 2016) and in tourism (Cifci, 2021). However, little research has been done using self-concept and/or self-congruity as an extended variable in the context of understanding consumer decision-making (Aguirre-Rodriguez et al., 2012), purchase intention of cosmetics (Khalid et al., 2018), organic cotton apparel (Hustvedt & Dickson, 2009), sustainable consumption (Kang et al., 2013; Legere & Kang, 2020) in addition to the determinants of TPB.

The consumption of secondhand clothing according to Herjanto et al. (2016) represents an individual's self-identity and commitment. Based on any circumstances, self-identity can become a crucial determinant of consuming secondhand clothing (Rothstein, 2005).

On the basis of the theory, I assume that consumers with strong positive self-congruity toward secondhand clothing will have a greater intention to purchase secondhand clothing within the next 6 months. Therefore, I developed the following hypothesis:

Hypothesis 7: There is a positive relationship between self-congruity and intention to purchase secondhand clothing within the next 6 months.

2.10 The proposed research model

The aim of the thesis is to determine consumers' intention to purchase secondhand clothing within the next 6 months. Hence, the research question of the thesis is as follows:

- *What are the antecedents of a consumer's intention to purchase secondhand clothing?*

A research model is developed to investigate this research question. The research model is illustrated below

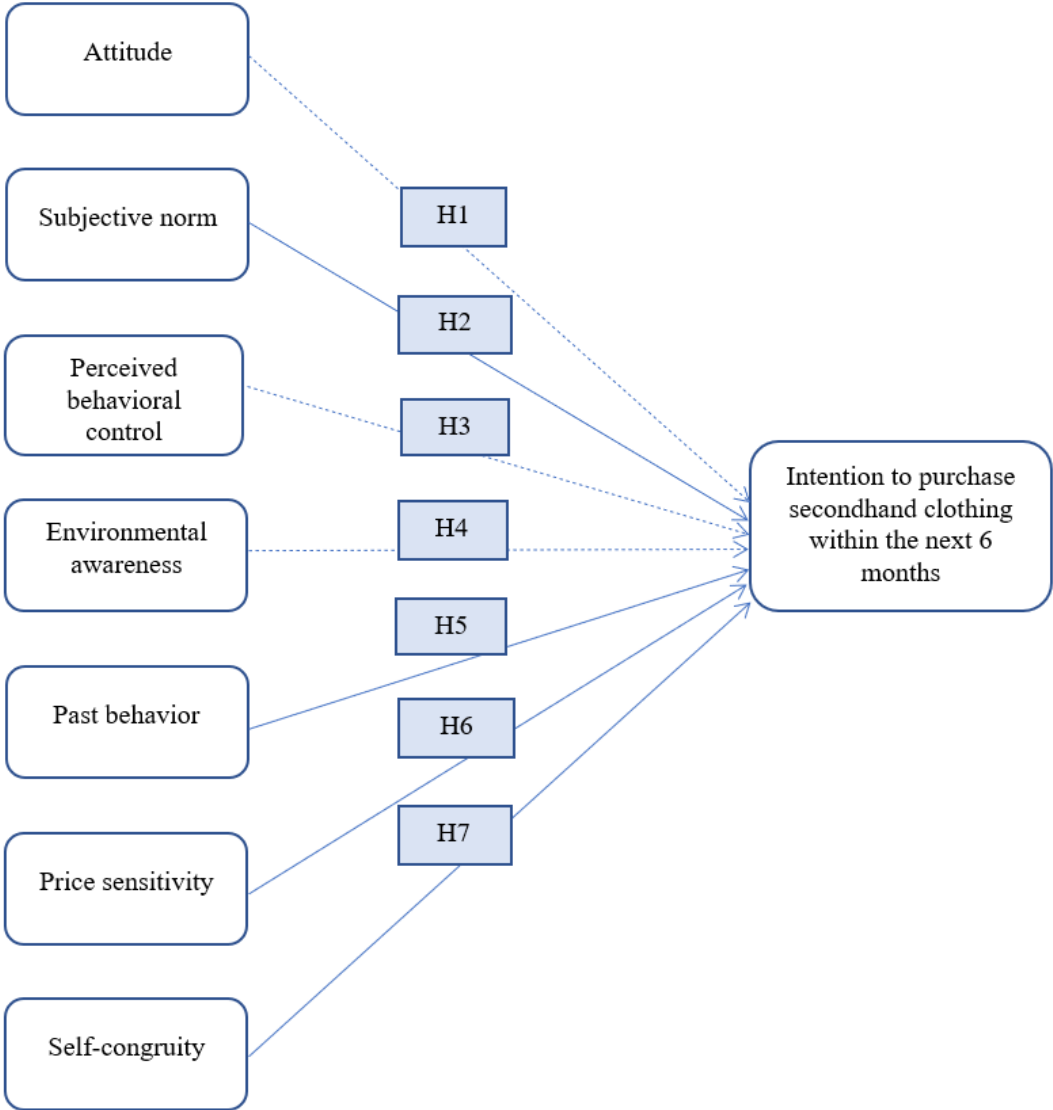


Figure 2: Proposed research model

According to the TPB (Ajzen 1991) the dependent variable, intention can be predicted by the three independent variables- attitude towards secondhand clothing, subjective norm, and

perceived behavioral control. The relationship between the independent and dependent variables will be favorable if all three independent variables show a positive result. As a result, consumers will purchase secondhand clothing. Furthermore, I have integrated four more independent variables into the model these are environmental awareness, past behavior, price sensitivity, and self-congruity. Therefore, this model argues that if there is a positive relationship between intention and seven independent variables, the probability for a consumer to purchase secondhand clothing will be greater.

3.0 Research Methodology

This chapter presents the methodological approaches of the paper, including the choice of research design, sampling design, measurement of the concepts, pre-test, the method of data collection, reliability, and validity. Further, the data analysis methods comprise the use of software for performing statistical analysis.

3.1 Research design

The research design defines as “organizing research activity, including the collection of data, in ways that are most likely to achieve the research aims”(Easterby-Smith et al., 2012, p. 37). I adopted a cross-sectional research design for this study. In this study, I wanted to determine consumers’ intention to purchase secondhand clothing, where I investigated the seven hypotheses of my research. The sample I gathered was for the purpose of studying potential correlations between the independent variables and intention, which was the dependent variable (Easterby-Smith et al., 2012).

3.2 Sampling design

A sample is a set of actual data that is taken from a population of potential data sources (Saunders et al., 2009). To make inferences about a population a researcher takes a sample from the overall population (Easterby-Smith et al., 2012). The sample should be representative of the population from which data was taken.

The two categories of sampling techniques are probability sampling and non-probability sampling. Probability sampling, in general, gives every member of the population an equal opportunity to be chosen and researched. In contrast, non-probability sampling does not treat all participants in the population being studied equally. (Saunders et al., 2009). Due to the lack of a suitable sampling frame, probability sampling was not adopted in this study. The sampling frame for any probability sample refers to a comprehensive list of all the individuals in the population from which the sample is derived (Saunders et al., 2009), which was inconvenient and difficult for me due to a lack of time and availability of information.

Sampling techniques are often influenced by the availability of resources so, non-probability convenience sampling was considered the most appropriate technique, which was practically possible and not very time-consuming (Saunders et al., 2009). Convenience sampling refers to

select respondents based on how easily they can be accessed (Easterby-Smith et al., 2012). Convenience sampling is a widely used technique where respondents are selected based on the ease of obtaining them (Saunders et al., 2009).

A self-administered questionnaire was constructed for the survey. I reassured the participants that the survey was anonymous, and that the information should only be utilized for this research.

3.3 Measurements

The questionnaire was prepared to examine consumers' intention to purchase secondhand clothing within the next 6 months, their attitude towards secondhand clothing, subjective norm, perceived behavioral control, environmental awareness, past behavior, price sensitivity, and self-congruity. The questionnaire I prepared was simple, easy to understand and to respond to. A respondent might require approximately six to eight minutes to complete the questionnaire. A seven-point Likert scale, from strongly disagree (1) to strongly agree (7), was used to measure the concepts, which was also used by Ajzen (1991). However, the measurement of past behavior was a seven-point Likert scale ranging from never (1) to always (7).

Intention

Intention was a measure of how likely consumers would purchase secondhand clothing within the next 6 months. It is necessary to select items that are reliable and highly internally consistent for the investigation (Ajzen, 2002). Thus, I asked three questions related to the behavioral intention of consumers based on Ajzen (2002).

- “I have intention to purchase secondhand clothing within the next 6 months”
- “I will try to purchase secondhand clothing within the next 6 months”
- “I am planning to purchase secondhand clothing within the next 6 months”

Attitude

Attitude defines a person's overall evaluation of performing a certain behavior which in this case is purchasing secondhand clothing within the next 6 months. Therefore, I questioned three statements based on Ajzen (2002) to capture the attitude of consumers.

- “Purchasing secondhand clothing is beneficial for me”
- “Purchasing secondhand clothing is enjoyable to me”
- “Purchasing secondhand clothing is good for me”

Subjective norm

Subjective norm refers to perceived social pressure over performing a certain behavior. It measures how consumers perceive the opinion of important others about him or her purchasing secondhand clothing. However, Ajzen (2002) did not recommend specifying the important others (i.e., family, friends, girlfriend/boyfriend, etc.), so I did not specify the important others. I prepared three questions for the respondents.

- “The most important people in my life whose opinion I value would approve of my purchase of secondhand clothing within the next 6 months”
- “The most important people in my life want me to purchase secondhand clothing within the next 6 months”
- “The most important people in my life would like me to purchase secondhand clothing within the next 6 months”

Perceived behavioral control

A direct measure of perceived behavioral control captures the consumer's confidence that they are capable of purchasing secondhand clothing within the next 6 months. Thus, these four statements were constructed based on the recommendation of Ajzen (2002).

- “It is possible for me to purchase secondhand clothing”
- “If I want to, I can purchase secondhand clothing”
- “I am in full control to purchase secondhand clothing”
- “It is entirely up to me whether or not I purchase secondhand clothing”

Environmental awareness

The measurement of environmental awareness was adopted from Borusiak et al. (2020), and Shalender and Sharma (2021) with slight modifications. The measurements used in those two papers were not quite the same as my research, so I had to change them accordingly. A total of four statements were developed to measure consumer awareness.

- “I take into account environmental consequences while I buy clothing” (Shalender & Sharma, 2021)
- “I believe that purchasing secondhand clothing can slow down the tempo of exhaustion of natural resources” (Borusiak et al., 2020)
- “I believe that purchasing secondhand clothing helps minimize environmental degradation” (Borusiak et al., 2020)
- “I believe individuals and society have the responsibility to preserve the environment” (Shalender & Sharma, 2021)

Past behavior

The measure for past behavior was adopted from Bamberg et al. (2003), and Smith et al. (2008) with slight modifications, to support this study. Only one item was used to measure past behavior, where respondents were asked to indicate their response on a seven-point Likert scale ranging from never (1) to always (7).

- “How often have you purchased secondhand clothing in the past 6 months?” (Smith et al., 2008)

Price-sensitivity

To measure consumers’ price sensitivity, I questioned three statements that were adopted from research conducted by Roux and Guiot (2008).

- “I prefer purchasing secondhand clothing because I do not want to spend a lot of money”
- “Purchasing secondhand clothing allows me to get good products at a cheaper price”
- “I purchase secondhand clothing because it feels like I am paying less”

Self-congruity

Data was collected for each of the four concepts of self-congruity theory (actual self-image, ideal self-image, actual social self-image, ideal social self-image). Two common types of measurement used in self-congruity studies are indirect and direct measures (Sirgy et al., 1997). Direct measures calculate the discrepancy score between product user image and self-

image measured on the same scale. While indirect measures use a discrepancy score and prearranged images, which could limit the capability of survey participants to freely express their imagination (Sirgy et al., 1997). Thus, Sirgy et al. (1997) developed the global/direct measure, that I adopted in this study, which allows respondents to generate freely associated images at the time of measurement. Respondents were instructed to consider the following situation at first, which is part of the global/direct measure (Sirgy et al., 1997; Sirgy & Su, 2000), and the following scenario were copied from these sources (Sirgy et al., 1997; Sirgy & Su, 2000) with slight modification.

“Take a moment to think about an item of secondhand clothing. Think about the type of person who typically purchases that kind of secondhand clothing. Imagine this person in your mind and then describe this person using one or more personal adjectives, such as stylish, poor, masculine, sexy, classy, old, athletic, or whatever personal adjectives you can use to describe” (Sirgy et al., 1997, p. 232). Once you have done this, use this scale to indicate whether you agree or disagree with the following statements: strongly disagree = 1, strongly agree = 7.

- “This item of secondhand clothing is consistent with how I see myself” (actual self-image), (Helgeson & Supphellen, 2004; Sirgy & Su, 2000).
- “I am quite similar to the typical buyer of this type of secondhand clothing” (actual self-image) (Helgeson & Supphellen, 2004).
- “The image of a typical buyer of this type of secondhand clothing is consistent with how I see myself” (actual self-image) (Helgeson & Supphellen, 2004).
- “This item of secondhand clothing is consistent with how I would like to see myself” (ideal self-image) (Helgeson & Supphellen, 2004; Sirgy & Su, 2000).
- “I would like to be perceived as similar to the typical buyer of this type of secondhand clothing” (ideal self-image) (Helgeson & Supphellen, 2004)
- “I like to see myself as a person who purchases this type of secondhand clothing” (ideal self-image) (Bosnjak et al., 2011; Helgeson & Supphellen, 2004)
- “This item of secondhand clothing is consistent with how I believe others see me” (actual social self-image) (Bosnjak et al., 2011; Sirgy & Su, 2000)
- “I believe others think of me as a person who purchases this type of secondhand clothing” (actual social self-image) (Bosnjak et al., 2011)

- “This item of secondhand clothing is consistent with how I would like others to see me” (ideal social self-image) (Bosnjak et al., 2011; Helgeson & Supphellen, 2004; Sirgy & Su, 2000)
- “I would like others to think of me as a person who purchases this type of secondhand clothing” (ideal social self-image) (Bosnjak et al., 2011)

Control variables

I added some demographic variables to the questionnaire, such as gender, age, place of birth, income, and level of education. In this study, the control variables are these demographic factors. Gender was a binary variable where 0 denoted female and 1 denoted male. Age and income were continuous variables, and place of birth was a string variable. To code level of education, scales ranging from 1 to 5 were used where 1 represented high school or lower, 2 represented profession certificate, 3 represented bachelor’s degree, 4 represented master’s degree, and 5 represented doctoral degree.

Research subject

To answer the research question data was collected from students at Nord university. One of the most widely bought items by students is clothing. (Case & King, 2003). A study by Zheng and Chi (2015) selected students as research subjects their research to understand factors that impact consumers’ purchase intention of environmentally friendly apparel. Students are a group of young consumers who are homogeneous regarding socioeconomic characteristics, and they are creative in trying new products. Research claims that young consumers are considered the main target of the secondhand clothing market (Hansen, 2004), and they are an important future market for environmentally friendly apparel such as secondhand clothing (Lee, 2008). Therefore, I chose the research subject to be students at Nord university.

3.4 Pre-test

Before initiating the survey, the questionnaire went through some corrections to find possible inconsistencies in the questions and the scale used. After preparing the questionnaire, I showed it to my supervisor, and he suggested some modifications. The questionnaire was modified based on my supervisor's suggestion before conducting a pre-test. The purpose of the pre-test was to make sure that the respondents could understand the questions and, more

crucially, that the survey questionnaire's measurement was precise. A total of 10 responses were collected for the pre-test via a convenience sampling method, where I asked students at the campus to participate in the pre-test and provide suggestions if the questionnaire required modifications. I conducted a reliability analysis to check Cronbach's alpha of the concepts. In addition, problematic items were revised, and designed a final questionnaire to collect data for the final analysis.

3.5 Data collection

A total of 146 responses for the research were collected. Data was collected from the Nord university campus and the canteen, where I asked students to participate in the survey. In addition, I created a questionnaire in google forms to collect data online. In the google forms, I added a screening question, "do you currently study at Nord university?" so that no one but current students can participate in the survey. The link to the google forms was posted on Facebook pages such as "Nord university", "HHS- Handelshøgskolens Studentforening Nord", and "SOB- studentorganisasjonen i Bodø". Furthermore, I shared the link to the online survey by email with students from my class.

3.6 Reliability

The degree to which data collecting and processing methods produce consistent results when utilized on other occasions is referred to as reliability (Saunders et al., 2009). Findings of any research related to social science may vary due to many factors such as the place of the research, time, and the group of people being studied, etc. However, it is possible to generate consistent results of research if repeated on any other occasion. To keep the research data reliable, we have to be alert to data being biased. There is always a risk of data being a biased quality that cannot be excluded (Saunders et al., 2009), despite the fact that reliability is meant to provide quality. I therefore selected measures from earlier studies that examined the variables I wished to apply to my study in order to minimize issues with data quality.

Adapting measurements from previous research allows the collected data to be more reliable than developing own measurements for the study. To investigate people's intention to purchase secondhand clothing, measurements for both dependent and independent variables were adopted from previous research with a slight alteration to match my research topic.

Another approach to assess reliability is through internal consistency. The most common way of calculating internal consistency or internal reliability is Cronbach's alpha (Saunders et al.,

2009). The value of this coefficient can range from 0 to 1, however, the higher the value the greater the reliability. Although a Cronbach's Alpha of 0.7 is the minimum necessary level, it might decrease to 0.6 (Hair et al., 2010). In this study, the internal reliability of the concepts ranged between 0.82 and 0.96 of Cronbach's alpha.

3.7 Validity

Validity is the degree to which the research's measurements or scales accurately reflect what they are intended to (Easterby-Smith et al., 2012; Saunders et al., 2009). Accurate data can be gathered with the use of a valid questionnaire. External validity and internal validity are terms used frequently by researchers (Easterby-Smith et al., 2012).

The term external validity relates to whether the research findings may be easily applied to different contexts and situations (Saunders et al., 2009). A non-probability convenience sampling technique was used, which led to the uncertainty of the results to be generalized to the population.

The questionnaire was prepared in English, which possibly, was understandable to all students as most of them were studying in bachelor and master programs. Moreover, I have collected most of the responses from the canteen, and lobby of Nord university, where students were spending their free time with friends after lunch. They took the time required to answer the survey uninterruptedly, while many students refused to participate as they were not eager to do so.

Internal validity refers to the ability of the questionnaire to measure what it intends to measure. It means the data collected using the questionnaire represents the reality of what the research intends (Saunders et al., 2009). A pre-test was conducted to ensure the measurements I used in the survey were correct enough to predict consumer intention. Moreover, I eliminated and altered some questions after the pre-test to ensure validity and reliability. As I mentioned earlier, I collected data from no one but the current students at Nord university for reliability and validity purposes.

3.8 Methods of data analysis

This section describes the data analysis methods used to interpret the survey data. A widely used software for quantitative studies called SPSS (Statistical Package for Social Sciences)

was used in this study to analyze data. The collected data from the printed questionnaire were entered into SPSS directly, while a few responses from google forms were first entered into the excel spreadsheet and then exported into SPSS. I utilized SPSS to do an exploratory factor analysis, correlation analysis, and multiple linear regression analyses to test the hypothesis. In addition, I ran descriptive statistics to check frequencies for the demographic variables.

Exploratory factor analysis

Exploratory factor analysis allows us to investigate whether the correlation between variables shows any patterns (Johannessen, 2009). Factor analysis is a data reduction approach that divides a large number of variables into smaller, identifiable factors (Hair et al., 2010). It is accomplished by grouping together variables that have a higher correlation among a set of observed variables (Hair et al., 2010).

Correlation analysis

I used correlation analysis to assess the relationship between variables. A correlation coefficient, denoted by r , quantifies the strength of a linear relationship between two variables (Saunders et al., 2009). The covariance can take a value between -1 and +1 (Hair et al., 2010; Saunders et al., 2009). A value of +1 denotes a perfect positive correlation, a perfect negative correlation denotes by a value of -1 (Saunders et al., 2009). It means that even though the two variables are precisely related, changes in values (increase/ decrease) of one variable change the value of other variables.

Multiple linear regression analysis

Linear regression analysis investigates the linear relationship between independent (explanatory) variables and dependent (response) variables, where any changes in independent variables cause changes in the dependent variables. The goal of regression analysis is to determine how many and which independent variables (Saunders et al., 2009). The regression coefficient is represented by R-squared (R^2) where the value of R^2 varies between 0 and +1. R^2 estimates the percentage of a dependent variable's variance that can be explained by an independent variable (Saunders et al., 2009). A regression analysis is called multiple regressions if the number of variables is more than two (Saunders et al., 2009). The purpose of multiple linear regression is to represent the linear relationship between

explanatory (independent) variables and response (dependent) variables (Saunders et al., 2009). To test my hypothesis, I used multiple linear regression analysis in this thesis.

Descriptive measure

The demographic variables used for simple statistical analysis, such as frequencies and descriptive, and the result shows the mean, minimum, and maximum value of the dataset. Additionally, a frequency distribution table for the demographic variables was prepared and presented in appendix 1.

Data was collected from the university campus and online platform, which consists of a total of 146 samples (from online 25 samples and on-campus 121 samples). All the respondents were students currently studying at Nord university. Alumni students were excluded from participating in the survey to increase the generalizability of the study. Among these respondents, females consist of the majority of the proportion. The gender descriptive illustrates that 89 respondents were female (61%), while 57 were male (39%). However, a few survey questionnaires had missing values, so those samples were excluded from the analysis.

Age was a continuous variable that varied between 19 years and 47 years old. The majority of students were 22 years old, consisting of 19 students (13%), followed by 23 years old, which makes up 11% of the total sample. In addition, the mean value of age was 25.87.

The sample was composed of 30 nationalities, where the majority of students were from Norway, which makes up a total of 96 students (65.8%), followed by Bangladesh, which consists of 9 students (6.2%). The number of students varied between 1 and 4 individuals for the remaining 28 nationalities.

As it was difficult to predict the income level of students, I decided to keep it as a continuous variable where students were allowed to write their monthly income to the open-ended question. The majority of students earn 10000 Nok after tax, which consisted of 19 students (13%). The second majority were 12 students (8.2%) who earn 8000 Nok after tax. The number of students who did not work was 13 (8.9%). Moreover, the mean value of income was 13379.68 Nok after tax. Among the total sample, 5 of the respondents had the highest amount of earning of 35000 Nok per month after tax. The minimum income was 0.00 Nok as many students were not doing any job. Furthermore, many students wrote in the questionnaire that their source of income is the monthly government stipend.

A large proportion of the respondents were bachelor's degree students that consist of 98 students (67.1%), followed by master's degree students that were 34 students (23.3%). Profession certificate and doctoral degree studying students were 8 and 6 students (5.5% and 4.1%) respectively, while no respondent was in high school or lower. Data were collected mainly at the university campus, so it might be a reason the questionnaire was not available to students studying at high school or lower. It is necessary to notice that the majority of respondents were studying for bachelor's and master's degrees, which is why age might vary between 22 and 23 years.

4.0 Analysis and discussion

In this chapter, I present the results from my analysis and discuss the findings. I begin by presenting an exploratory factor analysis, then a correlation analysis, and finally the regression analyses.

4.1 Factor analysis

An exploratory factor analysis was performed to see whether the intention of consumers to purchase secondhand clothing can be determined by attitude, subjective norm, perceived behavioral control, self-congruity, environmental awareness, price sensitivity, and past experience.

For the factor analysis, I started by creating a component matrix for each of the individual concepts based on the measurement to check the reliability and validity of the concepts. In addition, Cronbach's alpha was checked to see the internal reliability of the concepts presented in appendix 2.

The factor rotation analysis provides a clear pattern between the variables (Johannessen, 2009). Factor rotation allows for higher loadings on one factor and smaller loadings on all other factors. Hence, it was possible to identify any measure that represented phenomena that were not supposed to happen and eventually exclude those variables that described several factors (Johannessen, 2009). In this thesis, I employed varimax rotation, which emphasizes the correlation between the factors that allow connecting a variable to a factor (Hair et al., 2010). Similarly, I used the principal components extraction method with eigenvalues greater than 1 (Hair et al., 2010). The minimally acceptable level of factor loadings ranges between $\pm.30$ and $\pm.40$ (Hair et al., 2010). In addition, a guideline based on sample size suggested by Hair et al. (2010) mentioned using a factor loading of .45 for a sample size of 150. In this analysis, I suppressed the value below 0.45 as I had 146 samples, which allowed me to identify significant factor loadings that are easier to grasp.

In this study, I used factor varimax rotation to perform two rotation analyses. The first analysis expressed factor rotation before deleting variables with minor factor loadings or substantial cross-loadings (Hair et al. 2010). After deleting the undesired variables from the concepts, the second analysis offers a revised rotation model.

I had to exclude two measures from the research after performing the factor varimax rotation analysis because those measures had some loading issues. The measures spread among the seven components reported in appendix 3 according to the first rotation analysis. In the first rotation analysis, two items from two different concepts (attitude and environmental awareness) had loading problems. In that analysis, one item of attitude (attitude 1) did not load at all because the minimum factor loading was set to 0.45, which means “attitude 1” had a factor loading lower than 0.45. One item of environmental awareness (environmental awareness 1) was loaded on factor seven, whereas the rest of the items of environmental awareness were loaded on factor six. The first variable I removed was a measure of attitude “purchasing secondhand clothing is enjoyable to me” because this item loaded on factor two and factor five while the two other items of attitude loaded on factor four. The second measure I removed was from environmental awareness, “I take into account environmental consequences while I buy clothing” because this measure was loading on factor seven instead of factor six, where the rest of the items of environmental awareness loaded.

I ran a new rotation analysis after deleting those two variables from the factor analysis shown below.

Table 1: Factor rotation analysis

Rotated Component Matrix						
	Component					
	1	2	3	4	5	6
Intention 1		0.864				
Intention 2		0.860				
Intention 3		0.859				
Attitude 2				0.517		
Attitude 3				0.502		
Subjective norm 1				0.655		
Subjective norm 2				0.841		
Subjective norm 3				0.825		
Perceived behavioral control 1			0.761			
Perceived behavioral control 2			0.855			
Perceived behavioral control 3			0.826			
Perceived behavioral control 4			0.792			
Environmental awareness 2						0.905
Environmental awareness 3						0.926
Environmental awareness 4						0.690
Past behavior 1		0.695				
Price sensitivity 1					0.753	

Price sensitivity 2					0.786	
Price sensitivity 3					0.821	
Actual self-image 1	0.659					
Actual self-image 2	0.680					
Actual self-image 3	0.795					
Ideal self-image 1	0.817					
Ideal self-image 2	0.804					
Ideal self-image 3	0.706					
Actual social self-image 1	0.800					
Actual social self-image 2	0.709					
Ideal social self-image 1	0.825					
Ideal social self-image 2	0.727					
Explained variance %	33.54	11.89	9.54	6.97	5.58	3.98

Compared to the first analysis, the new rotation analysis revealed six factors. When comparing the second analysis to the first analysis, there was not much of a difference in the explained variances. Comparatively, all of the six factors indicated a slightly higher percentage in the new analysis. Factor one accounted for 33.54% of the total variance, while factor two for 11.89% of the total variance, factor three explained 9.54% of the total variance and factor four explained 6.97% of the total variance, factor five explained 5.58% of the total variance, and factor six explained 3.98% of the total variance. That, however, did not correspond with the theoretical framework in this research, where seven different factors were expected. The exploratory factor analysis did not distinguish between all seven concepts. Although the analysis identified six factors, few concepts loaded on the same factors. Possibly, the statements in the survey were considered similar by the analysis. However, due to the reliability purpose, the measurements used in the study were based on previous researchers with slight modifications to fit this research. It's possible that the statements were poorly phrased or that the respondents had trouble understanding them.

In the new study, the measures of intention were loaded on factor two. The factor loadings varied between 0.859 and 0.864 for the three items, with a Cronbach's alpha of 0.96. With a value greater than 0,70, this suggested that the validity was favorable (Hair et al., 2010), the internal reliability was excellent, with a Cronbach's alpha above 0,70 (Easterby-Smith et al., 2012). Therefore, these three variables were combined into one concept.

The measures for attitude after removing one item loaded on factor four where the factor loadings varied between 0.502 and 0.517 for the two items. A Cronbach's alpha of 0.84 indicated good internal reliability.

With factor loadings ranging from 0.655 to 0.841 and Cronbach's alpha of 0.82, the measures for subjective norm likewise loaded on factor four. This indicated that the measurements had strong internal reliability. As a result, I combined these three subjective norm measurements into a single concept.

The measures for perceived behavioral control had a factor loading on factor three Cronbach's alpha was 0.83, and the factor loadings ranged from 0.761 to 0.855. So, I combined these three variables into one concept.

The measures for environmental awareness had a factor loading on factor six. After removing one variable from the concept, the new loadings varied between 0.690 and 0.926, with Cronbach's alpha of 0.82. Hence, these two variables were computed into one concept as the result showed an excellent level of validity and reliability.

The measures for past behavior had a factor loading on factor two. The factor loading was 0.695. A reliability test could not be performed because this concept only had one component. As the value of factor loading was high, I, therefore, kept the measure.

The measures for price sensitivity had a factor loading on factor five. The factor loadings varied from 0.753 to 0.821, with a Cronbach's alpha of 0.83. Because the results demonstrated a high level of validity and reliability, I combined the three variables into a single concept.

The measures for self-congruity had a factor loading on factor one. Self-congruity is composed of four different concepts (actual self-image, ideal self-image, actual social self-image, and ideal social self-image). All the items connected with these four concepts were loaded on factor one. With Cronbach's alpha of 0.93, the factor loadings varied between 0.659 and 0.825. Hence, I added these ten items into one concept. Additionally, Cronbach's alpha and component matrix for each of four concepts has been tested, which is presented in appendix 4.

4.2 Correlation analysis

The correlation coefficient determines the relationship between the many variables that is denoted by r , presented in the correlation matrix below.

Table 2: Correlation matrix

	Intention	Attitude	Subjective norm	PBC	Environmental Awareness	Past behavior	Price sensitivity	Self-congruity
Intention	1							
Attitude	.555**	1						
Subjective norm	.505**	.597**	1					
PBC	0.107	.320**	.221**	1				
Environmental awareness	0.080	.336**	.172*	.228**	1			
Past behavior	.681**	.530**	.419**	0.025	0.024	1		
Price sensitivity	.509**	.489**	.255**	0.053	-0.018	.429**	1	
Self-congruity	.481**	.427**	.406**	0.131	0.099	.369**	.421**	1

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

* Correlation is significant at the 0.05 level (2-tailed).

In the correlation matrix, the value of Pearson correlation varied between -0.01 and 0.68. A r value of 0.20 indicates weak correlations, while a value between 0.30 to 0.40 indicates relatively strong correlations, and a correlation coefficient of 0.50 or above indicates a very strong relationship (Johannessen, 2009). The correlation matrix illustrates that intention had a significant correlation with attitude, subjective norm, past behavior, price sensitivity, and self-congruity. Most importantly, intention had a significant correlation at the level of 0.01 with those five variables. Whereas, perceived behavioral control and environmental awareness had a very weak correlation with intention where the Pearson correlation value was 0.107 and 0.080 respectively. Although these two variables showed a very low correlation with intention, the rotation analysis indicated these variables as two factors in this research. Similarly, Past behavior, price sensitivity, and self-congruity had a very low correlation with perceived behavioral control and environmental awareness. The negative correlation of -0.018 between price sensitivity and environmental awareness indicated that with an increase in price sensitivity, environmental awareness decreased. Further, the correlation coefficient for the rest of the variables was significant at the 0.01 and 0.05 levels.

A correlation coefficient of 0.90 and above indicates the risk of high collinearity (Hair et al., 2010; Saunders et al., 2009). Multicollinearity arises when independent variables are very strongly correlated with each other. Here, in this research, the highest value of the correlation coefficient was 0.681, that indicated the model was free from severe multicollinearity issues.

4.3 Testing of assumptions

Assumptions of multiple linear regression were performed to check if the dataset meet the assumptions of multiple linear regression analysis. Linearity, homoscedasticity, collinearity, and normality are the four assumptions of multiple linear regression analysis (Saunders et al., 2009). In my dataset, the independent variables were not normally distributed, while there was adequate normality in the dependent variable (appendix 5). To check the assumption of linearity, a P-P plot was created (appendix 6). The P-P plot illustrates data following the line with slight deviations. Homoscedasticity describes the degree to which the data values for the variables have equal variances (Saunders et al., 2009). Hence, a scatter plot was created (appendix 7), which illustrates all values of the dependent variable scattered between -3 and 3. The scatterplot shows whether data are homoscedastic or heteroscedastic visually by plotting standardized residuals against standardized predicted values. The scatter plot showed data met the assumption of homoscedasticity as all the values were shaped similarly to a rectangular (though it was not perfectly rectangular in shaped). As it was shown in the correlation matrix that there was no severe issue of multicollinearity in the dataset, as the correlation value did not exceed 0.90. In addition, the variance inflation factor (VIF) was checked, which did not indicate issues of multicollinearity (appendix 8). A very small tolerance value of 0.10 or below and a large VIF value of 10 or above means high collinearity (Hair et al., 2010; Saunders et al., 2009). In my study, the collinearity statistics illustrate that the lowest tolerance value was 0.342, and the highest VIF value was 2.923. In this study, the VIF findings demonstrated that there were no extreme issues with multicollinearity. Similarly, the correlation between the independent variables was not very high. Overall, the dataset met most of the assumptions that implied multiple linear regression could be conducted.

4.4 Hypothesis testing

I ran a simple linear regression to explore the relationship between the independent and dependent variables and how well an independent variable can predict intention. I performed a multivariate linear regression analysis to test the hypothesis. The variables were validated by factor analysis, correlation analysis, and reliability analysis, which I used in the regression analysis.

The simple linear regression analysis I performed is presented in appendix 9. Later, I ran a multiple regression analysis of the three concepts of attitude, subjective norm, and perceived behavioral control with intention to check whether TPB is statically significant to explain intention in my research. That regression analysis is presented in appendix 10.

The final regression analysis was performed to test the seven hypotheses of this study developed in the theoretical chapter. In addition to the independent variables, control variables were studied.

Table 3: Multiple linear regression analysis for the research model

Concepts:	<i>b</i>	<i>t</i>	<i>p</i>
Attitude	0.053	0.474	0.636
Subjective norm	0.239	2.533	0.012
Perceived behavioral control (PBC)	0.017	0.162	0.872
Environmental awareness	-0.012	-0.121	0.904
Past behavior	0.448	6.102	0.000
Price sensitivity	0.255	2.931	0.004
Self-congruity	0.199	1.966	0.051
Gender	-0.222	-1.057	0.293
Age	-0.015	-0.763	0.447
Income	0.000	1.042	0.299
Level of education	0.061	0.382	0.703

R² 59.5%, adjusted R² 56.2%

4.4.1 Attitude towards the behavior and intention

Hypothesis 1 stated, “There is a positive relationship between attitude towards secondhand clothing and intention to purchase secondhand clothing within the next 6 months.” In this sample, attitude had no statistically significant effect on intention ($b = 0.053$, $t = 0.474$, $p = 0.636$). Hypothesis 1 was rejected, resulting in the conclusion that attitude toward secondhand clothing had no statistically significant impact on explaining purchase intention. The finding indicates that consumers think purchasing secondhand clothing is neither good nor enjoyable to them. According to a study by Kalafatis et al. (1999) that examined the factors influencing customers' intentions to purchase environmentally friendly products in the UK and Greece under two different market conditions, and discovered that attitude did not directly affect intention in either market. Likewise, another study supported that attitude toward secondhand clothes does not exert a positive effect on mindful consumption behavior (Mohammad et al., 2021). Perhaps, the sample size might be a possible reason for attitude not having a significant impact on intention. Hair et al. (2010) argued that the probability of getting statistically significant results may get affected by the effect size. Larger sample sizes might have resulted in more robust statistical tests (Hair et al., 2010). It could also be caused by circumstances particular to this sample.

4.4.2 Subjective norm and intention

Hypothesis 2 stated, “There is a positive relationship between subjective norm and intention to purchase secondhand clothing within the next 6 months.” Subjective norm had a statistically significant effect on intention ($b = 0.239$, $t = 2.533$, $p = 0.012$). Hypothesis 2 was supported by the analysis. Subjective norm had a statistically significant impact on consumers' intention to purchase secondhand clothing. The result implied that consumers' intention to purchase secondhand clothing is influenced by the most important people in their life. Seo and Kim (2019) argued that consumers consider the opinion of the reference group that might impact the purchasing intention of used clothing. A study by Zheng and Chi (2015) found that subjective norm had a positive effect on consumers' purchase intention of environmentally friendly apparel. A bunch of other studies also found similar results, which illustrate that peer pressure plays a crucial role in influencing buying intention of secondhand and sustainable products (Eze & Ndubisi, 2013; Maichum et al., 2016; Xu et al., 2014).

4.4.3 Perceived behavioral control and intention

Hypothesis 3 stated, “There is a positive relationship between perceived behavioral control and intention to purchase secondhand clothing within the next 6 months.” Similar to the first analysis of TPB, perceived behavioral control had no statistically significant effect on intention in this proposed research model ($b = 0.017$, $t = -0.162$, $p = 0.872$). This meant that hypothesis 3 was rejected.

The theory of planned behavior is a well-developed and tested model; therefore, it was surprising that the two concepts attitude and PBC were statistically insignificant in my research model. Other researchers have discovered similar outcomes. The result indicates that even if the consumers perceive there are no obstacles to purchasing secondhand clothing, they will not intend to do so. It also implied that although they wanted to, they might not possibly purchase secondhand clothing because it was not entirely up to them whether or not they would purchase used clothing. A possible reason could be that since they value the opinion of the important person in their life, they do not feel of having full control over their intention in terms of buying secondhand clothing. Another possibility is that the operationalization of behavioral control in the context of buying secondhand clothing was subtle and confusing to the respondents because secondhand clothing might consist of social risk. Although the reliability and validity of the PBC measure were satisfactory it does not affect consumers’ intention in the context of secondhand buying. Seo and Kim (2019) stated in their study that PBC did not affect intention in terms of secondhand fashion shopping. Another study by Kang et al. (2013) shown that PBC has no significant impact on consumers' intentions to consume ecologically friendly textiles and apparel. Likewise, Zheng and Chi (2015) found an insignificant impact of PBC on intention in terms of purchasing environmentally friendly apparel.

4.4.4 Environmental awareness and intention

Hypothesis 4 stated, “There is a positive relationship between environmental awareness and intention to purchase secondhand clothing within the next 6 months.” Environmental awareness had statistically no significant impact on intention ($b = -0.012$, $t = -0.121$, $p = 0.904$). Hypothesis 4 was rejected by the analysis. The result of this study shows that a factor might not have the same impact on consumers from different parts of the world. For example, the study conducted by Yan et al. (2015) on college students in the USA illustrates that students who buy clothing from secondhand stores are environmentally conscious. However,

in my study, environmental awareness has no statistically significant effect on consumers' intentions, even though the research model in these two studies are distinct. Rizkalla et al. (2022) found a similar to my result that showed environmental concerns had no direct influence on the purchase intention of environmentally friendly apparel. Nonetheless, they found an indirect relation of environmental concerns with intention through attitude, which means environmental concern affects attitude, which affects purchase intention eventually. Thus, it could be a possible explanation that even if a consumer had concern towards the environment, they might not necessarily actualize that into action through buying environmentally friendly commodities. As Mostafa (2009) stated, a person must first have a positive attitude towards environmentally friendly products to be able to turn that concerns into actual purchase action. So, it is plausible saying that consumers did not have a positive attitude towards secondhand clothing thus, environmental awareness had no statistically significant impact on intention to purchase secondhand clothing in my research.

4.4.5 Past behavior and intention

Hypothesis 5 stated, “There is a positive relationship between past behavior and intention to purchase secondhand clothing within the next 6 months.” Past behavior had a statistically significant influence on intention ($b = 0.448$, $t = 6.103$, $p = 0.000$). Hypothesis 5 was supported by the analysis, which argues that if consumers previously performed a behavior will have a stronger intention to execute a similar behavior in the future. The result was similar to the previous literature, which depicts that past behavior is a determinant of behavioral intention, that plays a significant role in influencing the intention to buy secondhand goods and clothing in the future (Herjanto et al., 2016; Triandis, 1980; Xu et al., 2014). In terms of buying secondhand luxury products, past purchase experiences influence consumers’ intentions (Stolz, 2022).

4.4.6 Price sensitivity and intention

Hypothesis 6 stated, “There is a positive relationship between price sensitivity and intention to purchase secondhand clothing within the next 6 months.” Price sensitivity had an impact on intention that was statistically significant ($b = 0.255$, $t = 2.931$, $p = 0.004$). The analysis supported hypothesis 6. It implies that if a consumer is price-sensitive, the intention of that consumer will be stronger to purchase secondhand clothing. Yan et al. (2015) found in their study, that many college students prefer buying clothes from secondhand stores due to cheap

prices. As many students prefer not to do a job while others earn little money doing part-time jobs so secondhand clothing is a reasonable option for them that require little money to spend for a piece of clothing. Roux and Guiot (2008) argue that price sensitivity and frugality heavily influence the consumption of used goods.

4.4.3 Self-congruity and intention

Hypothesis 7 stated, “There is a positive relationship between self-congruity and intention to purchase secondhand clothing within the next 6 months.”. Self-congruity had a statistically significant impact on intention ($b = 0.199$, $t = 1.966$, $p = 0.051$). Therefore, hypothesis 6 was supported. The finding indicates that consumers think consuming used clothing reflects their self-image, so they tend to purchase secondhand clothing. In addition, according to the theory, it also depicts that consumers want to reflect their actual self-image, ideal self-image, actual social self-image, and ideal social self-image through the consumption of secondhand clothing. A study found self-congruity to be associated with purchase intention that affects a consumer's decision-making in terms of buying products, which are congruent with his/her self-image (Khalid et al., 2018). Based on any circumstances, self-identity can become a crucial determinant to consume secondhand clothing (Rothstein, 2005).

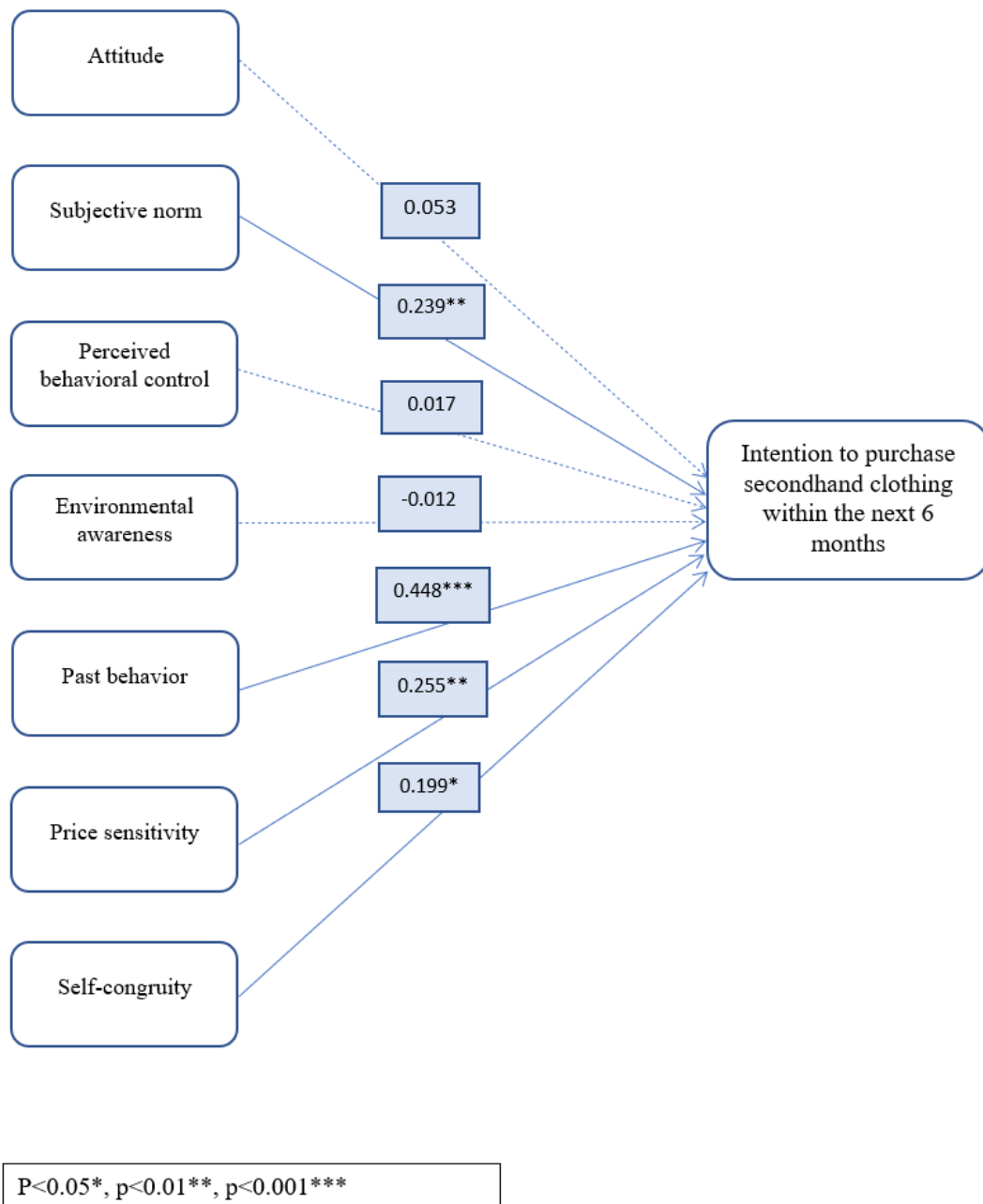


Figure 3: Result from the seven hypotheses

Apart from the results discussed above, some variations were noticed in the standardized coefficient beta compared to the unstandardized beta. The unstandardized beta was reported in the discussion above, but the value of all the independent variables dropped slightly for the standardized beta. The table below shows that the standardized coefficient beta decreased a little for past behavior, price sensitivity, and perceived behavioral control compared to the unstandardized beta. Whereas the beta for attitude, subjective norm, environmental awareness, and self-congruity barely dropped.

Table 4: Difference between unstandardized and standardized coefficient beta

Concepts:	Unstandardized beta	standardized coefficient beta
Attitude	0.053	0.045
Subjective norm	0.239	0.181
Perceived behavioral control (PBC)	0.017	0.010
Environmental awareness	-0.012	-0.008
Past behavior	0.448	0.432
Price sensitivity	0.255	0.217
Self-congruity	0.199	0.131

Gender, age, income, and level of education were also incorporated as control variables to the multiple linear regression analysis. None of the control variables revealed a statistically significant effect on intention however, these variables made some difference in the result of the overall regression analysis. A slight difference was visible in the result of the regression model after the control variable was added compared to the other regression model where control variables were not added (appendix 11). The value of adjusted R^2 decreased slightly to 56.2% from 56.7% as well as the p-value of independent variables changed a little when the control variable was added to the regression model.

The value of adjusted R^2 in the proposed research model indicated that the model explained 56.2 % of the variation in intention. Even being such a simple model, it showed a good level of explained variance for the model. The results showed that as a conceptual framework, this research model can predict a consumer's intention to purchase secondhand clothing within the next 6 months. However, this study did not examine the actual behavior of consumers, whether or not they purchased clothing within those 6 months.

5.0 Conclusion, implications, and recommendations

This chapter presents the conclusion about the research findings and contribution and discusses the possible ways to implement the result. This chapter also discusses the research's limitations and makes recommendations for future research.

5.1 Conclusion

This paper aimed to study the factors that influence intention of consumers to purchase secondhand clothing. Thus, this paper investigated the following research question, “What are the antecedents of consumers' intention to purchase secondhand clothing?” I derived seven hypotheses from the extant literature to study this research question. The theory of planned behavior (Ajzen, 1991) was applied as the conceptual framework. In addition, four more independent variables were included as extended variables to the original TPB model. After integrating all the variables, a research model was proposed, that implies that attitude, subjective norm, perceived behavioral control, environmental awareness, past behavior, price sensitivity, and self-congruity impact intention. Gender, age, income, and level of education were also incorporated as control variables to the research model.

The data was collected from students who currently study at Nord university. A total of 146 responses were collected, where 25 responses were online and 121 responses from on campus. The measurements used in the survey questionnaire are based on published literature. The statements were constructed using a seven-point Likert scale, from strongly disagree to strongly agree. However, to measure past behavior, a different Likert seven scale, ranging from never to always was used. The sample included students of various ethnicities studying at Nord University. All types of analysis were performed using the statistical software SPSS including multiple linear regression to test the hypothesis.

The following presents the findings of the study derived from the analytical part. For the proposed research model and control variables, I ran a multiple linear regression analysis. This analysis reveals that three variables, namely, attitude, perceived behavioral control, and environmental awareness have no statistically significant impact on intention to purchase secondhand clothing. In addition, none of the control variables have effects on intention. Among the seven hypotheses, only four are supported by the analysis. The research

model I developed reveals that the significant antecedents of intention to purchase secondhand clothing are the subjective norm, price sensitivity, past behavior, and self-congruity. The result implies that when consumers feel the most important person in their life supports them to purchase secondhand clothing, they sense price sensitivity to spending money on clothing, they previously performed a similar behavior, and they want to express their self-congruence through consuming used clothing, then those consumers will have greater intention to purchase secondhand clothing.

The study has both theoretical and practical contributions:

First, this study is one of the few that used the theory of planned behavior (TPB) to understand consumers' intention to purchase secondhand clothing. The result shows that TPB is a reliable framework to predict consumers' buying intention of secondhand clothing.

Second, by incorporating four new concepts into Ajzen (1991) original framework, this study has extended the TPB and contributed experimentally to new insights into the theory. The research model developed in this study shows high explanatory power of consumers' secondhand clothing purchase intention, accounting for 56.2% of variance. This study reveals that subjective norm, price sensitivity, past behavior, and self-congruity have a statistically significant impact on intention, in addition to the three original concepts of the TPB. Thirdly, this research advances the understanding of the factors that impact customers' intention to purchase secondhand clothing. Therefore, practitioners and marketers can utilize the findings of this study by implementing them in marketing strategies.

5.2 Implications

The research has some practical implications in the field of marketing and management that can be implemented in the secondhand clothing business by marketers, managers, and/or practitioners.

Practitioners and marketers want to attract more consumers to buy secondhand clothing. Therefore, managers must understand the consumer decision-making process and the factors that influence their intention. The findings of the proposed research model suggest that subjective norm, price sensitivity, past behavior, and self-congruity influence consumers' intention to purchase secondhand clothing.

The result shows that subjective norm affects consumers' buying intention of used clothing. The practitioners in the secondhand clothing industry and marketers of thrift stores can influence the reference group of consumers, e.g., family, friends, relatives, and girlfriends/boyfriends. As subjective norm was a statistically significant antecedent to influence consumers' intention, a manager can try to influence the reference group as their opinion considered important to consumers.

The result of past behavior implies that consumers, who performed a similar behavior in the past, will have a higher intention to perform that behavior in the future. If a consumer purchases a piece of clothing from a secondhand store, that consumer might return to the store to purchase for the second time if any other factors do not influence the consumer's intention. Hence, managers can create an atmosphere in the store so that consumers prefer to return to the same store in the future.

The concept of price sensitivity implies that consumers prefer to spend less money on clothing, and they believe secondhand clothing is very good in condition compared to the price. Therefore, marketers/managers should always make sure the clothing they are selling is clean and good in quality even though the price is not high. Managers can provide information about the procedures utilized in the preparation of clothes to be sold through marketing efforts. It is essential because secondhand clothing many times considered as unsanitary as the clothes worn by previous owners (Roux & Guiot, 2008). Otherwise, they will switch and intend to purchase clothing offered by fast fashion, which often is cheap in price. Furthermore, managers may consider highlighting certain benefits of shopping at their stores since thrift stores offer plenty of clothing, and many are considerably new. Young customers, according to research (e.g., college students) prefer buying clothing from secondhand stores with expectations such as finding unique or chip clothing (Jenss, 2004; Yan et al., 2015). Managers can try to attract consumers who prefer to spend less money on clothing and treasure hunters, or vintage clothing lovers' finds unique pieces to help create stylish outfits.

The concept of self-congruity implies that consumers choose secondhand clothing to reflect their own perceived characteristics and self-image. The theory states that consumers want to show a degree of match between their self-image and the products they use (Sirgy, 1986). Here, consumers exhibit how secondhand clothing reflects their self-congruence through the

consumption of secondhand clothing. Secondhand shoppers want to interact with society through the image of secondhand clothing that reflects their self-image. Therefore, managers may develop a communication or marketing strategy that facilitates consumers to relate to the secondhand clothing that the stores offer.

5.3 Limitations and recommendations

Although this research explained some variations in intention, there still are several areas for improvement in the present study. The methodology and sampling design are the main areas of limitation. For instance, the convenience sample technique utilized in this study might limit how far results can be generalized. As I lacked a complete list of all students studying at Nord university, I had to ask students who were around me on campus to participate in the survey. Therefore, the result might not reflect reality as accurately as it would have been possible using probability sampling. Consequently, it might be challenging to replicate this study in the future using probability sampling.

Attitude has a significant impact on intention in the analysis of the original model of TPB but an insignificant impact on intention in the research model I developed. Thus, it is difficult to say that attitude is not a significant factor in determining intention to purchase used clothing. Perhaps, other independent variables make the effect of attitude toward the behavioral intention insignificant, or there was some problem in the statements used to measure attitude. Future research may design statements to measure attitude more carefully. Furthermore, it is also possible to examine if there is any indirect impact of other independent variables on attitude

Only one item was used to measure past behavior. Consequently, it was inappropriate to conduct a reliability test on this variable. Though the result revealed that past behavior is a significant determinant of buying intention of secondhand clothing, future research may use more items to study how past behavior influences buying intention and actual buying behavior.

The linearity of the relationship between the dependent and independent variables in this study was questioned. The relationship might have been made linear by simply gathering a large sample size. Further research should consider this issue and act accordingly.

Given the result of regression in the research model, there was a slight difference when the control variable was added and not added. When control variables were included in the regression model, the value of the adjusted R square slightly declined. Similarly, there was little difference in the level of significance of independent variables on the dependent variable (intention), when compared to the first regression model. There was no statistically significant relationship between any of the control variables and intention. However, these variables made a difference in the entire regression analysis. Some studies found the opposite result, which is that gender, income, and education influence the behavior of secondhand shoppers. In my research, all respondents were studying for a bachelor's or master's degree, and few were doing a Ph.D. As most of the respondents were engaged in higher education this could be a reason for the variable not being significant on intention. In the case of control variables, most of the data represented a specific group where diversity in responses was missing, which led to the variables being statistically insignificant. On the other hand, there could be other underlying problems that affected the result from being significant that require investigation further. As the samples were homogenous in terms of education (all respondents were students) it does not necessarily need to make an effect on the dependent variable.

This study examined the students' secondhand clothing shopping behavior as a whole without differentiating their behavior across different types of secondhand shops. O'Donnell and Hughes (2007) stated that there is a strong distinction between profit and non-profit thrift shops. In some cases, consumers tend to purchase clothing from non-profit thrift shops because a large proportion of money the organization earns goes to charity. Therefore, future research might address the question of whether and how consumers of secondhand clothing differ across different types of secondhand stores.

In my research model, attitude and environmental awareness had no significant effect, whereas previous research found the opposite result. Some research also discovered the direct and indirect effects of environmental awareness on attitude. Therefore, future research can focus on studying the effects of environmental awareness or other kinds of beliefs that might have on attitude. Further research might focus on understanding and differentiating the psychographic characteristics of existing consumers, and potential consumers regarding purchasing secondhand clothing.

This study had a relatively satisfactory result in the context of secondhand clothing. Nonetheless, it is possible to use the research model in other contexts to see if the model generates a similar result or if it varies depending on the area of research.

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Appendix

Appendix 1: Demographic frequency distribution

Classification	Variable	N	Percentage
Country of birth	Afghanistan	2	1.4
	Bangladesh	9	6.2
	China	3	2.1
	Croatia	1	0.7
	Denmark	1	0.7
	Ethiopia	1	0.7
	Ghana	1	0.7
	Iran	1	0.7
	Italy	4	2.7
	Latvia	1	0.7
	Lithuania	1	0.7
	Mexico	2	1.4
	Nepal	2	1.4
	Netherlands	1	0.7
	Nicaragua	1	0.7
	Norway	96	65.8
	Pakistan	1	0.7
	Pakistan	1	0.7
	Philippines	1	0.7
	Poland	3	2.1
	Russia	2	1.4
	Slovakia	1	0.7
	South Korea	1	0.7
	Spain	3	2.1
	Switzerland	1	0.7
	Syria	1	0.7
	Thailand	1	0.7
	Vietnam	1	0.7
	Vietnam	1	0.7
	Zimbabwe	1	0.7
Gender	Male	57	39.0
	Female	89	61.0
Age	19	3	2.1
	20	14	9.6
	21	14	9.6
	22	19	13
	23	16	11
	24	14	9.6
	25	9	6.2
	26	7	4.8
	27	9	6.2

	28	4	2.7
	29	6	4.1
	30	3	2.1
	31	5	3.4
	32	4	2.7
	33	4	2.7
	34	4	2.7
	36	3	2.1
	37	1	0.7
	38	2	1.4
	42	1	0.7
	45	2	1.4
	47	2	1.4
Income	0	13	8.9
	2850	1	0.7
	3000	1	0.7
	5000	5	3.4
	6000	1	0.7
	6500	1	0.7
	7000	4	2.7
	7500	1	0.7
	8000	12	8.2
	8400	3	2.1
	8500	3	2.1
	8600	9	6.2
	8684	1	0.7
	8700	3	2.1
	9000	2	1.4
	9200	1	0.7
	10000	19	13
	11000	4	2.7
	11500	2	1.4
	12000	2	1.4
	12500	2	1.4
	13000	2	1.4
	14000	2	1.4
	15000	11	7.5
	16000	1	0.7
	18000	2	1.4
	20000	7	4.8
	22000	2	1.4
	23000	1	0.7
	23500	1	0.7
	24000	3	2.1
	25000	2	1.4
	26000	4	2.7

	27000	2	1.4
	28000	3	2.1
	29000	1	0.7
	30000	5	3.4
	31500	2	1.4
	35000	5	3.4
Level of education	Profession certificate	8	5.5
	Bachelor's degree	98	67.1
	Master's degree	34	23.3
	Doctoral degree	6	4.1
Total		146	100

Appendix 2: Factor analysis for each of the eight concepts

	Factor loading	Cronbach's Alpha
Intention 1	0.965	0.96
Intention 2	0.962	
Intention 3	0.965	
Attitude 1	0.870	0.87
Attitude 2	0.916	
Attitude 3	0.881	
Subjective norm 1	0.756	0.82
Subjective norm 2	0.904	
Subjective norm 3	0.907	
Perceived behavioral control 1	0.777	0.83
Perceived behavioral control 2	0.872	
Perceived behavioral control 3	0.857	
Perceived behavioral control 4	0.783	
Environmental awareness 1	0.424	0.71
Environmental awareness 2	0.902	
Environmental awareness 3	0.908	
Environmental awareness 4	0.727	
Price sensitivity 1	0.842	0.83
Price sensitivity 2	0.871	
Price sensitivity 3	0.887	
Actual self-image 1	0.718	0.93
Actual self-image 2	0.740	
Actual self-image 3	0.818	
Ideal self-image 1	0.835	
Ideal self-image 2	0.786	
Ideal self-image 3	0.764	
Actual social self-image 1	0.817	
Actual social self-image 2	0.757	

Ideal social self-image 1	0.856	
Ideal social self-image 2	0.768	

Appendix 3: First factor analysis

Rotated Component Matrix	Component						
	1	2	3	4	5	6	7
Intention 1		0.864					
Intention 2		0.859					
Intention 3		0.853					
Attitude 1							
Attitude 2				0.488			
Attitude 3				0.486			
Subjective norm 1				0.662			
Subjective norm 2				0.838			
Subjective norm 3				0.820			
Perceived behavioral control 1			0.767				
Perceived behavioral control 2			0.856				
Perceived behavioral control 3			0.825				
Perceived behavioral control 4			0.786				
Environmental awareness 1							0.732
Environmental awareness 2						0.914	
Environmental awareness 3						0.931	
Environmental awareness 4						0.649	
Past behavior 1		0.677					
Price sensitivity 1					0.743		
Price sensitivity 2					0.803		
Price sensitivity 3					0.830		
Actual self-image 1	0.642						
Actual self-image 2	0.657						
Actual self-image 3	0.782						
Ideal self-image 1	0.812						
Ideal self-image 2	0.800						

Ideal self-image 3	0.699						
Actual social self-image 1	0.802						
Actual social self-image 2	0.705						
Ideal social self-image 1	0.832						
Ideal social self-image 2	0.737						

Appendix 4: Factor analysis and Cronbach's alpha for each of the self-congruity concept

Component Matrix

	Component 1
Actual self-image 1	.816
Actual self-image 2	.901
Actual self-image 3	.871

Cronbach's alpha 0.829

Component Matrix

	Component 1
Ideal self-image 1	.857
Ideal self-image 2	.889
Ideal self-image 3	.862

Cronbach's alpha 0.836

Component Matrix

	Component 1
Actual social self-image 1	.913
Actual social self-image 2	.913

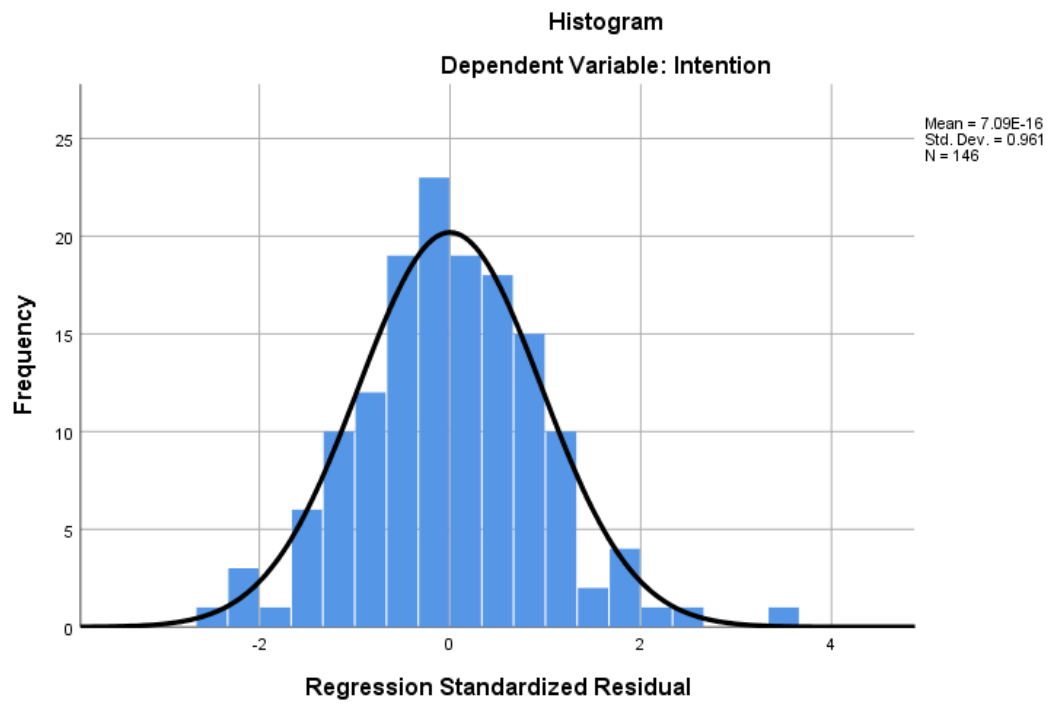
Cronbach's alpha 0.799

Component Matrix

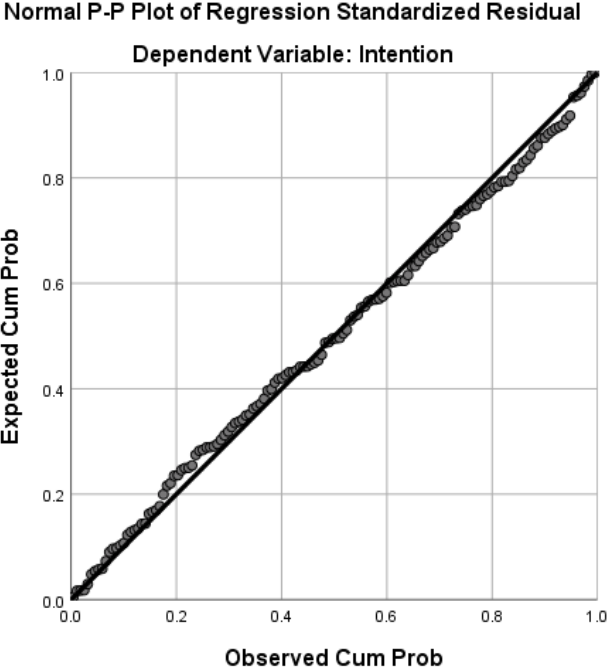
	Component 1
Ideal social self-image 1	.937
Ideal social self-image 2	.937

Cronbach's alpha 0.859

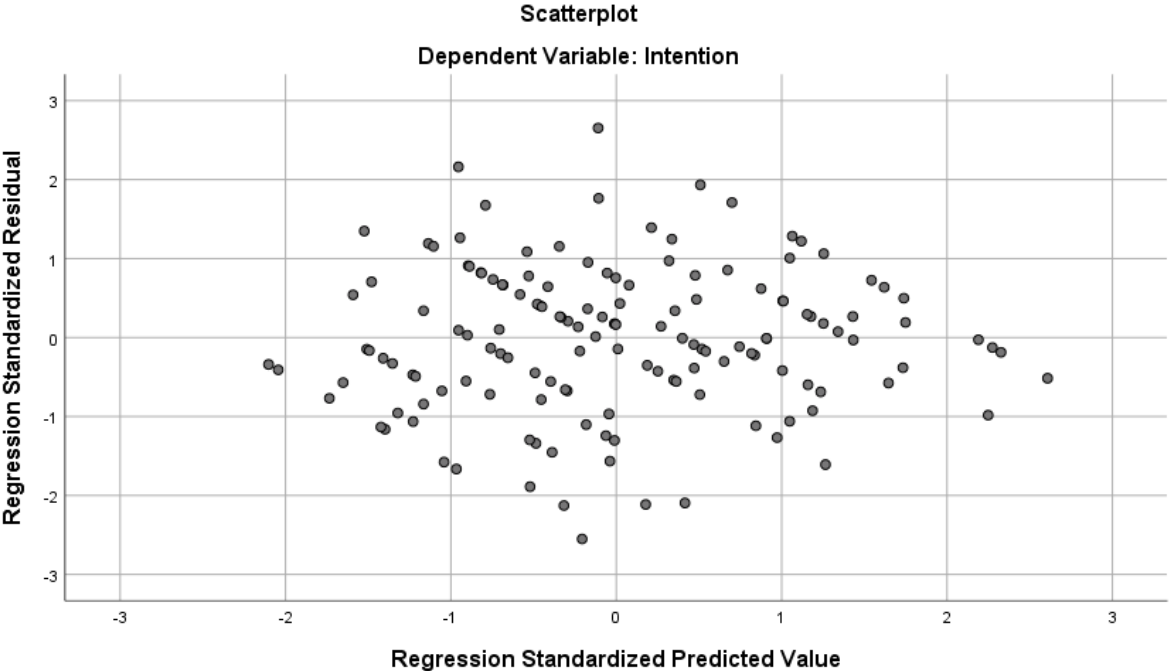
Appendix 5: Assumptions of multiple linear regression analysis, normality test.



Appendix 6: Assumptions of multiple linear regression analysis, linearity test



Appendix 7: Assumptions of multiple linear regression analysis, homoscedasticity test



Appendix 8: Assumptions of multiple linear regression analysis, VIF values

Model	Collinearity Statistics	
	Tolerance	VIF
Attitude	.342	2.923
Subjective norm	.588	1.700
PBC	.817	1.224
Environmental awareness	.739	1.354
Past behavior	.604	1.657
Price sensitivity	.552	1.812
Self-congruity	.683	1.464

Dependent Variable: Intention

Appendix 9: Simple linear regression analysis

Concepts:	<i>b</i>	<i>t</i>	<i>p</i>	<i>R</i> ²
Attitude	0.659	8.007	0.000	0.308
Subjective norm	0.664	7.027	0.000	0.255
Perceived behavioral control (PBC)	0.189	1.293	0.198	0.011
Environmental awareness	0.119	0.961	0.338	0.006
Past behavior	0.707	11.155	0.000	0.464
Price sensitivity	0.599	7.103	0.000	0.259
Self-congruity	0.730	6.581	0.000	0.231

Simple linear regression results show that attitude, subjective norm, past behavior, price sensitivity, and self-congruity all have a statistically significant effect on intention. Despite this, PBC and environmental awareness had no statistically significant impact on intention. It also shows that the five independent variables have a strong ability to explain intention to buy used clothing in the next 6 months.

Appendix 10: Multiple linear regression analysis of the TPB concepts

Concepts:	<i>b</i>	<i>t</i>	<i>p</i>
Attitude	0.498	4.870	0.000
Subjective norm	0.361	3.281	0.001
Perceived behavioral control (PBC)	-0.154	-1.234	0.219

Appendix 11: Multiple linear regression analysis without control variables

Concepts:	<i>b</i>	<i>t</i>	<i>p</i>
Attitude	0.069	0.657	0.513
Subjective norm	0.233	2.500	0.014
Perceived behavioral control (PBC)	0.016	0.148	0.882
Environmental awareness	0.010	0.107	0.915
Past behavior	0.461	6.432	0.000
Price sensitivity	0.219	2.721	0.007
Self-congruity	0.213	2.163	0.032

R² 58.8%, adjusted R² 56.7%

Appendix 12: Survey questionnaire

Questionnaire

Behavioral Intention to Purchase Secondhand Clothing

My name is Sonia Akter Sweety. I am a master's student at Nord University. This questionnaire is designed to collect data for my thesis where I want to study consumer's intention to purchase secondhand clothing (any types of secondhand clothes; for example, t-shirts, shirts, Jeanes, jackets, blazers etc.). None of your information will be used except for the purpose of this thesis. It will take you approximately 6-8 minutes to answer all the questions. I sincerely, request you to answer all the questions below. Please read the questions carefully and select the number that best describe your opinion.

**Please do not skip any question.*

Please check mark your answer to questions i, v, vi and write answers beside the questions for ii, iii, iv.

Demographic information:

- i. What is your gender?
 Male
 Female
- ii. What is your age? _____
- iii. What is your country of birth? _____
- iv. What is your approximate monthly income after tax? _____
- v. What do you study?
 High school or lower
 Profession certificate
 Bachelor's degree
 Master's degree
 Doctoral degree

Please consider these scoring scales when answering the questions below:

Scoring Scale

1= Strongly disagree (SD)

2= Disagree (D)

3= Somewhat disagree (SoD)

4= Neither agree nor disagree (N)

5= Somewhat agree (SoA)

6= Agree (A)

7= Strongly agree (SA)

*Please circle on your corresponding answer. Do not circle more than 1 answer for an individual question.

Questions	SD	D	SoD	N	SoA	A	SA
Purchasing secondhand clothing is beneficial for me.	1	2	3	4	5	6	7
Purchasing secondhand clothing is enjoyable to me.	1	2	3	4	5	6	7
Purchasing secondhand clothing is good for me.	1	2	3	4	5	6	7
The most important people in my life whose opinion I value would approve of my purchase of secondhand clothing within the next 6 months.	1	2	3	4	5	6	7
The most important people in my life want me to purchase secondhand clothing within the next 6 months.	1	2	3	4	5	6	7
The most important people in my life would like me to purchase secondhand clothing within the next 6 months.	1	2	3	4	5	6	7
It is possible for me to purchase secondhand clothing.	1	2	3	4	5	6	7
If I want to, I can purchase secondhand clothing.	1	2	3	4	5	6	7
I am in full control to purchase secondhand clothing.	1	2	3	4	5	6	7
It is entirely up to me whether or not I purchase secondhand clothing.	1	2	3	4	5	6	7
I take into account environmental consequences while I buy clothing.	1	2	3	4	5	6	7
I believe that purchasing secondhand clothing can slow down the tempo of exhaustion of natural resources.	1	2	3	4	5	6	7

I believe that purchasing secondhand clothing helps minimize environmental degradation.	1	2	3	4	5	6	7
I believe individuals and society have the responsibility to preserve the environment.	1	2	3	4	5	6	7
I prefer purchasing secondhand clothing because I do not want to spend a lot of money.	1	2	3	4	5	6	7
Purchasing secondhand clothing allows me to get good products at a cheaper price.	1	2	3	4	5	6	7
I purchase secondhand clothing because it feels like I am paying less.	1	2	3	4	5	6	7
I have an intention to purchase secondhand clothing within the next 6 months.	1	2	3	4	5	6	7
I will try to purchase secondhand clothing within the next 6 months.	1	2	3	4	5	6	7
I am planning to purchase secondhand clothing within the next 6 months.	1	2	3	4	5	6	7

*Take a moment to think about an item of secondhand clothing. Think about the kind of person who typically purchase that type of secondhand clothing. Imagine this person in your mind and then describe this person using one or more personal adjectives, such as stylish, poor, masculine, sexy, classy, old, athletic, or whatever personal adjectives you can use to describe.

Once you have done this, indicate your agreement or disagreement to the following statements using the same scales: strongly disagree = 1, strongly agree = 7.

Question	SD	D	SoD	N	SoA	A	SA
This item of secondhand clothing is consistent with how I see myself.	1	2	3	4	5	6	7
I am quite similar to the typical buyer of this type of secondhand clothing.	1	2	3	4	5	6	7
The image of a typical buyer of this type of secondhand clothing is consistent with how I see myself.	1	2	3	4	5	6	7
This item of secondhand clothing is consistent with how I would like to see myself.	1	2	3	4	5	6	7
I would like to be perceived as similar to the typical buyer of this type of secondhand clothing.	1	2	3	4	5	6	7
I would like to see myself as a person who purchases this type of secondhand clothing.	1	2	3	4	5	6	7
This item of secondhand clothing is consistent with how I believe others see me.	1	2	3	4	5	6	7

I believe others think of me as a person who purchases this type of secondhand clothing.	1	2	3	4	5	6	7
This item of secondhand clothing is consistent with how I would like others to see me.	1	2	3	4	5	6	7
I would like others to think of me as a person who purchases this type of secondhand clothing.	1	2	3	4	5	6	7

*Please refer to your past-purchase behavior of secondhand clothing using the scale-

Scoring Scale

1= Never (N)

2= Very rarely (VR)

3= Rarely (R)

4= Occasionally (O)

5= Frequently (F)

6= Very frequently (VF)

7= Always (A)

Question	N	VR	R	O	F	VF	A
How often have you purchased secondhand clothing in the past 6 months?	1	2	3	4	5	6	7

I appreciate that you have considered being a part of the survey and taken your time to answer these questions. Thank you very much.