CHINESE CONSUMER WILLINGNESS TOWARDS ECO-CONSCIOUS APPAREL PURCHASE
– AN APPLICATION OF THE THEORY OF PLANNED BEHAVIOR

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**Title:** Chinese Consumer Willingness Towards Eco-Conscious Apparel Purchase: An Application of the Theory of Planned Behavior

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**Abstract**

**Purpose** – This thesis aims to contribute to the understanding of the Chinese customers’ perception and acceptance of eco-conscious apparel (ECA) based on the theory of planned behavior (TPB). The thesis further examines whether people would like to pay more for ECA and how the factor of willingness to pay a premium is influenced by TPB variables.

**Design/methodology/approach** – The research design is based on quantitative methodology. The data were collected via a web-based survey, a total of 315 responses from Chinese consumers were analyzed with application of the structural equation modeling.

**Findings** – Both attitude toward ECA and perceived behavioral control over ECA acquisition have positive influence on ECA purchasing intention. Willingness to pay a premium for ECA is only positively affected by subjective norm. There is no correlation between ECA purchasing intention and willingness to pay a premium for ECA.

**Implications** – To raise Chinese customers’ purchasing intention, fashion company should focus their actions on disseminating environmental information and knowledge, and offer affordable ECA options with the properties close to traditional apparel. To evoke the willingness to pay a premium for ECA, fashion company can apply celebrity endorsement to add perceived social value into its ECA series. Such actions will contribute to formation of positive social norm and hence positive perception towards ECA. Meanwhile, the government can put more efforts into educating Chinese people about sustainability issues in fashion industry, formulating and implementing policies in favor of ECA consumption, so that a positive social atmosphere for ECA consumption could be created.

**Originality/value** – This study is novel in applying TPB for examining the consumer purchasing of apparel containing recycled fiber in China. The thesis provides useful information to corporate practitioners on how to formulate ECA marketing strategies in China. Research findings are also of relevance for Chinese government by providing recommendations for formulating relevant policies to favor the ECA consumption.
Keywords Eco-conscious apparel, Theory of planned behavior, Sustainable consumption in China, Willingness to pay a price premium, Sustainable fashion, Apparel containing recycled fibers
Table of contents

1. Introduction .................................................................................................................. 1
   1.1 Background .............................................................................................................. 1
   1.2 Research Gap ......................................................................................................... 2
   1.3 Purpose .................................................................................................................... 3
   1.4 Research Question ................................................................................................. 3
   1.5 Outline .................................................................................................................... 3

2. Methodology .................................................................................................................. 5

3. Relevant Literature and Hypotheses Development ...................................................... 8
   3.1 The Theory of Planned Behavior (TPB) .................................................................. 8
   3.2 Customer Attitude Toward ECA ........................................................................... 10
   3.3 The Influence of Subjective Norm on ECA Acquisition Behavior ......................... 12
   3.4 PBC in ECA Acquisition ....................................................................................... 13
   3.5 Customers’ Willingness to Pay a Premium for ECA .............................................. 14
   3.6 Factors Influencing Sustainable Consumption in China ....................................... 14
   3.7 Hypotheses Development ...................................................................................... 17

4. Result and Analysis ..................................................................................................... 20
   4.1 Sample Profile ........................................................................................................ 20
   4.2 Research Quality .................................................................................................... 21
   4.3 Descriptive Statistics of Variables ........................................................................ 25
   4.4 Hypotheses Test ..................................................................................................... 26

5. Discussion and Implication ......................................................................................... 28
   5.1 Discussion ............................................................................................................... 28
   5.2 Implications for Corporate Practitioners and Policymakers .................................. 30

6. Conclusion and Future Research ............................................................................... 33
   6.1 Conclusion .............................................................................................................. 33
   6.2 Limitations and Future Research .......................................................................... 33

Reference ......................................................................................................................... 35

Appendix 1 ...................................................................................................................... 43

Appendix 2 ...................................................................................................................... 47
1. Introduction

1.1 Background

Apparel industry is a traditional industry with hundreds of years, but the development has never been stopped. Especially for recently decades, the speed is faster than before in many aspects like technology and technique of manufacture, evolvement of business model, dynamic market demands and fashion trend. Sustainability trend has been introduced into apparel industry and many fashion companies like H&M, UNIQLO and North Face, take an active part in this development. Sustainable fashion can be defined as clothing, shoes and accessories that are manufactured, marketed and used in the most sustainable manner possible, considering both environmental and socio-economic aspects (Green Strategy, 2017). As customers, we have already seen some clothes and pants with various green label such as “organic cotton”, “recycled fiber” and “eco-conscious”, appear from boutiques to shopping malls.

Why sustainability has become one of fashion trends in apparel industry? On the one hand, our earth has been extremely exploited by human beings, resulting in environmental degradation and a variety of man-made pollutions, which is threatening our living conditions. Throughout the life cycle of apparel, everything from garment production in factory, through the maintenance in use, to the final disposal, contributes to environmental damage. One recipient of an environmental award claimed that pollution from the apparel industry ranks second behind oil (Sweeney, 2016). On the other hand, ethical issues, such as unfair employment and poor working conditions, have been a serious problem in the apparel industry. Social impacts used to occur in the western countries during the last century, but now, it mainly occurs at the process of manufacture in developing countries. In 2013, an eight-story complex of clothing factories called Rana Plaza, in Bangladesh has collapsed in Bangladesh. As result of this disaster, 1127 people were dead, mainly young women. Big fashion companies were affected with criticism and negative publicity, which demonstrated that ethical-consciousness of products has been in many people’s mind. Research shows that consumers support ethical fashion businesses and are willing to pay a premium for apparel products produced ethically (Shen et.al, 2012).

Sustainable fashion also becomes one of emerging markets in fashion, because more customers become environmentalists and sustainable consumerism gradually becomes the mainstream. Today, people view garment consumption as a means of constructing self-identity. One way of green customers expressing their green image is to buy sustainable garments. Therefore, in the highly competitive apparel market, sustainability is a good concept to be used to develop this potential market. As Douaihy and Alleyne suggested (2008), sustainability offer companies an opportunity to make their products and services competitive.

Eco-conscious apparel is a subset of sustainable fashion. Perry and Chung (2016)
summarized the previous studies and defined it as apparel made from eco-friendly fiber or recycled materials, designed for long-time use, causing little or no environmental impact, and produced by eco-conscious companies. To be specific, it includes using cloth with no or low hazardous substance, apparel made from organic cotton, hemp and silk, classic in styling and extending the lifetime of apparel by eco-design and consuming second-hand apparel (Zhu et al., 2016; Hiller Connell, 2011). From the customer perspective, eco-conscious apparel consumption is behaviors of apparel acquisition, storage, use, maintenance and discarding that are environmentally preferable to mainstream apparel consumption behaviors due to creating less waste and/or consuming fewer resources (Connell, 2010).

China has more than 1.3 billion people. Large population constitutes a tremendous fashion market, which keeps growing year by year. According to statistics, the adult apparel market in China was estimated above 174 billion USD in 2016, which increases by 6.4 percent compared to the last year. Its market value is expected to climb to more than 208 billion USD by 2019 (HKTDC Research, 2017). Nowadays, fashion brands can be divided into two major categories in China. The first comprises upmarket brands whose target group is high-income customers. These customers have high consumption power on luxury garments and luxury fashion brands and stress shopping experience. The second category adopts a mass market strategy. Its representatives are well-known fast fashion brand such as H&M and Zara. They offer affordable and trendy garments especially popular with young consumers (HKTDC Research, 2017).

1.2 Research Gap

There is a paucity of academic research on eco-conscious apparel (ECA) consumption in China. A lot of studies have been focused on sustainable consumption in China, but most of them remain a general focus on the relationship between the antecedents and sustainable purchasing intention and behaviors (e.g. Wang, 2014; Wu et al., 2016; Wang et al., 2016). Furthermore, majority of these studies focus on organic food (e.g. Yu et al., 2014; Hasimu et al., 2017). In term of apparel industry, despite of large consumption of apparels in China, the amount of studies focusing on examining the purchasing behavior of ECA is limited. Scholars and practitioners can refer the findings from the relevant studies in the other regions to predict and estimate the Chinese ECA market. However, people from different countries have different dispositions, living conditions and values that could affect the research findings. Therefore, it is of particular research interest to make a study with focus on Chinese market.

Hustvedt and Dickson (2009) further claimed that while organic food consumption had been examined in academic research, little had been published on the psychology of organic apparel consumers. In the last decade, the number of relevant research papers on sustainable apparel has increased as the concept of sustainable apparel attracted the attention of both corporate practitioners and customers. Although ECA is a subset concept of sustainable apparels, ECA encompasses a quite wide range of products, such
as apparel made of eco-advantageous fibers like organic cotton and hemp, apparel made of recycled fibers and apparel designed with longevity (Hiller Connell, 2011). Currently, organic cotton has been researched in many studies (e.g. Lin, 2010; Ellis et al., 2012; Nassivera et al., 2017), whereas other categories of ECA have received limited research attention. The reason could be a much earlier commercialization of organic cotton than of other eco-conscious categories. At the same time, organic cotton apparel is quite special due to customers’ perception that this green fiber is better for their health compared to conventional cotton containing traces of harmful pesticide residues (Han and Chung, 2014), although there is scarcely scientific evidence to support such opinion (Hustvedt and Dickson, 2009). Therefore, findings from previous studies with focus on organic cotton do not provide sufficient explanation for understanding of ECA consumption phenomenon. This study contributes to existing research on ECA consumption by focusing on the apparel containing recycled fiber. It refers to the apparels made from recycled garments and textile leftovers, which are ground into fibers, spun into new yarns and woven into new fabrics blended with conventional yarns.

As such, this study attempts to enrich knowledge of ECA consumption in Chinese market by providing a more comprehensive understanding of the purchasing intention in relation to ECA and how it can be facilitated.

1.3 Purpose

This study aims to contribute to the understanding of the Chinese customers’ perception and acceptance of eco-conscious apparels. Based on the theory of planned behavior (TPB), the study examines the influence of attitude, social norm, and perceived behavioral control (PBC) on consumer intention to purchase ECA. Moreover, this study will examine whether people would like to pay more for ECA compared to conventional clothes and how the factor of willingness to pay a premium is influenced by TPB variables.

1.4 Research Question

To accomplish the purpose of this thesis, the following research question will be addressed:

1) Underpinned by the theory of planned behavior (TPB), how do attitude, subjective norm and perceived behavioral control (PBC) influence Chinese consumers’ intention to buy eco-conscious apparel (ECA)?

2) How do attitude, subjective norm and perceived behavioral control (PBC) influence willingness to pay a premium for eco-conscious apparel (ECA) in Chinese market?

1.5 Outline
This thesis is comprised of six chapters as below:

Chapter 1 is Introduction. It provides the background to sustainable fashion, introduces the concept of ECA and brief overview of Chinese apparel market. The research gap and purpose are then presented, followed by formulation of research questions of this study.

Chapter 2 describes the research methodology. It clarifies how quantitative research method is used and how it affects the design of this study. Moreover, the questionnaire design is presented in Chapter 2.

Chapter 3 is devoted to literature review and hypotheses development. The literature review is structured among several concepts derived from the Theory of Planned Behavior (TPB) and factors influencing sustainable consumption in China. These concepts are also used as the theoretical basis for hypothesis formulation.

In Chapter 4, results from testing hypotheses using a series of statistical methods are presented. This chapter also examines the research quality including reliability analysis and validity analysis.

Chapter 5 discusses the research findings, comparing them with results from prior studies on ECA consumption. The chapter also discuss the implications of research findings for corporate practitioners and policymakers. In particular, it is suggested how ECA purchasing intention and customers’ willingness to pay a premium for ECA can be facilitated by marketing efforts and governmental policies.

Chapter 6 is Conclusion. This chapter summarizes the thesis findings and the research contributions. Suggestions for future research and research limitations are presented.
2. Methodology

This thesis utilizes quantitative research method. Like other studies using quantitative methods, reviewing the literature is the first step. Underpinned by the TPB, this study elaborates on relevant concepts and findings from previous studies. More specifically, customer attitudes toward ECA, the social influence on ECA acquisition behavior, PBC in ECA acquisition and factors influencing sustainability consumption in China are reviewed.

As the next step, hypotheses are formulated, based on the conceptual model derived from the TPB and related literature review. In order to test these hypotheses, the hypotheses have to be broken down into a number of indicators which can be operationalized (Chapman and McNeill, 2005). For this study, a self-administered questionnaire was developed, utilizing the questionnaires’ construct and measurement items from the previous studies, because there are numerous previous studies applying TPB model to develop corresponding questionnaires. Apparently, it was necessary to make some modifications to fit the current study topic. As a general rule, developing a questionnaire with totally new items could have a higher risk of poor reliability and validity. On the contrary, previous studies have shown the good quality of their measures. This thesis mainly refers to the previous studies in the field of organic clothing to design the scale items for each variable. All variables with corresponding scale items are listed in the following table.

Table 1. Scale items of each variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coding</th>
<th>Item</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td></td>
<td>For me buying apparel containing recycled fibers would be:</td>
<td>(Kim and Karpova 2010)</td>
</tr>
<tr>
<td></td>
<td>AT1</td>
<td>Harmful/Good</td>
<td>(Han and Stoel. 2016)</td>
</tr>
<tr>
<td></td>
<td>AT2</td>
<td>Useless/Beneficial</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AT3</td>
<td>Foolish/Wise</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AT4</td>
<td>Negative/Positive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AT5</td>
<td>Not valuable/Valuable</td>
<td></td>
</tr>
<tr>
<td>Subjective norm</td>
<td>SN1</td>
<td>Close friends and family think it is a good idea for me to buy apparel containing recycled fibers</td>
<td>(Kim and Karpova 2010)</td>
</tr>
<tr>
<td></td>
<td>SN2</td>
<td>The people who I listen to could influence me to buy apparel containing recycled fibers</td>
<td>(Maloney et.al, 2014)</td>
</tr>
<tr>
<td></td>
<td>SN3</td>
<td>Important people in my life want me to buy apparel containing recycled fibers</td>
<td>(Han and Chung, 2014)</td>
</tr>
<tr>
<td></td>
<td>SN4</td>
<td>I believe that most of my acquaintances expect that I choose apparel containing recycled fibers</td>
<td></td>
</tr>
</tbody>
</table>
instead of conventional apparel

PBC

PBC1 I have complete control of purchasing apparel containing recycled fibers (Kim and Karpova 2010)

PBC2 I believe that I have the resources and the ability to purchase apparel containing recycled fibers (Han and Stoel. 2016)

PBC3 If I want to, I could easily buy apparel containing recycled fibers

PBC4 I do not face significant barriers in purchasing apparel containing recycled fibers

Purchasing intention

PI1 I intend to buy apparel containing recycled fibers. (Kim and Karpova 2010)

PI2 I will try to buy apparel containing recycled fibers in the future (Han and Stoel. 2016)

PI3 I will make an effort to buy apparel containing recycled fibers in the future

PI4 If I see a retail store selling apparel containing recycled fibers, I intend to visit the store to purchase a product

Willingness to pay a premium

WPP1 I am willing to pay a premium for apparel containing recycled fibers (Shen et.al, 2012)

WPP2 It is still worthwhile to support the apparel containing recycled fibers even if I have to forgo some clothing options (Jung and Jin, 2016)

WPP3 In the future, I plan to buy apparel from the fashion retailers which have the category of the apparel containing recycled fibers

WPP4 Buying apparel containing recycled fibers seems smart to me even if it costs more

All the items are rated on a 7-point Likert scale. Moreover, the questionnaire has five items that measure the respondent’s demographic characteristics including gender, age, education level, income, and whether purchasing of ECA has occurred earlier. The questionnaire can be seen in Appendix 1. Appendix 2 is corresponding Chinese version.

Data were collected through a Web-based survey from 8th May to 25th May 2018. The survey was initially developed in English but translated into Chinese when all item

1 7-point Likert scale (1= Entirely disagree, 2= Mostly disagree, 3= Somewhat disagree, 4= Neither agree nor disagree, 5=Somewhat agree, 6=Mostly agree and 7=Entirely agree)
contents of questionnaire were entered into wjx.cn, a well-known web tool in China. The website can output e-questionnaire and it can be shared to social software like WeChat and QQ. WeChat is the biggest multi-purpose messaging and social media app in China and has over 1 billion monthly active users (Jao, 2018). After more than half of a month collection through social media channels, in total, 491 questionnaires were collected but 176 questionnaires had to be discarded due to invalidity. Two standards were set to identify the questionnaire validity. When collected questionnaires were downloaded at the wjx.cn, the records of completion time of each questionnaire were also accessible. According to a rough statistic, it took from 130 to 500 seconds for most respondents to complete the questionnaire. 85 questionnaires were completed less than 30 seconds and 44 questionnaires were completed more than 500 seconds, so they should be discarded at first. Secondly, if respondents chose the same number to answer all the questions in the second portion, their questionnaires were discarded as well, which accounted for 47 collected questionnaires in total. Therefore, the remaining usable responses were 315, yielding an effective rate of 64.15%. These data were gathered and entered into SPSS software version 20.

After research quality (namely, validity analysis and reliability analysis) had been qualified with acceptable threshold level, structural equation modeling (SEM) were applied to figure out the relationships among variables with Amos version 23. Whether the suggested hypotheses are accepted or rejected were in accordance with correlation coefficient and corresponding significance level. Meanwhile, descriptive statistical analysis was used to illustrate sample profile and data distribution of each variable. Finally, discussion is based on the comparison of obtained findings with results from previous literatures, and some suggestions for practice and future research are proposed.
3. Relevant Literature and Hypotheses Development

This chapter is devoted to analysis of relevant literatures. It presents theory of planned behavior and summarizes findings from previous studies on the influence of customer attitude, social norm and perceived behavior control on ECA acquisition. Additionally, the concept of customers’ willingness to pay a premium for ECA is introduced, followed by general overview of factors influencing sustainable consumption in China. The chapter concludes with hypotheses formulation, focusing on the influence of TPB-based factors on the purchasing intention of apparel containing recycled fiber in China.

3.1 The Theory of Planned Behavior (TPB)

The theory of planned behavior has become a relatively mature and influential theory in social psychology, and it has also been widely applied. It is mainly used to predict human behavior, explaining how attitudes, subjective norm, and perceived behavioral control jointly influence on people’s intention as well as how actual behavior is influenced by the above factors. The theory of planned behavior is an extension of the theory of reasoned action (TRA) (Fishbein and Ajzen, 1975). TRA assumes that behavioral intention is a direct factor that determines behavior, and behavioral intention is influenced by behavioral attitudes and subjective norm. TRA can provide a good explanation in research when individual’s behavior is controlled by his/her own willpower. However, in reality the individual’s behavior is not entirely voluntary and is always interfered by many external factors. These factors, including comments from peers, substantially reduce the explanatory power of individual behavior in the TRA (Ajzen, 1991). Therefore, under Ajzen’s further research, Perceived Behavior Control (PBC) was proposed and added into the structure of TRA model as a variable, forming the TPB (Ajzen, 1985). TPB is evolved from TRA and it increases the explanatory accuracy in the situation when a person has only limited control over his/her willpower, like lack of money and time when intending to have a trip.
Figure 1. The theory of planned behavior (TPB). Source: Ajzen (1991)

In the TPB (Figure 1), the element termed Behavior refers to the person actually taking action. The other four conceptual categories need to be explained in more detail:

**Attitude.** Attitude (A) refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question (Ajzen, 1991). In the theoretical model suggested by Ajzen (1991), behavioral attitudes are influenced by behavioral beliefs related to the assessment of an individual's behavior that may produce important results. Behavioral beliefs consist of two parts. One is the possibility of behavioral consequences, namely strength of behavioral belief (b), and the other is the assessment of behavioral outcomes, namely evaluation (e). Strength of behavioral belief and evaluation jointly determine behavioral attitude. This relation can be expressed in equation format as below:

\[ A \propto \sum b_i e_i \]

**Subjective Norm.** Subjective norm (SN) refers to the perceived social pressure to perform or not to perform the behavior, such as influence of peers or groups on an individual’s behavioral decision-making. The individual’s ability to adopt a specific behavior is affected by normative beliefs of other people’s expectations (Ajzen, 1991). Like attitude, SN is determined by two factors. One is a normative belief (n) and it means that individuals subjectively believe that peers or social groups support him in performing a particular behavior. The other factor is motivation to comply (m) which means the extent to which individuals follow the opinions held by peers or social groups when performing a particular behavior. The relation which determines dependence of subjective norm on the aforementioned factors can be expressed in equation format as below:

\[ SN \propto \sum n_i m_i \]

**Perceived Behavioral Control.** Perceived Behavioral control (PBC) is defined as the degree of difficulty that an individual perceives when intending to perform a specific behavior. In other words, PBC reflects the individuals’ perception of drivers and barriers for implementing the behavioral intention (Ajzen, 1991). PBC also has two antecedent factors, control belief (c) and perceived power (p). The former refers to the factors perceived by individual that possibly promote or hinder behaviors. The later refers to the extent to which an individual perceives the influence of these factors on behavior. The relationship between PBC, control belief and perceived power are shown in the equation below:

\[ PBC \propto \sum p_i c_i \]

**Behavior Intention.** Behavior intention (BI) is a central factor in the theory of TPB and also in the theory of TRA. It is assumed to capture the motivational factors that influence a behavior. In another word, it is an indication of how hard a person is willing to try and how much of an effort he/she is planning to undertake in order to perform the
behavior.

As a general rule, more positive attitude, higher subjective norm and higher PBC lead to the stronger behavioral intention and consequently increased likelihood of the actual behavior. On the opposite, more negative attitude, lower subjective norm and lower PBC result in weaker behavioral intention and consequently decreased likelihood of the actual behavior (Ajzen, 1991).

3.2 Customer Attitude Toward ECA

Some previous studies showed that positive attitude toward ECA leads to ECA purchasing intention (e.g. Chang and Watchravesringkan, 2018; Cowan and Kinley, 2014; Kang and Kim, 2013; Kang et al., 2013) and even results in the willingness to pay a premium (e.g. Lin, 2010; Shen et al., 2012). However, several studies suggested that there is a gap between environmental attitudes and ECA purchasing behaviors. More specifically, it does not mean that people with high eco-consciousness about apparel would actually purchase ECA (Kim and Damhorst, 1998; Kollmuss and Agyeman, 2002; Perry and Chung, 2016). Through individual in-depth interviews, Perry and Chung (2016) found that, this was due to respondents’ perception that 1) environmental issues are not prioritized in the apparel industry; 2) eco-apparel items are not so environmentally friendly; 3) purchasing eco-apparel cannot save the environment; 4) and the industry should take more responsibility. Most customers usually consider other factors than environmental attitudes when purchasing a ECA (Ginsberg and Bloom, 2004; Perry and Chung, 2016). Customers are not willing to sacrifice their benefits from purchasing conventional apparels and switch to buy more sustainable alternatives (Sonnenberg et al., 2014; Meyer, 2011). Price, design/style/fashion, and fit are important criteria which affect customers’ purchasing intention to buy both an ECA and conventional apparel (Meyer, 2011; Perry and Chung, 2016).

In some cases, customers will abandon their purchasing behaviors because the ECA cannot meet their multiple demands, such as a trade-off between a desire for sustainability and a desire to buy the product that will enhance their image (Tey et.al., 2018). However, sometimes, customers would like to make a compromise. For instance, Hustvedt and Dickson (2009) summarized the previous studies about the relationship between altruistic values and environmental behavior and concluded that people were more likely to purchase the apparel with only a small percentage of organic cotton than 100 percent organic cotton. One reason is that for some people, the motivation for purchasing is related to the perception that organic cotton apparel is better from health perspective. In addition, “Organic” is viewed as a symbol of a better lifestyle. In comparison to 100 percent organic cotton of high price, blended organic apparel is more affordable and delivers a number of similar perceived benefits for customers. In other words, some customers don’t really care about the environmental performance of apparel products (e.g. if it is 100 percent organic or not), but rather want to obtain other
benefits such as acting in a socially responsible manner while paying lower prices.

Environmental claims from eco-conscious fashion brands themselves could appeal customers to engage in ECA acquisition. As the study of Wong and Taylor (2001) concluded, environmental claims were the most effective ways to attract attention to environmental clothing brands and consumers accepted and appreciated educational environmental advertisements in their survey. Stall-Meadows and Davey (2013) pointed out that environmental claims could be suitable for facilitating sustainable consumption among some customers. They found that environmental marketing claims may be effective to consumers who had past purchasing experiences with ECA, reducing their price sensitivity. The effectiveness of environmental claims is however low for motivating sustainable consumption among customers who had no purchasing history of ECA. In the similar vein, Kim et al. (1997) found out that environmentally concerned customers reacted more positively to advertisement than non-environmentally concerned customers. However, fashion advertisements with environmental claims appeared to be insufficient for stimulating customers to do consumption changes towards purchasing sustainable textiles in the study of Kim and Damhorst (1999). It is important to note, however, that their respondents sample reflects poor environmental concern, environmental commitment and environmental textile knowledge. As such, it can be concluded that the effect of environmental claims is subject to other factors. Environmental claims can facilitate customers’ positive attitude toward ECA in situations when customers have already formulated good image of ECA in their mind. In other situations, the influence of environmental claims and advertisement is rather limited.

With regard to ECA, there is a lack of knowledge among consumers. For many customers, “organic” is always associated with good quality and thus they are willing to pay more for organic clothing (Ellis et al., 2012; Hustvedt and Dickson, 2009). However, some other categories of ECAs, e.g. fibers made from polylactic acid (PLA), a fiber manufactured from corn, have different associations. For instance, Hustvedt and Bernard (2008) found that consumers were willing to pay almost 40 cents less for the pair of socks once they found out the socks were made with PLA. The main reason is customers lacking the relevant knowledge of PLA (Hustvedt and Bernard, 2008). Tey et al. (2018) also found that customers tend to pay less for apparel made of polylactic acid. The suggested explanation is poor communication leading to mis-perceptions concerning the products’ sustainability performance. In the research by Connell (2010), respondents stated that natural fibers are better for the environment than manufactured fibers. However, in reality garments made of natural and manufactured fibers have equal environmental effects over the complete product life cycle (Chouinard and Brown, 1997). In addition, Connell (2010) found that all respondents were quite familiar with organic cotton and hemp, but beyond these two fibers, they had little awareness about other environmentally preferable fiber alternatives, and many participants almost did not know where they could buy ECA.
Some studies (e.g. Connell, 2010; Wong and Taylor, 2001; Kozar and Hiller Connell, 2013) pointed out that ECA knowledge was positively related to ECA acquisition, and a lack of knowledge was a barrier for customers to purchase ECA. Nevertheless, other studies refer to different results. For example, the research by Kim and Damhorst (1998) showed that there was a weak association between the customers’ knowledge of environmental effects of apparel products and ECA consumption. Hiller Connell and Kozar (2012) found no significant change in apparel purchasing behavior after participants got more knowledge about environmental issues relevant to the apparel and textile industry. Furthermore, it does not mean customers with good ECA education would avoid buying garment with negative environmental impact (Wong and Taylor, 2001). Based on these previous studies, knowledge can be a driver for customers to join in ECA acquisition, but it does not really promote customers to change their purchasing patterns towards ECA.

### 3.3 The Influence of Subjective Norm on ECA Acquisition Behavior

When choosing fashion wear, individuals are guided by their societal context, such as professional position, social status, and/or group-identity and peer groups (Tey et al., 2018). Some people are greatly concern with how they are perceived by their peers when they attempt to wear ECA (McNeill and Moore, 2015). In the study of Connell (2010), one of the participants argued: “I am expected to carry a certain appearance. If I were working for an environmental group, I would feel more comfortable wearing hemp but I work in academia. So, I must continue to buy regular clothes”. Kang and Kim (2013) made research on ECA consumption through the lens of customer perceived risks. One of identified risks preventing the purchase of ECA was social risk, referred to embarrassment or disapproval from one’s family or peers (Mandel, 2003). The main reason is that people still perceive this type of apparel as counterculture in style (Connell, 2010), although current ECA design is far different from the stereotypical images which are often associated with the Hippie subculture (Winge, 2008).

Some studies suggested that subjective norm can affect ECA purchasing intention and behaviors. Kang et al. (2013) suggested that subjective norm had a positive effect on ECA purchasing intention among university students from US, South Korea and China. Chang and Watchravesringkan (2018) also did research on college students and, through applying TPB, found the same effect. Cowan and Kinley (2014) revealed that social pressure to act green and environmental guilt, as two subsets of normative influence, had significant impact on ECA purchasing intentions. Based on the theory of normative conduct proposed by Cialdini et al. (1990), Han and Stoel (2016) split social norms into injunctive norms and descriptive norms. They found that injunctive norms had an indirect correlation with purchasing intention of organic cotton apparel.

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1 Injunctive norms refer to the individual perception whether others people approve or disapprove his/her behavior. Descriptive norms are defined as how majority of other people act in a given situation (Cialdini et al., 1990).
while descriptive norms directly influence on the purchasing intention. Han and Chung (2014) confirmed that social pressure could greatly influence Korean consumers to buy organic cotton apparel. This is in contrast to previous studies, which concluded that subjective norm had a weaker impact on green product acquisition for Western consumers. They explained that such varying degree of influence of subjective norm is due to cultural values of individualism and collectivism in Western European and Korean context respectively. Kim et al. (2012), by carrying out experiment with fictitious product description websites containing environmental claims, found that both the descriptive norms and the injunctive norms had significant effects on ECA purchasing intentions and their effects were greater than the effect of respondents’ environmental concerns.

In comparison to aforementioned research, there are some studies found no significant correlation between subjective norm and ECA purchasing intention. In the study of Khare and Sadachar (2017), both variables of customers’ susceptibility to interpersonal influence (CSII) and green peer influence cannot affect Indian youth to buy green apparels, which were against anticipation that both variables could do influence on purchasing behavior because India was a collectivist society in particular. Another study found similar result that peer influence also did not had impact on Indian youth to buy organic cotton (Khare and Varshneya, 2017).

### 3.4 PBC in ECA Acquisition

Price is one of the often-examined factors in research on sustainable consumption. Clearly, the high price negatively influences green purchasing intention and behavior for many sustainable product alternatives, including ECA (Joshi and Rahman, 2015). For example, Wang (2007) demonstrated that organic cotton clothing with a high premium price was only catering for the demands of environmentally conscious customers, whereas the rest of customer segments were not affected due to price sensitivity. Tey et al. (2018) found that income could directly make an influence on individual intention to purchase ECA. Customers with higher income could more easily afford more expensive sustainable apparel than individuals with low-income. Moreover, previous research indicates that customers are resistant to pay more money for ECA, unless ECA had extra personal benefits in addition to environmental considerations (Tey et al., 2018; Perry and Chung, 2016).

Besides perceived high price, availability is another factor that hinders potential customers to purchase ECA. Previous researches reveal that limited availability of green products has a negative influence on customer purchasing intention and purchasing behavior (e.g. Bonini and Oppenheim, 2008; Young et al., 2010).

More specifically, the ECA availability includes two sub-concepts. One is limited availability of ECA with desired attributes. For example, business wear and footwear are the two most commonly mentioned categories which are hard to find. In the semi-
structured interview conducted by Connell (2010), consumers often mentioned the difficulty to find business casual clothes that is suitable, meets their needs and good for environment. Ochoa’s study (2011) revealed that “not stylish” and “expensive” are two main barriers for buying eco-fashion, with “not stylish” explaining why 48 percent of customers included in the survey have abandoned ECA purchase. Meyer (2001) and McNeill and Moore (2015) suggested that some kinds of ECAs were perceived by customers as colorless and shapeless as the result of focus on superior durability and environmental standards. Similarly, Perry and Chung (2016) point out the trade-off between garment classic design for longevity and fast changes in fashion style as one of the central characteristics of the fashion industry. The other one is limited availability of sources for acquiring ECA such as hard to find retailers and inconvenience to potential customers (Connell, 2010; Perry and Chung, 2016; Kim and Damhorst, 1998; Jin Gam, 2011). Customers are more likely to purchase ECAs when they are not required to spend extra effort such as more time and long distance to travel to the shop. Otherwise, customers still buy conventional apparels instead of ECA (Perry and Chung, 2016).

3.5 Customers’ Willingness to Pay a Premium for ECA

As previous research shows, price sensitivity is very important factor in explaining purchasing intention and behavior (Wang, 2007; Tey et al, 2018; Perry and Chung, 2016). Wang (2007) found out that only 10 percent of respondents in the survey were not at all willing to pay a premium for an organic cotton t-shirt, while 30 percent stated they were extremely willing to pay a premium. More than half of respondents were willing to pay a 50 percent premium and 25 percent would like to spend over double cost on an organic cotton t-shirt over the visibly similar t-shirt made from conventionally produced cotton.

Ellis et al. (2012) found out that 26 percent of respondents were not willing to pay a premium for the organically produced cotton t-shirt; 24 percent were willing to pay a premium of US$2.00 or less; 38 percent were willing to pay a premium between US$2.01 and US$5.00; and 12 percent were willing to pay over a US$5.00 premium. On average, participants were willing to pay a 25 percent price premium for organic cotton t-shirts. Notably, participants were not willing to pay a price premium in case of paying for their own clothing or making purchasing alone.

In addition, Hustvedt and Bernard (2008) made a survey about customers’ willing to pay for sustainable apparel influenced by labelling for fibers origin and production methods. Findings suggest that respondents were willing to pay a $1.86 premium for a pair of socks after they got the information that it is made of organic cotton. Respondents were also willing to pay $1.36 more for labelling that assured them that the socks were made with non-genetically modified fibers.

3.6 Factors Influencing Sustainable Consumption in China
In the early research on sustainable consumption in China, Chan (1999) and Chan and Lau (2000) found out that Chinese consumers had strong emotional attachment to ecological issue, which is opposite to their initial assumption that Chinese people could be environmentally apathetic. Chan (2001) argued that one reason is that Chinese traditional culture is focused on man-nature relationships, meaning that ‘man should not try to overcome or master nature but has to learn how to adapt to it so as to reach harmony’ (Yau, 1988). Another reason for being prone to care about environment is collectivism (Chan, 2001). Therefore, Chan (2001) suggested that Chinese government could appropriately use these unique cultural characteristics to elicit more environmental consciousness in Chinese society, contributing to sustainable national development. Another study by Wang et al. (2016) also confirmed that man–nature orientation and collectivism could affect pro-environmental consumption behavior.

However, high level of environmental concerns among Chinese customers did not result in sustainable purchasing choices, although many researchers confirmed the positive correlation between attitudes towards green products and actual purchasing behavior (e.g. Zhao et al., 2014; Geng, et al., 2017; Wu et al., 2016). The reason could be that except for environmental concerns, the mean scores on other internal and external factors were far from satisfactory in accordance with several surveys (Chan, 1999; Chan and Lau, 2000; Zhao et al., 2014). A lack of ecological knowledge was mentioned in most studies and led to low level of purchasing behaviors (e.g. Chan, 2001; Zhao et al., 2014; Geng et al., 2017). In addition, unavailability of green products is another barrier for potential green customers in China. Unavailability is associated with: 1) difficulty to find where to buy green products, 2) insufficient number of options customers can choose from, which both satisfy their private needs and concerns for environment; 3) credibility’ risk of green products, implying that fake green products, which does not hold true to products environmental claims, exist in Chinese market (Wang et al., 2016; Chan, 2001; Zhu et al., 2013).

As Zhao et al. (2014) found out that price was not a statistically significant factor affecting purchasing decisions, Xu et al. (2012) confirmed that although generally price had a negative effect on intention to purchase eco-labeled products, the result was not statistically significant for Chinese customers, who appeared to be not very sensitive to green product price and willing to pay a premium. Chan (1999) revealed that Chinese customers were willing to pay 4.5 percent more for green products, although it is a bit lower than American consumers who are willing to pay 6.6 percent more as price premium. Notably, this is due to low credibility of product environmental claims in China (Chan, 1999) and lower income level in China. According to Zhao et al. (2014), 71.6 percent of consumers are willing to pay for highly-priced green products and 26.4 percent claimed they would prefer green products even if a premium is between 5 and 10 percent higher than conventional products.

In China, the motivation of engaging in green behavior is not driven by eco-consciousness only, and is often accompanied with other benefits, especially for
monetary. In Chinese rural regions, people are more likely to conduct egoistic sustainable consumption behaviors like recycling and repairing rather than altruistic behaviors like choosing high active, low toxic pesticides and purchasing the less packaging product, because egoistic behaviors can save money and bring extra income (Wang et al., 2014). Xu et al. (2012) suggested that on the one hand, customers were willing to buy eco-labeled seafood for the protection of social benefits, and on the other hand, for their individual benefits, food safety and health. Wu et al. (2016) claimed that as a general rule, citizens from the Midwest of China adopt environmentally friendly and resource-efficient behaviors for the purpose of their living expense or protection of their own and their family members’ health. When Chinese people buy new energy vehicles, price subsidies from government and policy privilege like no traffic restriction schemes are two main factors which appeal to them, followed by environmental concern (Wang et al., 2017). Therefore, practitioners should not focus on motivating customers’ eco-consciousness, but also on improving the quality and providing more personal benefits associated with consumption (Meyer, 2001; Chan, 1999).

Some scholars paid attention to investigating the influence of social norms on green purchasing among Chinese consumers. Geng et al. (2017) claimed that social influence did not have any effect on motivation of sustainable consumption behaviors among Chinese adolescents including product purchasing, use, repair and disposal. However, some researchers suggested there was a correlation between social influence and sustainable consumption behavior. Lee (2008) found that social influence was the top predictor of teenagers’ green purchasing. Wang et al. (2016) demonstrated social influence could influence both on intention and behavior among rural citizens in Jiangxi province in south-eastern China. Another cross-cultural study on American and Chinese Consumers by Chan and Lau (2002) showed that Chinese consumers were more strongly influenced by subjective norms than their attitudes, when buying green products. Moreover, the effect of subjective norms on doing effect on green purchasing is higher among Chinese customers than among Americans. Given by the perspective of perceived customer value, Awuni and Du (2016) suggested social value\textsuperscript{3} were positively to Chinese green purchasing intention and Chi (2015) implied that social value is the most desired value for ECA, followed by price, emotional, and quality values. Collectivistic Chinese culture is one of the explanations of high social influence effect on Chinese green purchasing intention and behavior (Lee, 2008; Chan and Lau, 2002).

Table 2 provides the summary of factors influencing sustainable consumption in China according to TPB and reviewed literature. art of content.

<table>
<thead>
<tr>
<th>Factors\textsuperscript{4}</th>
<th>Factor’s effect</th>
<th>Studies</th>
</tr>
</thead>
</table>

\textsuperscript{3} Social value refers to perceived utility acquired from an alternative’s association with one or more specific social groups (Sheth, Newman and Gross, 1991).

\textsuperscript{4} Factors marked in bold correspond the conceptual categories in TPB theory and include Attitude, Subjective Norm and Perceived Behavioral Control. These factors are comprised of various more detailed factors mentioned...
### Attitude

| Positive | Zhao et al., 2014; Wu et al., 2016; Chan, 2001; Lee, 2008; Chan and Lau, 2002; Wang et al., 2016 |

### Sustainability-related knowledge

| Positive | Wu et al., 2016; Chan, 1999; Chan and Lau, 2000 |

### Environmental concerns

| Positive | Chan, 1999; Chan and Lau, 2000; Chan, 2001; Wang et al., 2016; Geng et al., 2017; Wang et al., 2016 |

### Man-nature orientation

| Positive | Chan and Lau, 2000; Chan, 2001; Wang et al., 2016 |

### Culture of collectivism

| Positive | Chan, 2001; Wang et al., 2016 |

### Subjective Norm

#### Social influence

| Positive | Lee, 2008; Chan and Lau, 2002; Wang et al., 2016 |
| Unrelated | Geng et al., 2017 |

#### Social Value

| Positive | Awuni and Du, 2016; Chi, 2015 |

### Perceived Behavior Control

| Positive | Chan and Lau, 2002 |

### Price

| Unrelated | Xu et al., 2012 |

### Financial benefit

| Positive | Wang et al., 2017 |

### Availability

| Positive | Wang et al., 2016; Chan, 2001; Zhu et al., 2013 |

### 3.7 Hypotheses Development

In line with research purpose, this study aims to reveal how factors in the TPB model (namely, attitude, subjective norm and PBC) influence ECA purchasing intention and willingness to pay a premium for ECA. Based TPB and reviewed literature summarized in Tables, six hypotheses (Figure 2) have been proposed.

Table 3. Factors affecting ECA purchasing intention

<table>
<thead>
<tr>
<th>Factors</th>
<th>Factor’s effect</th>
<th>Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attitude</strong></td>
<td>Positive</td>
<td>Wong and Taylor, 2001; Connell, 2010; Kang et al., 2013; Kang and Kim, 2013; Cowan and Kinley, 2014; Chang and Watchravesringkan 2018; Han and Stoel, 2016; Han and Chung, 2014;</td>
</tr>
<tr>
<td>Sustainability-related knowledge</td>
<td>Positive</td>
<td>Connell, 2010; Bin et al., 2012; McNeill and Moore, 2015; Cowan and Kinley,</td>
</tr>
</tbody>
</table>

5 Factors marked in bold correspond the conceptual categories in TPB theory and include Attitude, Subjective Norm and Perceived Behavioral Control. These factors are comprised of various more detailed factors mentioned in other studies and summarized in the table under each conceptual category.
H1. Chinese consumers’ attitude toward ECA will have a positive influence on their intentions to buy ECA.

H2. Chinese consumers’ attitude toward ECA will have a positive influence on their willingness to pay a premium for ECA.

H3. Chinese consumers’ subjective norm will have a positive influence on their intentions to buy ECA.

<table>
<thead>
<tr>
<th>Conceptual categories and factors</th>
<th>Effect</th>
<th>Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>Positive</td>
<td>Ellis et al., 2012; Lin, 2010; Shen et al., 2012; Stall-Meadows and Davey, 2013; Hustvedt and Bernard, 2008; Tey et al., 2018</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>Positive</td>
<td>Ellis et al., 2012</td>
</tr>
<tr>
<td>Perceived Behavior Control</td>
<td>Positive</td>
<td>Tey et al., 2018</td>
</tr>
</tbody>
</table>
H4. Chinese consumers’ subjective norm will have a positive influence on their willingness to pay a premium for ECA.

H5. Chinese consumers’ PBC over ECA acquisition will have a positive influence on their intentions to buy ECA.

H6. Chinese consumers’ PBC over ECA acquisition will have a positive influence on their willingness to pay a premium for ECA.

It has been proposed that attitude, subjective norm and PBC have positive relationship with both ECA purchasing intention and willingness to pay a premium for ECA. In addition to these hypotheses, as a common sense, before a person would like to pay a premium for a product, he/she should already have intention to buy it. The relationship between these two factors in the current study can be postulated as:

H7 Consumers’ intentions to buy ECA have a positive influence on their willingness to pay a premium for ECA.

Figure 2. The proposed theoretical framework
Note. AT = Attitude, SN = Subjective norm, PBC = Perceived behavioral control, PI = Purchasing intention, WPP = Willingness to pay a premium
4. Result and Analysis

4.1 Sample Profile

The questionnaire contained measures for gender, age, educational level, income and whether customers purchased ECA before. The sample comprises 315 respondents.

Table 5. The demographic composition of the samples (N=315)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Options</th>
<th>N (number)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>136</td>
<td>43.2</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>179</td>
<td>56.8</td>
</tr>
<tr>
<td>Age</td>
<td>Less than 18</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>18-29</td>
<td>121</td>
<td>38.4</td>
</tr>
<tr>
<td></td>
<td>30-39</td>
<td>143</td>
<td>45.4</td>
</tr>
<tr>
<td></td>
<td>40-49</td>
<td>37</td>
<td>11.7</td>
</tr>
<tr>
<td></td>
<td>50-59</td>
<td>9</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>60-69</td>
<td>4</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>70 and above</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Educational Level</td>
<td>Junior high school or below</td>
<td>8</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Senior high school</td>
<td>17</td>
<td>5.4</td>
</tr>
<tr>
<td></td>
<td>Junior college</td>
<td>63</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Undergraduate</td>
<td>197</td>
<td>62.5</td>
</tr>
<tr>
<td></td>
<td>Postgraduate and above</td>
<td>30</td>
<td>9.5</td>
</tr>
<tr>
<td>Income per month</td>
<td>Less than 2000</td>
<td>30</td>
<td>9.5</td>
</tr>
<tr>
<td>(Unit: CNY)</td>
<td>2000-4999</td>
<td>77</td>
<td>24.4</td>
</tr>
<tr>
<td></td>
<td>5000-9999</td>
<td>135</td>
<td>42.9</td>
</tr>
<tr>
<td></td>
<td>10000-14999</td>
<td>44</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>15000-19999</td>
<td>23</td>
<td>7.3</td>
</tr>
<tr>
<td></td>
<td>20000-29999</td>
<td>4</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>30000 and above</td>
<td>2</td>
<td>0.6</td>
</tr>
<tr>
<td>Purchased ECA before</td>
<td>Yes</td>
<td>123</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>128</td>
<td>40.6</td>
</tr>
<tr>
<td></td>
<td>Not sure</td>
<td>64</td>
<td>20.3</td>
</tr>
</tbody>
</table>

As reflected in Table 5, of the total of 315 respondents, females account for 56.8%. Although Chinese sex ratio is 1.06 males for every 1 female (Central Intelligence Agency, 2017), females is slight over represented in the survey. However, many related previous studies also showed that the ratio of female respondents is larger than the male, while the region gender ratio is male larger than female (e.g. Magnuson, et al., 2017;
Jain et al., 2017; Chen and Liu, 2000). Magnuson et al. (2017) suggested the sample comprising a majority of women was a logical outcome because women were more likely to do fashion shopping and buy their own clothing.

In term of age, most respondents range from 18 to 39 years old, accounting for 83.8 percent. Less than 18 and above 50 are small population in the survey, totally accounting for 4.5 percent only. Therefore, the following research findings could well reveal Chinese adults under 50 years old but could not reflect the teenagers and the elderly population.

A large proportion (62.5 percent) of the total participants got undergraduate education, followed by junior college (20 percent) and Postgraduate and above (9.5 percent). Less than 8 percent of participants claimed they did not accept higher education.

Approximate 43 percent of participants’ incomes ranges from 5000 to 9999 yuan per month. The second largest group is income from 2000 to 4999 yuan per month, accounting for about 25 percent. It is followed by the group of 10000-14999 (14 percent). The rest groups are all less than 10 percent respectively. It is shown that the average monthly income in 37 major cities in China is 7599 yuan (Zhaopin, 2017) and urban residents’ incomes are more than triple of those of their rural counterparts (Frazier, 2013), due to China facing with a social problem is income inequalities (Han et al., 2016). According to the data construction, it can be suggested that the majority of participants are urban population.

When answering the question, “Have you bought eco-conscious apparel before?”, 39 percent of participants responded they had bought, while about 40 percent claimed they had not bought any ECA so far. The rest about 20 percent were not sure.

4.2 Research Quality

Before counting the scores of each variable and testing the purposed model, it is necessary to estimate the reliability and validity of questionnaire. Poor questionnaire quality will lead to a nonsense statistics consequence.

4.2.1 Reliability Analysis

Reliability is an assessment of the degree of consistency between multiple measurements of a variable (Hair et al., 1998). This study applied Cronbach's alpha to test each factor. Cronbach's alpha can identify whether a set of items measures a single latent construct and reveal the extent of internal consistency of the construct. Value range between 0 and 1.0, with higher values indicating higher reliability among the indicators (Hair et al., 1998). A commonly accepted rule of thumb is that a above 0.7 considered acceptable and the value above 0.8 are preferable, whereas if the value is less than 0.7, questionnaire should be done with some adjustments (Pallant, 2013).
Table 6. Reliability tests

<table>
<thead>
<tr>
<th>Construct</th>
<th>Number of items</th>
<th>Cronbach's alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>5</td>
<td>0.875</td>
</tr>
<tr>
<td>Subjective norms</td>
<td>4</td>
<td>0.776</td>
</tr>
<tr>
<td>PBC</td>
<td>4</td>
<td>0.725</td>
</tr>
<tr>
<td>Purchasing intention</td>
<td>4</td>
<td>0.818</td>
</tr>
<tr>
<td>Willingness to pay a premium</td>
<td>4</td>
<td>0.792</td>
</tr>
</tbody>
</table>

As shown in Table 6, all Cronbach's alpha values are above 0.7 and pass the acceptable threshold level. Both constructs, Attitude and PBC lies within the perfect level. As such, it is concluded that the questionnaire has a good reliability.

4.2.2 Validity Analysis

Validity is the degree to which a measure accurately represents what it is supposed to (Hair et al., 1998). Like the other field researches involving psychology test, content validity and construct validity always should be explained.

Content validity refers to the assessment of the correspondence of the variables to be included in a summated scale and its conceptual definition (Hair et al., 1998). In this study, the development of all items referred to several previous studies in apparel research field with similar research framework and object. These studies have reflected good content validity. Validity of this study thus should be satisfactory.

Construct validity was confirmed by assessing convergent validity and discriminant validity. Convergent validity refers to the extent to which a set of measured items reflects the theoretical latent construct which those items are meant to measure (Hair et al., 2010). It is can be examined by confirmatory factor analysis (CFA). The threshold is that the value of standardized factor loadings should be greater than 0.5, average variance extracted (AVE) had to be greater than 0.36 and construct reliability (CR) had to be greater than 0.6 (Fornell and Larcker, 1981). Meanwhile, the requirement of goodness of fit indices is chi-square statistic divided by degrees of freedom (CMIN/DF) under 3, comparative fit index (CFI), goodness-of fit index (GFI) and normed fit index (NFI) all above 0.9, and root mean square error of approximation (RMSEA) under 0.08 (Hair et al., 1998). After calculation, the results show all corresponding indices (See Table 7) lie in qualified intervals, thereby indicating acceptable convergent validity.
Table 7. The outcome of CFA

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Convergent Validity</th>
<th>Goodness of fit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Standardized Factor loadings</td>
<td>CR</td>
</tr>
<tr>
<td>AT</td>
<td></td>
<td></td>
<td>0.875</td>
</tr>
<tr>
<td>AT1</td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AT2</td>
<td>0.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AT3</td>
<td>0.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AT4</td>
<td>0.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AT5</td>
<td>0.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SB</td>
<td></td>
<td></td>
<td>0.778</td>
</tr>
<tr>
<td>SN1</td>
<td>0.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN2</td>
<td>0.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN3</td>
<td>0.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN4</td>
<td>0.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC</td>
<td></td>
<td></td>
<td>0.729</td>
</tr>
<tr>
<td>PBC1</td>
<td>0.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC2</td>
<td>0.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC3</td>
<td>0.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC4</td>
<td>0.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI</td>
<td></td>
<td></td>
<td>0.822</td>
</tr>
<tr>
<td>PI1</td>
<td>0.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI2</td>
<td>0.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI3</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI4</td>
<td>0.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WPP</td>
<td></td>
<td></td>
<td>0.793</td>
</tr>
</tbody>
</table>

23
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>WPP1</td>
<td>0.69</td>
</tr>
<tr>
<td>WPP2</td>
<td>0.75</td>
</tr>
<tr>
<td>WPP3</td>
<td>0.58</td>
</tr>
<tr>
<td>WPP4</td>
<td>0.77</td>
</tr>
</tbody>
</table>
Moreover, discriminant validity is the degree to which two conceptually similar concepts are distinct (Hair et al., 1998). In this study, it was calculated using the test proposed by Anderson and Gerbing (1988). As per this test, discriminant validity is confirmed by the fact that the AVE for one construct is greater than the squared correlation between that construct and any other (Anderson and Gerbing, 1988). In another word, if no correlation of one construct with others exceeds the square root of its AVE means, it suggests that the discriminant validity is qualified.

Table 8. Construct correlations and discriminant validity testing matrix

<table>
<thead>
<tr>
<th></th>
<th>AT</th>
<th>SN</th>
<th>PBC</th>
<th>PI</th>
<th>WPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN</td>
<td>0.680</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBC</td>
<td>0.332</td>
<td>0.684</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI</td>
<td>0.727</td>
<td>0.565</td>
<td>0.370</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WPP</td>
<td>0.561</td>
<td>0.637</td>
<td>0.274</td>
<td>0.443</td>
<td><strong>0.701</strong></td>
</tr>
</tbody>
</table>

Note: Diagonal elements shown in italic and bold represent the square root of AVE, while the other matrix entries represent the correlations.

As shown in Table 8, the square root AVE of each construct exceeds its correlation coefficient with any other constructs. This indicates that all five constructs are distinctive of each other.

### 4.3 Descriptive Statistics of Variables

Table 9 lists central tendency, dispersion and percentiles of each variable’s scores. It gives an overlook of all scores and their distributions. Among antecedent variables in TPB, Attitude and PBC got similar scores and both score distributions are quite similar according to mean, median, mode, standard deviation and percentiles. The scores of Subjective Norm is lower than Attitude and PBC in almost all the indices. In 7-Point Likert scale system, 4 represents neutral attitude and 5 represents somewhat agreeing with an opinion. Therefore, it is implied that the participants tended to somewhat agree with the questions from Attitude and PBC, while they are relatively neutral to response to the questions from Subjective Norm. PI and WPP as two dependent variables in this study. According to the related statistical indices, it is suggested that the scores of both variables are quite different. The participants reflected quite high intention to buy ECA, but all the indices of WPP indicated that the participants were less active to be willing to pay a premium for ECA.

Table 9. The descriptive statistics of all constructs (N=315)

<table>
<thead>
<tr>
<th></th>
<th>AT</th>
<th>SN</th>
<th>PBC</th>
<th>PI</th>
<th>WPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.92</td>
<td>4.55</td>
<td>4.87</td>
<td>5.10</td>
<td>4.06</td>
</tr>
<tr>
<td>Median</td>
<td>5.00</td>
<td>4.75</td>
<td>5.00</td>
<td>5.25</td>
<td>4.25</td>
</tr>
<tr>
<td>Mode</td>
<td>5.40</td>
<td>4.50</td>
<td>5.50</td>
<td>5.50</td>
<td>5.00</td>
</tr>
</tbody>
</table>
4.4 Hypotheses Test

The proposed structural model was estimated by the means of IBM Amos version 23. Except for NFI (NFI=0.89), the other indices (CMIN/DF=1.894, RMSEA=0.53, GFI=0.916, IFI=0.945) are within in the recommended thresholds (CMIN/DF<3, RMSEA<0.08, NFI>0.9, GFI>0.9, IFI>0.9 (Hair et al., 1998). However, model fit is still acceptable because the index of NFI is very close to the recommended level (Hair et al., 1998).

As shown in Figure 3, attitude towards ECA is positively and significantly related to purchasing intention to buy ECA (\(\beta = 0.78\), \(p < 0.001\)), while there is no relationship between attitude and willingness to pay a premium for ECA (\(\beta = 0.05\), \(p = 0.798\)). Therefore, H1 is accepted whereas H2 is rejected. There is also no relationship between subjective norm and purchasing intention (\(\beta = 0.01\), \(p = 0.924\)). But, subjective norm have a strong influence on willingness to pay a premium (\(\beta = 0.82\), \(p < 0.001\)). Therefore, H3 is rejected while H4 is accepted. Focusing on PBC, it has a positive significant effect on purchasing intention as well, although the effect is much lower than the effect by attitude (\(\beta = 0.19\), \(p = 0.002\)). However, it cannot do any effect on willingness to pay a premium (\(\beta = 0.09\), \(p < 0.235\)). As such, H5 is accepted while H6 is rejected. Finally, it is found that there is no relationship between purchasing intention

\[
\begin{array}{cccccc}
\text{Std deviation} & 1.03 & 1.27 & 1.11 & 1.39 & 1.21 \\
\text{Minimum} & 1.00 & 1.00 & 1.25 & 1.00 & 1.00 \\
\text{Maximum} & 7.00 & 6.50 & 7.00 & 7.00 & 6.25 \\
\text{Percentiles} & 25 & 4.60 & 3.75 & 4.25 & 4.50 & 4.25 \\
 & 50 & 5.00 & 4.75 & 5.00 & 5.25 & 4.25 \\
 & 75 & 5.60 & 5.50 & 5.50 & 6.00 & 5.00
\end{array}
\]

Figure 3. Summary of SEM Results
Goodness of fit: CMIN/DF=1.894, RMSEA=0.53, NFI=0.89; GFI=0.916, IFI=0.945
Note. All values are standardized estimates. \(\rightarrow\) Significant effect, \(\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cd-
and willingness to pay a premium ($\beta = -0.12$, $p = 0.437$), suggesting that H7 are not supported. Table 10 summarized each hypothesis corresponding result.

Table 10. Results of structural model

<table>
<thead>
<tr>
<th>Coding</th>
<th>Hypotheses</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Chinese consumers’ attitude toward ECA will have a positive influence on their intentions to buy ECA.</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>Chinese consumers’ attitude toward ECAs will have a positive influence on their willingness to pay a premium for ECA.</td>
<td>Rejected</td>
</tr>
<tr>
<td>H3</td>
<td>Chinese consumers’ subjective norm will have a positive influence on their intentions to buy ECA.</td>
<td>Rejected</td>
</tr>
<tr>
<td>H4</td>
<td>Chinese consumers’ subjective norm will have a positive influence on their willingness to pay a premium for ECA.</td>
<td>Accepted</td>
</tr>
<tr>
<td>H5</td>
<td>Chinese consumers’ PBC over ECA acquisition will have a positive influence on their intentions to buy ECA.</td>
<td>Accepted</td>
</tr>
<tr>
<td>H6</td>
<td>Chinese consumers’ PBC over ECA acquisition will have a positive influence on their willingness to pay a premium for ECA.</td>
<td>Rejected</td>
</tr>
<tr>
<td>H7</td>
<td>Chinese consumers’ intentions to buy ECA have a positive influence on their willingness to pay a premium for ECA.</td>
<td>Rejected</td>
</tr>
</tbody>
</table>
5. Discussion and Implication

5.1 Discussion

According to descriptive statistics of attitude and purchasing intention, it seems that Chinese customers are positive and acceptable to ECA, which supports again that Chinese people are not environmentally apathetic. One reason could be man-nature, one of Chinese traditional cultures, suggested by Chan (2001) and Wang et al., (2016). Another reason could be the properties of ECA including appearance and function, which in recent years get closer to traditional apparels than before. Winge (2008) claimed that the current design of ECA is far different from the past associated with subculture like Hippie and nowadays eco-fashion can be more compatible with mainstream fashion than before. From the perspective of corporate practice, more and more fashion companies put sustainability into their business strategy. One of H&M’s sustainability strategy goals is that all the commercial goods will be made with recycled or other sustainably-sourced material by 2030 (H&M Group, 2017). The contradiction between sustainability and appearance has been diminishing during the past ten years, with better design and the development of production technology making eco-fashion more attractive to customers.

The results of this study demonstrate that Chinese attitude toward ECA can have a positive effect on ECA purchasing intention, which is in line with previous research results on ECA (e.g. Kang and Kim, 2013; Cowan and Kinley, 2014; Chang and Watchravesringkan, 2018) and sustainable consumption in China (e.g. Zhao et al., 2014; Wu et al., 2016; Chan, 2001). Therefore, it is suggested that attitude is always an effective predicator of purchasing intention in ECA consumption.

Yet, there is no identified correlation between pro-environmental attitude and willingness to pay a premium for ECA. This result is different from the previous studies by Lin (2010) and Shen et al. (2012), demonstrating that people are not willing to pay more money just for a concept of sustainability (Kollmuss and Agyeman, 2002; Meyer, 2011; Perry and Chung, 2016).

Combining H1 and H2 (Chinese consumers’ positive attitude toward ECA will lead to purchasing intention, but not lead to willingness to pay a premium.), the research findings also demonstrate that customers would like to buy the apparel made of blended organic cotton with quite cheaper price instead of expensive apparel made of pure organic cotton (Hustvedt and Dickson, 2009). The apparel made of blended organic cotton is a good option allowing customers to meet their expectations for better price and acting responsibly.

The result of testing H3 suggests that ECA purchasing intention is not influenced by subjective norm in China. This is contradictory to many previous ECA related studies (Kang et al., 2013; Cowan and Kinley, 2014; Chang and Watchravesringkan, 2018) and
the general studies of sustainability consumption in China (Lee, 2008; Chan and Lau, 2002; Awuni and Du, 2016). Yet, to some extent, this finding is supported by the studies of Khare and Sadachar (2017) as well as Khare and Varshneya (2017), although their research focused on actual ECA purchasing behavior. The similar observation was made by Shen et al. (2003), who found that subjective norm could not influence Chinese purchasing intention for the apparel made in the United States.

At the same time, the result of H4 indicates that subjective norm can have a positive influence on Chinese willingness to pay a premium for ECA, which is consistent with the study by Ellis et al. (2012). Moreover, it is shown that the correlation between subjective norm and willingness to pay a premium is very strong (β = 0.82), and the willingness to pay a premium as a dependent is only influenced by subjective norm. As Tey et al. (2018) suggested, the reason could be customers are resistant to price premiums unless they perceive an extra benefit equivalent to the premium paid. In Chinese ECA consumption, such kind of extra benefit should be social value because in previous studies, Awuni and Du (2016) suggested that social value was positively related to Chinese young adults’ green purchasing intentions and Chi (2015) claimed social value was the most desired value, followed by price, emotional, and quality values when Chinese customers estimated the perceived value of ECA.

From the perspective of social culture, this study suggests that concepts of collectivism and individualism do not provide conclusive explanation of the ECA consumption. While subjective norm positively influences the willingness to pay a premium for ECA, there is no correlation between subjective norm and ECA purchasing intention. Previous studies also demonstrated that social norms of collectivism and individualism are not a good predictor for ECA consumption (Khare and Sadachar, 2017; Khare and Varshneya, 2017).

Just as in case with attitude influence on ECA, there is no identified effect of PBC on the willingness to pay a premium for ECA. However, PBC has a positive influence on ECA purchasing intention, although the correlation between PBC and ECA purchasing intention (β = 0.19) is much weaker than the correlation between attitude and purchasing intention (β = 0.78). The relationship between PBC and willingness to pay a premium is different from the study by Tey et al. (2018), which got the relationship based on a literature review. Overall, there has been a lack of research on the relationship between these two variables so far. The relationship between PBC and ECA purchasing intention is in line with most previous studies viewing PBC as a variable to test (e.g. Cowan and Kinley, 2014; Chang and Watchravesringkan, 2018) and also supports for the finding that both high price and limited availability are barrier to ECA consumption (e.g. Perry and Chung, 2016; Han and Chung, 2014; Ginsberg and Bloom, 2004). To sum up, it is suggested that Chinese customers’ purchasing intention for ECA is not only influenced by internal factors, personal attitudes, but also by some external factors such as price and availability.
Finally, it is found that there is no correlation between ECA purchasing intention and willingness to pay a premium. This relation has not been examined in previous studies on ECA consumption. However, the study of Jung and Jin (2016) with focus on slow fashion products suggested that once consumers were willing to buy slow fashion products, they were more likely to pay a premium for these products. Phau et al. (2015) found that there is a significantly positive influence of the intention not to purchase luxury fashion apparel made in sweatshops on willingness to pay more for luxury fashion apparel not made in sweatshops. Therefore, this study points towards differences in the consumption behavior between ECA and other sustainable fashion products.

5.2 Implications for Corporate Practitioners and Policymakers

This study reveals that Chinese consumers can accept ECA and have sustainable purchasing intention in general. This is a good signal for fashion companies that want to develop eco-fashion market in China. Yet, less than 40 percent of respondents clearly claimed they had bought ECA before and more than 60 percent of respondents claimed they never bought or were not sure whether they had bought ECA. This indicates that there is a room for improvement to develop the ECA market. This section focuses on what corporate practitioners and policymakers in China can do in order to facilitate the ECA consumption.

Business practitioners can increase customers’ purchasing intention for ECA through raising customers’ positive attitude towards ECA. Previous studies suggested that Chinese people were lack of sustainability knowledge (Wu et al., 2016; Chan, 1999; Chan and Lau, 2000) and a lack of knowledge is often mentioned as a barrier for customers to purchase ECA (Connell, 2010; Shen et al., 2012; McNeill and Moore, 2015; Cowan and Kinley, 2014). In line with Wong and Taylor (2001), this study suggests that Chinese government and schools should pay more attention to eco-friendly education. Meanwhile, fashion companies can focus on offering eco-fashion knowledge to customers as part of taking social responsibility.

Kim et al. (1997) and Stall-Meadows and Davey (2013) demonstrated that effectiveness of environmental claims for stimulating sustainable consumption was increased when customers had already formulated a good image of ECA. As shown in the survey, Chinese consumers have this perception. Therefore, environmental claims can be applied as one of the tools to further motivate purchasing of ECA among Chinese customers. For instance, fashion companies can provide specific eco-fashion knowledge and general information of what company is doing to address sustainability challenges. Although some fashion companies in China have already started working with sustainability, the sustainability-related information is not easy to find on their web pages. For example, H&M is one of leaders of eco-fashion with high transparency of sustainability information. On the Chinese corporate web-sites, the “Sustainability” link is often at the bottom of the page and marked with small font. In case of H&M, the
sustainability information is very limited in Chinese version, while the web-page in English and Swedish versions provide plenty of eco-fashion information and knowledge. In order to increase the visibility of sustainability-related information, fashion retailers can put “sustainability” link in a conspicuous place like the top of main page and provide more eco-fashion information and knowledge in Chinese web-site version.

Chinese customers will have stronger intentions to buy ECA when they perceive higher control over ECA acquisition. Price and availability are always viewed as two main factors of perceived behavioral control. Penetration pricing refers to using low prices as the principal instrument for penetrating mass markets early (Dean, 1976). As Cowan and Kinley (2014) suggested, this strategy can help customers overcome price barrier for ECA purchasing. In addition, fashion practitioners should strive to make ECA properties better in order to decrease purchasing trade-offs between price, quality, design etc. Otherwise, the effectiveness of penetration pricing will be decreased since it will still be hard to make mainstream customers to change their purchasing behaviors. In order to decrease the price difference between conventional and ECA products, and therefore favor the ECA consumption, Chinese government can consider applying the tax discount policies similar to the policy of hybrid vehicle acquisition in China.

Besides stimulating the availability of ECA products in terms of improving products properties such as improved design and quality, and decreasing product prices, it is also important to make sure that consumers know where to buy an ECA and that shopping experience is relatively easy. Fashion retailers can use their e-commerce website to exhibit their ECA products with specific information like material, production process and carbon footprint and tell customers where they can buy ECA or offer ECA shopping services. Once customers can easily buy affordable ECA, the ECA market potential can be further developed as customers with previous ECA purchasing experience are more prone to buy ECA while being less price sensitive (Cowan and Kinley, 2014; Stall-Meadows and Davey, 2013). In addition, Connell (2010) suggested that individuals would view wearing ECA as a societal norm when more and more people wear ECA. Based on Connell’s (2010) suggestion and results of hypothesis testing, it can be concluded that PBC has an indirect effect on promoting customers willingness to pay a premium for ECA in Chinese market.

Finally, fashion companies in China should notice that customers with purchasing intention for ECA are not willing to pay a price premium for these products. Stimulating the willingness to pay and hence opportunity to earn higher profits mostly depends on whether a fashion retailer can create a social value associated with consumption of ECA to their customers. Chinese customers will not like to pay more money for ECA unless their ECA consumption can get positive feedback from his/her families, peers and society. One way of generating a social value of ECA consumption is a celebrity endorsement. Fashion company can try to invite celebrities to endorse its apparels in eco-conscious series.
Nonetheless, it is obviously not an easy task to create a social environment conducive to ECA consumption by efforts from one or several fashion companies in a short term. The whole textile industry and Chinese government should work together for this goal. Fashion company should take more responsibility in establishing positive social norms of ECA for stimulating ECA consumption. Furthermore, such actions, while helping more consumers to form a positive image of ECA, can help company to become the market leader in the future.
6. Conclusion and Future Research

6.1 Conclusion

This study applied the TPB to explain Chinese consumers’ willingness to purchase ECA and pay a price premium for it. After collecting 315 questionnaires online and analyzing data by structural equation modeling, it is found that both attitude toward ECA and PBC over ECA acquisition are positive to ECA purchasing intention. Willingness to pay a premium for ECA is only positively influenced by subjective norm and there is no correlation between ECA purchasing intention and willingness to pay a premium for ECA.

Based on the obtained findings, this study suggests a number of recommendations for business practitioners and policymakers on how to stimulate the development of the eco-fashion market in China. Fashion companies can disseminate environmental information and knowledge to raise customers’ attitude toward ECA and consequently ECA purchasing intention. In addition, fashion firms should make it easy for customers to buy affordable apparels with the properties close to traditional apparels through better design and manufacturing methods. This will help raising PBC and consequently ECA purchasing intention.

To raise Chinese customers’ willingness to pay a premium for ECA, fashion company can apply celebrity endorsement to add perceived social value into its ECA series. However, subjective norm cannot rapidly change. Fashion company should take more responsibility and become a leader of eco-fashion to make contribution to the formation of positive social norm and hence positive perceptions towards ECA. In this case, the company is more likely to make a considerable profit in the future.

Chinese government should participate in the development of ECA because encouragement of sustainability consumption is also a public issue. The government can put more efforts into educating Chinese people about sustainability issues in fashion industry, formulating and implementing the policies in favor of ECA consumption, such as tax discount. The final goal is to create a positive social atmosphere for ECA consumption.

6.2 Limitations and Future Research

This study contributes to the research on sustainable consumption by investigating the relationships between attitude, subjective norm, PBC on the one hand, and purchasing intention and willingness to pay a premium for ECA products on the other hand. This research is novel since it for the first time examine these relationships for the purchasing of apparel containing recycled fiber in China. There are several research limitations which are worth mentioning.
Firstly, the data on five investigated variables are all from the participants’ self-reporting, so there could be the situations when some participants ‘don’t walk their talk’. For example, some participants claimed they were willing to pay a premium for ECA in the survey, but in reality, they would not like to pay more money for ECA when they are in fashion stores. Because of limited resources like short of hands and limited time and expenditure, the study did not measure variables based on participants’ actual behaviors. Future study can focus on Chinese customers’ actual purchasing behaviors of ECA and try to collect data from the real purchasing experience.

Secondly, the age of survey participants mostly ranges from 18 to 50 years old. Teenagers and elderly people were under represented in the respondents’ sample. Therefore, the findings of this study hold true only for young and middle-aged adults. In the future, scholars can focus on Chinese teenagers and the elderly people when carrying out research on ECA consumption.

Finally, this study enriched ECA knowledge by focusing only on the apparel containing recycled fiber. This category has been under represented in existing research on ECA and hence its investigation contributes to enhanced understanding of ECA consumption. Nevertheless, the findings in this study are not generalizable to all category of ECA.

Future research should focus on other categories of ECA, such as apparel with durable design, apparel with low carbon production and apparel made with biodegradable materials. It should utilize the combination of quantitative and qualitative methods to yield better explanations of the ECA purchasing phenomenon.

Future research should also put more efforts on providing the more detailed picture of factors that affect ECA purchasing intention and willingness to pay a premium for ECA products. As shown in many previous studies, attitude includes sustainability-related knowledge and environmental concerns, subjective norm can be divided into injunctive norms and descriptive norms, and price and availability are two main sub-concepts of PBC in ECA market. This study summarizes these sub-concepts in literature review and uses them to discuss the findings after hypotheses testing. Future study should put more efforts on identifying the correlations between these detailed variables and purchasing behavior, which will contribute to better understanding of ECA consumption in China and how it can be stimulated.
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Appendix 1

The Survey of Chinese Consumers' Willingness to Purchase Eco-Conscious Apparel

Dear madam/sir
Thank you for participating in the survey. The purpose is to better understand the customers' attitude toward the eco-conscious apparels, purchasing intention and its antecedents. The data collection will remain confidential. There are no right or wrong answers to the questions. Please fill in the questionnaire based on first thought or feeling you recall. Thank you in advance for your participation. It is greatly appreciated!

Best regards
Fanlv Jin
Postgraduate student at University of Borås, Sweden
E-mail: s161519@student.hb.se

Part 1: Demographic Information

1. Gender [Multiple choice] *
   ○Male ○Female

2. Age [Multiple choice] *
   ○<18 ○18-29 ○30-39 ○40-49
   ○50-59 ○60-69 ○>70

3. Educational level [Multiple choice] *
   ○Junior high school or below ○Senior High School ○Junior College
   ○Undergraduate ○Postgraduate or above

4. Income per month (Unit: CNY) [Multiple choice] *
   ○<2000 ○2000-4999 ○5000-9999
   ○10000-14999 ○15000-19999 ○20000-29999
5. Have you bought eco-conscious apparel before? [Multiple choice] *
   ○ Yes  ○ No  ○ Not sure

Part 2: The questions about apparel containing recycled fibers.

Note: In this survey, the apparel containing recycled fibers mainly refers to the apparels made from garments recycled from post-consumers and leftovers and scraps in textile production, which are ground into fibers, spun into new yarns and woven into new fabrics blended with conventional yarns. This kind of apparel is one of categories of eco-conscious apparels.

1. For me buying apparel containing recycled fibers would be: [Multiple choice] *
   Harmful  ○ 1  ○ 2  ○ 3  ○ 4  ○ 5  ○ 6  ○ 7  Good

2. For me buying apparel containing recycled fibers would be: [Multiple choice] *
   Useless  ○ 1  ○ 2  ○ 3  ○ 4  ○ 5  ○ 6  ○ 7  Beneficial

3. For me buying apparel containing recycled fibers would be: [Multiple choice] *
   Foolish  ○ 1  ○ 2  ○ 3  ○ 4  ○ 5  ○ 6  ○ 7  Wise

4. For me buying apparel containing recycled fibers would be: [Multiple choice] *
   Negative  ○ 1  ○ 2  ○ 3  ○ 4  ○ 5  ○ 6  ○ 7  Positive

5. For me buying apparel containing recycled fibers would be: [Multiple choice] *
   Not valuable  ○ 1  ○ 2  ○ 3  ○ 4  ○ 5  ○ 6  ○ 7  Valuable

6. Close friends and family think it is a good idea for me to buy apparel containing recycled fibers. [Multiple choice] *
   Strongly disagree  ○ 1  ○ 2  ○ 3  ○ 4  ○ 5  ○ 6  ○ 7  Strongly agree
7. The people who I listen to could influence me to buy apparel containing recycled fibers. [Multiple choice] *

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>o1</th>
<th>o2</th>
<th>o3</th>
<th>o4</th>
<th>o5</th>
<th>o6</th>
<th>o7</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

8. Important people in my life think I need/have an obligation to choose apparel containing recycled fibers if possible. [Multiple choice] *

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>o1</th>
<th>o2</th>
<th>o3</th>
<th>o4</th>
<th>o5</th>
<th>o6</th>
<th>o7</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

9. I believe that most of my acquaintances expect that I can choose apparel containing recycled fibers. [Multiple choice] *

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>o1</th>
<th>o2</th>
<th>o3</th>
<th>o4</th>
<th>o5</th>
<th>o6</th>
<th>o7</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

10. I have complete control of purchasing the apparel containing recycled fibers. [Multiple choice] *

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>o1</th>
<th>o2</th>
<th>o3</th>
<th>o4</th>
<th>o5</th>
<th>o6</th>
<th>o7</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

11. I believe that I have the resources and the ability to purchase apparel containing recycled fibers. [Multiple choice] *

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>o1</th>
<th>o2</th>
<th>o3</th>
<th>o4</th>
<th>o5</th>
<th>o6</th>
<th>o7</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

12. For me, to buy the apparel containing recycled fibers is easy. [Multiple choice] *

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>o1</th>
<th>o2</th>
<th>o3</th>
<th>o4</th>
<th>o5</th>
<th>o6</th>
<th>o7</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

13. I do not face significant barriers in purchasing apparels containing recycled fibers. [Multiple choice] *

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>o1</th>
<th>o2</th>
<th>o3</th>
<th>o4</th>
<th>o5</th>
<th>o6</th>
<th>o7</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>

14. I will try to buy apparels containing recycled fibers in the future. [Multiple choice] *

*
15. I intend to buy apparels containing recycled fibers. [Multiple choice] *

16. I will make an effort to buy apparels containing recycled fibers in the future. [Multiple choice] *

17. If I see a retail store selling apparels containing recycled fibers, I intend to visit the store to purchase a product. [Multiple choice] *

18. I am willing to pay a premium for apparels containing recycled fibers. [Multiple choice] *

19. It is still worthwhile to buy apparels containing recycled fibers even if I have to give up some other properties (such as appearance, comfort etc.). [Multiple choice] *

20. In the future, I plan to buy apparel from the fashion retailers which have the category of apparel containing recycled fibers. [Multiple choice] *

21. Buying apparel containing recycled fibers seems smart to me even if it cost more. [Multiple choice] *

The survey is over. Thanks for your participation!
Appendix 2
(The questionnaire in Chinese version)

中国消费者对于绿色服装购买意愿的调查

先生/女士，您好！
非常感谢您参与本次的问卷调查！本调查旨在更好地了解中国消费者对于绿色服装的态度，购买意向和潜在因素对于消费者购买决策的影响。本研究所收集的数据仅用于学术研究之用，您提供的任何信息我们都将予以严格保密。本问卷所有题项没有对错之分。请按照您的实际情况或第一感觉进行填写。再次对于您的参与表示感谢！

祝好！
金凡律
瑞典布罗斯大学纺织品管理专业在读研究生
电子邮箱：s161519@student.hb.se

第一部分：个人基本信息

1. 性别 [单选题] *
   ○男 ○女

2. 年龄 [单选题] *
   ○<18 ○18-29 ○30-39 ○40-49
   ○50-59 ○60-69 ○>70

3. 学历 [单选题] *
   ○初中及以下学历 ○高中学历 ○大学专科
   ○本科学历 ○研究生及以上学历

4. 每月收入（单位：元） [单选题] *
   ○<2000 ○2000-4999 ○5000-9999
5. 您是否购买过绿色服装？ [单选题] *

○是  ○否  ○不确定

第二部分：请您回答有关含再生纤维服装的问题（量表题）。
说明：本调查中的含再生纤维服装主要是指服装企业对顾客丢弃的旧衣和服装加工中产生的废料进行处理，纺成新纱，再与传统纱混合编织出布料，最后用此布料制成的衣服，裤子和裙子等。含再生纤维服装是绿色（环保）服装的一种之一。

1. 对于我来说，购买含再生纤维的服装是： [单选题] *
极坏  ○1  ○2  ○3  ○4  ○5  ○6  ○7  极好

2. 对于我来说，购买含再生纤维的服装是： [单选题] *
很无用  ○1  ○2  ○3  ○4  ○5  ○6  ○7  很有用

3. 对于我来说，购买含再生纤维的服装是： [单选题] *
很愚蠢  ○1  ○2  ○3  ○4  ○5  ○6  ○7  很明智

4. 对于我来说，购买含再生纤维的服装是： [单选题] *
非常消极  ○1  ○2  ○3  ○4  ○5  ○6  ○7  非常积极

5. 对于我来说，购买含再生纤维的服装是： [单选题] *
极无价值  ○1  ○2  ○3  ○4  ○5  ○6  ○7  极有价值
6. 家人和好友认为我购买含再生纤维的服装是一个不错的选择。 [单选题] *

极不认同 ○1 ○2 ○3 ○4 ○5 ○6 ○7 极为认同

7. 日常那些我愿意采纳他们意见的人有可能会促使我购买含再生纤维的服装。 [单选题] *

极不认同 ○1 ○2 ○3 ○4 ○5 ○6 ○7 极为认同

8. 那些视为我生命中重要的人认为，如果各方面条件允许，我有义务购买含再生纤维的服装。 [单选题] *

极不认同 ○1 ○2 ○3 ○4 ○5 ○6 ○7 极为认同

9. 我相信绝大多数身边的熟人希望我能够选择购买含有再生纤维的服装。 [单选题] *

极不认同 ○1 ○2 ○3 ○4 ○5 ○6 ○7 极为认同

10. 购买含再生纤维的服装并不是一件难事。 [单选题] *

极不认同 ○1 ○2 ○3 ○4 ○5 ○6 ○7 极为认同

11. 我相信我有相应的资源和能力购买含再生纤维的服装。 [单选题] *

极不认同 ○1 ○2 ○3 ○4 ○5 ○6 ○7 极为认同

12. 对于我而言，购买含再生纤维的服装是一件简单的事。 [单选题] *

极不认同 ○1 ○2 ○3 ○4 ○5 ○6 ○7 极为认同

13. 当购买含再生纤维的服装时，我不会遇到任何显然的阻碍。 [单选题] *
14. 未来，我会尝试着去购买含有再生纤维的服装。 [单选题] *

15. 我有意向购买含有再生纤维的服装。 [单选题] *

16. 未来，我争取购买一件含有再生纤维的服装。 [单选题] *

17. 如果有一天我看到一家服装店在出售含再生纤维的服装，我会进这家店看一下他们出售的含再生纤维的服装。 [单选题] *

18. 我愿意付更多的钱购买含再生纤维的服装。 [单选题] *

19. 购买含有再生纤维的服装是有意义的，即便这会让我面临放弃服装的一些其他属性（如，外观，舒适性等）。 [单选题] *

20. 我打算以后从那些有含再生纤维服装系列的时装品牌零售店内购买衣物。 [单选题] *
21. 即使是花更多的钱购买含再生纤维的服装也是明智之举。 [单选题] *

极不认同 ○1 ○2 ○3 ○4 ○5 ○6 ○7 极为认同

问卷到此结束，谢谢您的参与！