

Chinese Students' Knowledge of Environmentally and Socially Sustainable Apparel and Sustainable Purchase Intentions

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Abstract

Although many studies have focused on the relationship between consumers' purchase intentions and their knowledge and attitudes of socially and environmentally responsible issues pertaining to the apparel and textiles (AT) industry, few studies have focused on consumers outside the US and UK. Therefore, the purpose of this study was to better understand the sustainability knowledge, attitudes, and purchasing intentions of Chinese consumers. A paper questionnaire consisting of approximately 80 questions and five scales was given to 52 Chinese undergraduate students enrolled in a course at a university located in the Zhejiang province of China during the summer of 2015. As a result of the data analysis, the Chinese students were much more informed of environmental issues within the AT industry as compared to issues of social responsibility, yet also reported strong attitudes regarding the treatment and safety of workers in AT production and how these issues might influence their purchasing intentions.

Keywords: Chinese consumers, sustainability, apparel, social responsibility, purchase intentions, environmental responsibility

1. Introduction

With apparel production finding itself a leading cause of harm to the environment, and rampant with issues concerning labor exploitation, the call to action to influence consumers' purchase intentions for environmentally and socially sustainable apparel is pertinent for the current and future well-being of both the environment and humankind. Supplying a base of knowledge to consumers is crucial to enable them to understand the consequences that the AT industry has on the environment and the treatment of workers (Brosdahl & Carpenter, 2010). This knowledge can potentially lead to a change of attitude and modification in apparel purchase intentions. However, research indicates (Hiller, 2010; Young, Huang, & McDonald, 2010; Hiller Connell, 2011; Hiller Connell & Kozar, 2012; Hiller Connell & Kozar, 2013; Kang, Liu, & Kim, 2013) that among US consumers, there are many barriers to environmentally and socially sustainable apparel consumption practices, including, but not limited to, price, knowledge, and concern/apathy involving the production, distribution, consumption, and disposal of apparel goods. This study aims to investigate the nature of Chinese consumers, including their knowledge, attitudes, and purchase intentions of sustainable apparel. The nature of this study is unexplored in current research and is significant given the continued growth of the Chinese economy in recent years.

2. Literature Review

China became a member of the World Trade Organization (WTO) in 2001, and with that the growth of the Chinese apparel industry has been tremendous. Today, Chinese apparel firms are attempting to modify the perception of products "Made in China" to those "Created in China," seeking further opportunities as strong brands in the global marketplace (Chen & Shih, 2004). At the same time, domestic Chinese brands are also faced with a flood of foreign apparel brands that are tapping into the affluent Chinese middle-class marketplace. During the first quarter of 2014, according to China's National Bureau of Statistics, China's AT industry was worth 66.7 billion Chinese RMB (or 11 billion USD), representing an increase of 10.9% since the first quarter of 2013 (Liu, 2014). As of 2011, there were over 50,000 apparel enterprises operating in China (China Connection,

2011). The Chinese market is one that is becoming increasingly wealthier, yielding a powerful and significantly affluent consumer society, while the US Bureau of Labor Statistics reports that US consumer spending has not grown since 2012 (CIA World Factbook, 2015). From 2000 to 2010, the size of the Chinese economy more than doubled and consumption increased from approximately \$650 billion to almost \$1.4 trillion, with discretionary income among Chinese consumers expected to increase 5-7% annually from 2010 to 2020. In fact, the per-household annual consumption in China for apparel goods alone is projected to increase from 8% in 2005 to 15% in 2030 (McKinsey and Company, 2015).

Many studies have focused on the relationship between consumers' purchase intentions and the knowledge and attitudes of socially and environmentally responsible issues pertaining to the AT industry (Kim & Damhorst, 1998; Dickson, 2000; Hiller, 2010; Young, Huang, & McDonald, 2010; Ha Brookshire & Norum, 2011; Hiller Connell, 2011; Hyllegard, Yan, Ogle, 2012; Hiller Connell & Kozar, 2012; Hiller Connell & Kozar, 2013; Kang, Liu, & Kim, 2013; Reiter, 2015). Yet, few have focused on consumers outside the US and UK. Specifically, Roubanis (2008) found that American students with a globally responsible focus in their education considered pro-environmental features when purchasing goods, including apparel. Tilikidou (2007) found that Greek consumers were more likely to purchase ecofriendly goods when no price difference existed. Kozar and Hiller Connell (2010) made a call for more action regarding the lack of extensive studies regarding consumer sustainability knowledge and attitudes and purchasing intentions. As stated by the authors, in the US, "students, whose education focused more on global responsibility and the well-being of others, showed a greater tendency when making buying decisions to consider the pro-environmental attributes of the products they purchased" (Kozar & Hiller Connell, 2010, p.281). As such, the purpose of this study was to better understand the knowledge, attitudes, and purchasing intentions of Chinese consumers. This is especially significant given the vast economic growth of China in the last decade. China is not only the world's largest AT producer in the world, but is soon to become the largest retail market in the world. Indeed, while many US and European-based apparel retail firms are closing stores in their own countries, these firms are relocating opening stores in China given the prosperity of, and overall size of, the Chinese consumer market.

The topic of sustainability in the AT industry is significant. For example, according to Challa (2012), the AT industry is considered a highly polluting industry compared to other manufacturing industries. In fact, the industry requires more than 10 times the energy to produce one ton of textiles than it does one ton of glass (Draper, Murray, & Weissbrod, 2007). AT production is the second leading industrial cause of environmental pollution, thus making a considerable footprint on the planet (Black, 2008). Aside from environmental issues within the AT industry, there are a number of social issues that also exist. For instance, "forced labor, low wages, excessive hours of work, discrimination, health and safety hazards, psychological and physical abuse, lack of awareness of worker's rights, and lack of worker representation for negotiations with management" are all of concern (Dickson, Loker, & Eckman, 2009, p. 6). According to Rivoli (2009), factory owners and managers exploit a "docile" workforce to their advantage. In many cases, workers earn only two thirds of the hourly wage that is found in other industries. Within newly developing and developing countries, the pay can be as low as \$1.63 per hour with the workers being forced to perform repetitive tasks for 10-15 hours per day, 6-7 days per week (Ross, 2004).

Hiller Connell and Kozar (2014) determined that knowledge of sustainability in the AT industry can be an important determinant of sustainable purchasing intentions. In a similar vein, Thorgerson (2000) noted that lack of knowledge can be a restraint to a wide range of sustainable behaviors for a variety of factors including, consumers' awareness (or lack thereof) of how their behaviors impact the environment, their lack of understanding of how modifications in their behaviors can benefit the environment, and/or their unawareness of how their behavior can be more environmentally responsible. Butler and Francis (1997) found that 90% of participants in their study never or rarely considered the environment when purchasing apparel; similarly, Kozar and Hiller Connell (2013) found that only 41% of participants were willing to pay more for environmentally sustainable apparel goods. In a separate study, Kozar and Hiller Connell (2010) found that about half of respondents indicated being knowledgeable about socially responsible clothing firms and that they were generally informed of environmental issues regarding apparel and textiles. Reiter (2015) noted that greater knowledge and stronger attitudes can lead to an increase in purchase intentions of environmentally sustainable apparel. As such, Reiter's (2005) study further substantiates that the more education provided to consumers on these topics, the more knowledge may be retained and the greater likelihood of purchase intentions of sustainable apparel among consumers. These findings are similar to that reported by Kozar and Hiller Connell (2010).

Literature also exists to support the relationship between consumer knowledge of sustainability issues within the AT industry and consumers' purchase intentions, however, further investigation is needed regarding the social sector of responsible apparel purchasing intentions. According to a number of researchers, a relationship exists between knowledge of issues and the purchasing of socially responsible consumer goods (Antil, 1984; Henion, 1972; Roubanis, 2008; Schahn & Holzer, 1990; Tanner & Kast, 2003; Kozar & Hiller Connell, 2013). Meinhold and Malkus (2005) found that there was indeed a relationship between knowledge of environmental issues and pro-environmental purchase behaviors. Arbutnot (1977) discovered early on that users of recycling vents had greater knowledge about the environment. Dickson (1999) reported that consumers more concerned with labor issues, felt more empathy for domestic (US) workers, and were more willing to boycott irresponsible factories that mistreated workers. This was especially the case regarding factories using child laborers in the production of their goods. Ten years later, in 2009, Dickson reported a significant relationship between knowledge of social responsibility in the AT industry and support for socially responsible firms (Dickson, 2009). Moreover, Hustvedt and Dickson (2009) found that some segments of the US consumer market use environmental information to inform their purchase decisions to be more environmentally responsible, although the size of these segments were limited. However, Carrigan and Attalla (2001) found that this relationship is not always the case, and that oftentimes the social responsibility and code of ethics of a firm were not a strong influencer of consumers' purchase decisions. Yet, Dickson et al. (2009) stated that consumers can make a change and that "Through their purchasing, consumers can pull the economy and effect change in business as well as contribute to the formation of a virtuous circle of business development and social responsibility" (pp. 313-314).

Consequently, based on past studies and the call to action regarding further exploration on the knowledge, attitudes, and purchasing intentions among consumers, this study sought to examine these variables using a sample of Chinese consumers. As noted above, this is highly relevant given the recent growth of the Chinese middle-class consumer market and the overall retail marketplace as well as the growing sustainability movement within the AT industry. As such, the following research objectives were addressed as part of this study:

Objective 1: To explore Chinese consumers' knowledge of environmentally and socially responsible apparel issues.

Objective 2: To examine Chinese consumers' attitudes regarding environmentally and socially responsible apparel issues.

Objective 3: To analyze the relationship between Chinese consumers' knowledge, attitudes, and purchasing intentions of environmentally and socially responsible apparel.

Objective 4: To assess whether the scales/instruments used to measure US consumer knowledge, attitudes and sustainable purchase intentions can be replicated in a study utilizing a Chinese sample.

3. Method

A paper questionnaire consisting of approximately 80 questions was given to 52 Chinese undergraduate students enrolled in a course at a university located in the Zhejiang province of China during the summer of 2015. Because a convenience sample was utilized given time restraints, threats to the validity of the research project existed. For example, internal selection was limited in regards to the mortality, the loss of participants in the study, with the possibility of the participants dropping out of the study at any point before fully completing the questionnaire. Additionally, extra credit was offered for survey completion (Campbell & Stanley, 1963). This could have construed some of the responses to simply be completed quickly given the incentive. The researchers conducted a data cleansing to ensure that these types of responses were removed before the data analysis process. This included removing data that were straight across the board (i.e. straight lining). The sample is also limited in generalizing to the larger population of Chinese consumers. However, in terms of exploring the research objectives, this was the most efficient means for collecting data in a limited amount of time at an affordable cost. The questionnaire was administered over a two day period so that students would not be overwhelmed with the length of the questionnaire. The questionnaire was translated from English to Mandarin by three graduate Chinese students and then was back translated to English by a fourth Chinese student. The questionnaire utilized five scales to assess students' knowledge and attitudes of environmental and social issues in the AT industry, along with their apparel purchasing intentions. All items were measured on a 3-point scale, which included "yes," or "agree," "no," or "disagree," and "I don't know." Cronbach's calculations were conducted to ensure reliability of the scales.

3.1 Instrument

The first part of the questionnaire measured students' knowledge of AT environmental issues using the Environmentally Sustainable Apparel Knowledge (ESAK) scale by LeHew and Hiller Connell (under development). Examples of items of the scale included, "Globally, more agrochemical insecticides are applied to cotton than any other major crop," and, "Growing enough cotton to make a pair of jeans (weighs 1.5 pounds) requires approximately 55% more water than what is needed to grow enough wheat for a loaf of bread (weighs 2 pounds)."

Dickson's (1999) Knowledge of and Concern with Apparel Social Issues Scale was utilized to assess students' knowledge of and attitudes toward AT social issues. As part of the scale, statements assessed students' knowledge of issues concerning child labor and the treatment of workers in apparel manufacturing factories globally. Additionally, students' attitudes towards banning apparel products produced by child laborers, involving government in regulating working conditions in apparel manufacturing factories, and labeling apparel goods produced in a socially responsible manner were included.

Kozar and Hiller Connell's (Hiller Connell & Kozar, 2009, 2010; Kozar & Hiller Connell, 2010) Apparel Purchasing Behavior scale was used to examine students' past experiences with purchasing socially and/or environmentally responsible clothing. This scale included statements which assessed participants' willingness to pay premium prices for socially responsible goods, experiences in boycotting firms because of labor abuses, and experiences in researching a company's policies on social responsibility prior to making purchasing decisions. Additional statements analyzed students' eco-conscious apparel-purchasing behavior, such as participants' willingness to pay premium prices for goods produced in an environmentally responsible manner, experiences boycotting firms because of environmental abuses, and experiences in researching a company's environmental practices prior to making purchasing decisions.

Finally, because the literature strongly references knowledge as a powerful predictor of purchase intentions, two scales were utilized to further understand the extent of Chinese students' knowledge regarding the manufacturing of AT goods. This was accomplished by using Kim and Damhorst's (1998) Environmental Knowledge scale. This scale included measures assessing participants' knowledge of chemical pollutants produced in the manufacture and processing of fibers, the recyclability and biodegradability of apparel goods, and regulations for clean air and water imposed on firms operating within the supply chain. The New Environmental Paradigm (NEP) scale by Dunlap, Van Liere, Mertig, and Jones (2000) is a widely used measure of pro-environmental orientation; as part of this study, this scale assessed participants' ecological beliefs and attitudes towards human-environmental relationships. Specific items of the scale included "We are approaching the limit of the number of people the Earth can support," and "Humans have the right to modify the natural environment to suit their needs."

3.2 Data Analysis

The questionnaires were coded and entered into SPSS for data analysis purposes. Unfortunately, the scales in the study were not found reliable as the Cronbach's alpha scores fell below the .70 level (Cronbach, 1951). Consequently, future research is warranted in exploring other measures more reliable in examining Chinese consumers' responses to the variables used in this study. As such, in regards to Objective Four of this study, the scales/instruments used in this study to measure US consumer knowledge, attitudes and sustainable purchase intentions should not be replicated in a future study utilizing a Chinese sample of participants. Therefore, simple descriptive statistics of the Chinese consumers' knowledge, attitudes, and purchase intentions were considered of greater importance rather than the relationships between the summed variables. These low Cronbach's values could also be due to the small number of participants of the study. The frequencies of individual scale items were still analyzed however to better understand participants' knowledge, attitudes and purchasing intentions of socially and environmentally responsible apparel. Again, however, because of the low reliability scores, summed scores of the variables were not computed. As such, simple linear regression analysis was not conducted to explore whether or not knowledge and attitudes were significant predictors of purchase intentions (Objective Three). However, the frequencies of the items could still be compared to that previously reported in research studies utilizing samples of US consumers.

4. Results and Discussion

The sample consisted of 61.5% ($n=32$) female and 38.5% ($n=20$) male students. A majority (46.8%, $n=22$) of the respondents were age 22, followed by 27.7% ($n=13$) aged 21 years old, 10.6% ($n=5$) aged 23 years old, 8.5% ($n=4$) aged 20 years old, and 6.4% ($n=3$) aged 24 years old. All participants were enrolled in a summer course at a Chinese university located in the Zhejiang province.

4.1 Frequencies of the Items

The ESAK scale (LeHew & Hiller Connell, under development) measured the Chinese students' knowledge of apparel environmental issues. A majority of the participants in this study had a higher knowledge as compared to US students as previously reported by Reiter (2015). In Reiter's study (2015), the US participants had extremely low levels of knowledge regarding environmental issues in the AT industry, with 75% or more of the respondents answering most of the questions in the ESAK scale incorrectly. For example, in Reiter's study (2015), 90% of the participants incorrectly believed that minimal fabric is wasted in the manufacturing of clothing, 89% incorrectly stated that a majority of garments thrown away by consumers are diverted from landfills and recovered for reuse or recycling, and 91.2% were incorrect in believing that by using more natural fibers it is possible to significantly decrease energy consumption in the AT industry. The participants in Reiter's study were slightly more knowledgeable about the differences in the environmental impacts between cotton and polyester. However, over half of the respondents still answered the majority of these questions incorrectly as well.

The Chinese students, however, were well versed in the amount of water it takes to produce synthetic fibers (75% answered correctly) and how much chemicals used in textile processing remain in aquatic systems for several years (88.5% answered correctly). Additionally, the Chinese students were more knowledgeable on items regarding "Many of the chemicals found in textile dyes are known and/or suspected carcinogens," (82.7% right) and "Chemical pollutants are produced during the manufacturing of textiles" (82.7% right). However, a much smaller proportion of the Chinese students were correct on other scale items. For example, only 40.4% of participants correctly reported that "The manufacturing of clothing uses large amounts of energy." Additionally, only 11.5% of the Chinese students answered the following item correctly: "Home laundering (washing and drying) of a 100% cotton t-shirt will have less of an environmental impact than the initial production of the cotton fiber and the manufacturing of the shirt." It should be noted, however, that this result should be carefully interpreted as many Chinese students hand wash and hang dry their clothing as opposed to the typical US home laundering process. Yet, as the Chinese economy continues to develop and more homes are equipped with electrical powered washers and dryers, it is important to educate Chinese consumers on sustainable clothing care methods. Further, only 32.7% of respondents answered the following two statements correctly: "A majority of garments thrown away by consumers are diverted from landfills and recovered for reuse or recycling," and "In an industrial landfill, a 100% cotton garment will biodegrade within one to two months." Given these results, while it is evident that Chinese students understand the environmental impacts of apparel production, less is understood regarding environmentally sustainable consumption and disposal habits. This poses an opportunity for future areas of research focused on sustainable home laundering processes and phases of the life cycle of a garment.

Similar to that reported above, the items of Kim and Damhorst's (1998) Environmental Apparel Knowledge scale showed that the Chinese students were considerably knowledgeable about AT production and its environmental impacts. This is the antithesis of previous studies done on US students in which knowledge was found to be quite low (Kozar & Hiller Connell, 2013; Hiller Connell & Kozar, 2012; Kozar & Hiller Connell, 2010; Hiller Connell, 2010). Among the participants, 82.7% correctly answered the statement "Chemical pollutants are produced during manufacturing of synthetic or manufactured fibers such as polyester." The majority of participants (71.2%) were also aware that chemical pollutants are produced during the processing of fibers and 88.5% were correct that natural fibers are biodegradable. Nearly 79% of participants were knowledgeable that special finishes on fabrics may create problems for recycling and nearly the entire sample (92.3%) agreed that textile dyeing and finishing uses a lot of water and that phosphate laundry detergents can pollute water. Additionally, 84.6% of respondents were aware of the air pollution that can occur during the common processes of dyeing.

Among the items of Dickson's (1999) Knowledge of Apparel Social Issues scale, compared to US findings that indicate customers have even lower knowledge of social issues than environmental (Kozar & Hiller Connell, 2013; Dickson, 1999). In this study, over half of the respondents (63.5%) reported that child labor was not a general practice in the US but in other countries most of the respondents (90.4%) agreed that the practice of using child labor as a means of cheap labor in apparel production occurs. Among the other items, over half of the respondents agreed that the majority of garment workers in the US are not paid fair wages (which is correct), with 20% reporting "I don't know." Similarly, nearly 35% of the sample agreed that garment workers in other foreign countries are not paid fair wages with 26.9% responding "I don't know." There was an incorrect assumption among a majority of participants (73.1%) that in the US, garment manufacturing firms are fair in required working hours, yet there was a correct assumption among participants that countries outside of the US

are unfair in working hours required. Finally, the majority of participants (88.5%) agreed that the working environments in garment factories in the US are nonhazardous, which is incorrect, however, less favorable ratings were given to countries outside the US. As a result, these findings show that among the Chinese students, most regard the conditions of US apparel factories fairly high, which in the LA garment industry is often not the case, while the conditions of other countries being less favorable, a repeatedly noted fact which participants correctly answered. In reference to the working conditions in garment factories in the US, research has shown that a majority of factories in the LA garment industry are rife with labor abuses and unhealthy and unsanitary working conditions. Furthermore, a larger proportion of students in this study reported being less knowledgeable about social issues in general as compared to issues regarding the environmental impacts of apparel production (i.e., a higher proportion of participants selecting "I don't know" to the items). This provides another opportunity for further research in China, as the findings indicate that overall, Chinese consumers are likely less familiar or knowledgeable with social issues pertaining to the AT industry, particularly the labor conditions in the US.

Among the items of Dickson's (1999) scale used to assess Participants' Attitudes towards Issues of Social Responsibility, many of the responses reported by the students varied to some degree. In previous US studies, it was found that consumers held higher beliefs regarding the industry than knowledge (Dickson, 1999; Hustvedt & Dickson, 2009). For example, there was a strong stance noted among participants (86.5%) regarding the banning of products using child labor and that there should be more government regulations protecting industry workers (98.1%). Additionally, 88.5% of participants reported that they would boycott clothing made by firms that were not socially responsible and 82.7% agreed that they would make an effort to buy socially responsible apparel when comparing products. A strong majority of participants (98.1%) requested that there be a label on denim advertising that it was made using socially responsible practices. Other attitudes that varied more among respondents included their beliefs that they were knowledgeable about socially responsible clothing firms (53.8% responded "yes," 36.5% responded "no," and 9.6% responded "I don't know") or that they were informed regarding social issues in the US industry (44.5% reported "yes," 36.5% reported "no," and 19.2% reported "I don't know") and in other countries (25% reported "yes," 50% reported "no," and 25% reported "I don't know"). These findings show that Chinese students are not as confident in their understanding of socially responsible practices as compared to the environmental impacts of AT production but are open to being more informed regarding these issues and taking a stand against products that are not produced in a socially irresponsible manner.

The Dunlap et al. (2000) NEP scale was used to measure Chinese students' pro-environmental orientation. Compared to US data in which respondents scored quite low on their pro environmentalism attitudes (Kozar & Hiller Connell, 2013; Dunlap et al., 2000). However gender was considered a strong demographic factor in pro environmental attitudes and should be further studied in other cultures (Dunlap et al., 2000). Many respondents (67.3%) agreed that we are approaching the limit of the number of people the earth can support, that humans are abusing the environment (90.4%), that plants and animals have just as many rights to exist as humans (96.2%), that despite our special abilities humans are still subject to the laws of nature (90.4%), and that we have limited room and resources left on the planet (96.2%). Many students disagreed that we were meant to rule over nature (94.2%), that humans have the right to modify nature to suit their needs (76.9%), that nature can cope with industry outputs (90.4%), that humans will learn enough about nature to control it (84.6%) and that the ecological crisis facing human kind has been exaggerated (82.7%). As such, these results indicate that Chinese students are quite knowledgeable about environmental issues in general and agreed that society must learn to work with nature and not control it. These are significant findings given the current state of the natural environment in China, particularly being one of the most significant contributors to pollution in the world. However, students' responses were much more varied when responding to statements regarding whether or not mankind will overcome these challenges. For example, only 30.8% of participants agreed that "Human ingenuity will insure that we do not make the earth unlivable" (with 48.1% reporting "no" and 21.2% reporting "I don't know").

Utilizing the Kozar and Hiller Connell (2013) Sustainable Purchasing Behavior scale, the responses among the participants in this study were quite varied. Kozar and Hiller Connell (2013) found that knowledge and attitudes were significant predictors of sustainable purchasing behavior with knowledge being a stronger predictor. Results from this study indicate that further work must be done in educating and promoting sustainable apparel purchasing behavior among Chinese consumers. For instance, in this study, over half of respondents indicated that they rarely boycott an apparel brand because of unfair working conditions, yet, were more likely to boycott an apparel retailer for poor environmental policies. Less than half of respondents indicated a willingness to pay premium prices for clothing made under fair labor conditions, yet a greater proportion of respondents were

willing to pay higher prices for clothing produced in an environmentally conscious manner. Less than 25% of participants reported actively seeking out the labor or environmental practices of apparel retailers prior to making purchasing decisions, however, approximately 60% of participants and 70% of participants indicated that they could be influenced in their purchasing behavior if more information was known about the social and environmental practices of a firm. As a result, future research should explore the most effective means for educating Chinese consumers about the social and environmental practices of major apparel firms operating in the marketplace in China today.

5. Conclusion

5.1 Implications for Industry Professionals

Overall, given these results, sustainable apparel brands targeting Chinese consumers should find new and/or more effective means for measuring Chinese consumers' sustainable apparel knowledge and attitudes in an attempt to impact purchase intentions. Apparel firms with a sustainable focus need to also ascertain the most effective means for marketing and communicating to Chinese consumers their overall corporate practices, again, as a means to both educating and driving purchasing behavior and consumer loyalty. Both fast-fashion and luxury brands should take note of the implications of sustainability in the fashion industry today as this is a growing phenomenon in the AT industry.

As part of this study, a significant finding was that participants were less familiar with the environmental impacts of clothing care and disposal. Future research should explore further marketing or educational methods for educating Chinese consumers on sustainable practices as more consumers purchase home laundering appliances. Additionally, as compared to the environmental aspects of the industry, respondents were somewhat less knowledgeable about social issues but significantly, were influenced by social issues in their purchasing intentions. These findings have strong implications for apparel firms operating in the Chinese marketplace. While it seems that Chinese consumers may hold more favorable pro-environmental orientations, an opportunity exists in educating Chinese consumers of social issues existing in the industry. This is significant, as the social conditions in apparel factories around the globe, from the US to China, have consistently been criticized for poor working environments and the exploitation of workers.

Chinese participants also indicated that they would have more favorable attitudes towards socially responsible firms if they were better informed. These findings are similar to past studies (Kim & Damhorst, 1998; Dickson, 2000; Hiller, 2010; Young, Huang, & McDonald, 2010; Ha Brookshire & Norum, 2011; Hiller Connell, 2011; Hyllegard, Yan, Ogle, 2012; Hiller Connell & Kozar, 2012; Hiller Connell & Kozar, 2013; Kang, Liu, & Kim, 2013; Reiter, 2015). Aside from the fact that Chinese consumers need to be better informed of social issues, the participants in this study did indicate that they would be willing to make exceptions in their apparel purchasing decisions if products were clearly labeled. Both educators and industry professionals should take note of this finding, providing further brand information and through devising effective marketing strategies. By providing social and environmental information prior to the point of purchase, Chinese participants indicated a more favorable response to purchasing sustainable products over non-sustainable options. These findings hold true to US consumers as well. As Kozar and Hiller Connell (2010) noted, as more education is provided to consumers on these topics, the more knowledge may be retained and the greater likelihood of purchase intentions of sustainable apparel. Further research is still needed, however, on the most effective means for educating and marketing to consumers, whether in the US or China, on the environmental and social impacts of the apparel supply chain and the consumers' role in fostering sustainability in the AT industry.

5.2 Limitations

A limitation to this study was the utilization of a convenience sample, therefore, generalizations to the larger Chinese market cannot be fully realized. Further, as found after collecting and analyzing the data, it was determined that the measures used in this study yielded low reliability scores. Consequently, only descriptive statistics could be reported as summed variables could not be computed and the relationships among the variables tested. Consequently, additional research should explore more effective means for collecting Chinese consumers' sustainability knowledge, attitudes, and purchasing intentions as it relates to the AT industry. Perhaps a qualitative study is warranted as a starting point. As it was determined, the measures used to collect data on US consumers cannot be reliably replicated when studying Chinese consumers.

5.3 Recommendations for Future Research

Future research should investigate effective ways in educating Chinese consumers regarding issues of sustainability in the AT industry. Ascertaining the relationship of Chinese consumers' sustainability knowledge,

attitudes, and purchasing intentions is also warranted given the limitations of this study in that the measures used were deemed unreliable. Indeed, further research on this topic is significant, given the expedited growth of the Chinese retail market, economy, and consumer purchasing power. Given the sheer size of the Chinese market, influencing Chinese consumers' sustainable purchasing intentions and other clothing practices can be substantial in fostering the overall sustainability movement in the AT industry.

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