

Article

Factors Influencing Purchase Intention toward Recycled Apparel: Evidence from China

Xiaofang Jin , Azizah Omar * and Kai Fu

School of Management, Universiti Sains Malaysia, Gelugor 11700, Malaysia; bbq6ay@gmail.com (X.J.); usmkai628@gmail.com (K.F.)

* Correspondence: aziemar@usm.my

Abstract: This study aimed to develop a conceptual framework that integrates both consumer-specific and product-specific factors, with a particular focus on consumer value perceptions regarding recycled apparel and their impact on consumer attitudes and purchase intention. The framework combines the Perceived Consumer Value (PCV) with the Knowledge–Attitude–Behavior (KAB) model. To validate the proposed conceptual framework, an online survey was conducted with a purposive sample of 716 participants in China. Using structural equation modeling, the hypotheses of the conceptual model were tested. This study identified four dimensions of perceived value and environmental knowledge as significant factors that positively influenced customers’ attitudes toward purchasing recycled apparel. Notably, it was found that perceived quality value had a more pronounced effect on purchase intention than other factors. Interestingly, product knowledge did not demonstrate a significant impact on attitudes. By exploring this under-researched topic, this study provides new insights into consumer behavior in the context of sustainable fashion in a non-Western context.

Keywords: recycled apparel; environmental knowledge; product knowledge; perceived value; attitude; purchase intention



Citation: Jin, X.; Omar, A.; Fu, K. Factors Influencing Purchase Intention toward Recycled Apparel: Evidence from China. *Sustainability* **2024**, *16*, 3633. <https://doi.org/10.3390/su16093633>

Academic Editors: Muhammad Mohiuddin, Slimane Ed-Dafali, Saeb Farhan Al Ganideh, Bilal Khalid and Ting Chi

Received: 3 March 2024

Revised: 12 April 2024

Accepted: 23 April 2024

Published: 26 April 2024



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1. Introduction

In recent years, the emphasis on sustainable development and the need for eco-friendly consumption habits have grown markedly across societal and academic domains. This increased attention has highlighted the role of the fashion sector, particularly the fast fashion industry. “Fast fashion” is characterized by a shortened fashion cycle, which is associated with cheap manufacturing, more frequent consumption, and the short-term use and disposal of apparel items [1–3]. This trend has promoted the formation of rapid response systems and flexible supply chains in the apparel industry. However, it has also resulted in a considerable waste of resources and serious environmental pollution problems in the fashion industry [1–3].

Ikram [4] highlighted the negative social and environmental effects of the fashion industry, which was supported by Centobelli et al. [5], who noted that the fashion industry accounts for a staggering 10% of worldwide carbon emissions, making it a major pollution source. It is also responsible for 20% of the global industrial wastewater, at approximately 79 trillion liters annually, and contributes substantially to marine microplastic pollution. With over 92 million tons of textile waste produced annually, as pointed out by Musova et al. [1], the industry’s detrimental impact is undeniable.

As the largest developing economy, China plays a prominent role in the global apparel industry, and its apparel market has been projected to reach a value of USD 615 billion by 2025 [6]. The textile sector has been instrumental in economic growth and public welfare but at a significant environmental cost. As per the China National Textile and Apparel Council (2021) [6], it is the third-largest source of wastewater effluents, contributing 17% in 2020, and accounts for 10% of all industrial carbon emissions. More importantly, China is

also concerned about the environmental impact of textile waste. Currently, approximately 26 million tons of textile waste are generated in China every year, and it is predicted that this will increase in the future.

To counteract the pattern of unsustainable practices in fashion, there has been an emphasis on adopting the principles of sustainable development. According to the 14th Five-Year Plan for Economic and Social Development of the People's Republic of China (2021–2025), ambitious targets have been set for the textile industry, including reductions in energy consumption, carbon dioxide emissions, and water usage, alongside the goal of recycled fiber use [6].

As a sustainable solution, recycled clothing continues to attract the attention of scholars, the fashion industry, and environmentally conscious individuals. This trend is motivated by growing environmental concerns about resource availability and the increase in waste volume [7]. Recycled clothing, as highlighted by Wagner and Heinzl [8], is produced by breaking down textile waste into raw materials, which are then used in the production of new clothing items. It has been increasingly recognized as a promising and sustainable method for reducing material and energy use and ensuring sustainable production and consumption in the textile and apparel industries [7,8]. Due to these benefits, great interest in recycled fashion has emerged within academia and the fashion industry in recent years [6,9].

Amid the growing environmental awareness, Chinese textile and apparel companies are increasingly committing to environmental protection as part of their corporate social responsibilities. These efforts are largely focused on recycling waste clothing, with significant investments from fashion companies in recycling technologies. Notable collaborations, including those of LINING, ANTA, and LETIN, have led to advances in converting old clothes into high-quality recycled polyester fibers for new products [6].

Despite these measures, the uptake of recycled apparel among Chinese consumers is limited, underscoring a deficiency in market acceptance. While previous studies investigating recycled fashion in China have largely focused on design analysis and technological improvements in the fashion industry, empirical research on consumer purchasing behaviors regarding recycled fashion is limited, as noted by Jung et al. and Su et al. [10,11]. Therefore, it remains unclear which factors can encourage Chinese consumers to choose recycled clothing.

In previous studies on recycled fashion worldwide, the focus has been on the influencing factors, such as environmental concerns, consumers' pro-environmental attitudes, perceived quality, perceived value, and perceived risk [12–14]. However, it is unclear which specific aspects are considered by consumers when assessing the value of recycled apparel, especially in China, where the recycled apparel business is still at an early stage. Consumers lack knowledge about recycled apparel [6], and there are knowledge gaps regarding the fashion industry's environmental impacts, as highlighted by Jung et al., Lu et al., and Kim et al. [10,14,15], which may influence their purchase intention toward recycled clothing.

Therefore, this study seeks to explore the factors that cause Chinese consumers to choose recycled clothing, aiming to provide a corresponding framework and policy suggestions for the promotion of recycled fashion consumption in China. The main research questions are as follows.

RQ1: How does environmental knowledge influence Chinese consumers' attitudes toward recycled clothing? This question explores the impact of environmental awareness on consumer choices regarding sustainable fashion.

RQ2: What role does product knowledge play in shaping the attitudes of Chinese consumers toward recycled clothing? This question examines how familiarity with the attributes of recycled clothing can affect consumer preferences.

RQ3: How do different types of perceived value influence the attitudes and purchase intentions of Chinese consumers toward recycled clothing? This question aims to understand how consumers weigh the benefits (emotional, economic, quality, and social) of

recycled clothing against the potential drawbacks, influencing their decisions to purchase such a clothing item.

By identifying the factors associated with the acceptance of recycled apparel, this study proposes strategies to encourage sustainable consumption, thus aiding in reducing the fashion industry's environmental impacts and fostering sustainable market evolution. This research, therefore, aims to bolster the adoption of recycled apparel in China, contributing to a more sustainable fashion industry by addressing both theoretical and practical challenges, offering insights into consumer behavior, and suggesting strategies to increase the acceptance and utilization of recycled apparel.

The remainder of the paper is structured as follows: Section 2 provides a comprehensive literature review and a description of the development of hypotheses; Section 3 introduces the research methodology; Section 4 presents the results of the empirical investigation in detail; and Section 5 provides a discussion of all findings. Section 6 puts forward the study's theoretical contributions and managerial implications, followed by the study limitations and directions for future research in Section 7.

2. Literature Review and Hypothesis Development

2.1. Research on Recycled Apparel Consumption

With the rise of recycled apparel, scholars have shown increasing interest in its acceptance among consumers. Botwinick and Lu [12] found that clothing produced using recycled materials was often considered inferior in quality and less durable and functional than regular new clothing. Likewise, although consumers regard clothing made from recycled materials as more eco-friendly, no clear evidence has shown that they are willing to pay for such products given the products' clear functional or aesthetic shortcomings. From a Turkish perspective, Şener et al. [13] discovered that the perceived benefits derived from emotional, social, and epistemic values are insufficient in positively shaping consumers' attitudes toward recycled clothing. However, conditional value, rooted in factors such as environmental degradation and price incentives, exerts a significant positive influence on consumers' attitudes. Exploring the South Korean context, Kim et al. [14] determined that aesthetic and sanitary risks are notable deterrents in promoting positive product attitudes and purchase intentions toward recycled clothing. According to Meng and Leary [16] and Pretner et al. [17], consumers could also be wary of the potential health risks of consuming clothing made from recycled materials, given the unknown sources of the textile waste used and the recycling process. Within the Indian context, Chaturvedi et al. [18] identified willingness to pay, environmental concern, perceived value, and personal norms as critical drivers of Generation Z's purchasing behaviors regarding recycled clothing. Additionally, Park and Lin [19] found that even consumers with a positive attitude toward sustainable products often purchase clothing based on conventional factors, such as price, perceived value, and other functional benefits.

In summary, studies consistently show that consumers commonly see clothing made from recycled materials as relatively inferior in quality and value, with product safety concerns. In addition, consumers are not willing to sacrifice other benefits, such as quality, simply for the sake of sustainability. Finally, there is a lack of research concerning the purchase intention of Chinese consumers toward recycled fashion.

Thus, the sole reliance on highlighting the environmental contributions of recycled apparel is not sufficient to attract consumers. Addressing consumers' concerns about the value of recycled clothing is crucial. Firstly, it is necessary to identify the specific aspects considered by consumers when assessing the value of recycled apparel as being inadequate. Understanding these particular concerns is key in enabling sellers to provide tailored information, which could significantly reduce or eliminate these concerns. At the same time, consumer-specific factors, such as consumers' environmental knowledge and product knowledge, should be addressed, as consumers' decisions are not only influenced by their evaluation of the value of recycled clothing. Additionally, conducting research specifically

addressing the purchasing behaviors and attitudes of Chinese consumers toward recycled apparel is imperative for a more logical and informed approach in this sector.

2.2. Theoretical Background

Kallgren and Wood's Knowledge–Attitude–Behavior (KAB) model [20], initially developed in 1986 to elucidate the influence of knowledge on behavior and its role in driving gradual change, has been widely applied in diverse academic fields, such as climate-smart food products [21], the circular economy [22], green product purchasing [23], education [24], and clinical services [25]. This model asserts that consumers' pursuit of knowledge culminates in either a positive or negative attitude toward a particular behavior. Central to the KAB model is the idea that attitudes are shaped by external factors and consumer knowledge, allowing for the seamless integration of consumer concerns related to external factors into the model. However, the KAB model has faced criticism for its simplicity. Research indicates that sustainable consumption is not only influenced by consumer-specific factors, such as environmental knowledge and product knowledge, but other factors associated with product perception also influence consumer behavior.

Thus, in addition to focusing on consumer-specific factors, a considerable body of research has also explored the impact of product-specific factors on purchase intention. These studies highlight the relevance of product-related concepts such as utility and value in explaining consumer behavior. Specifically, the Perceived Consumer Value (PCV) postulated by Sheth et al. [26], which underscores the critical role of perceived value in shaping behavioral intentions, has been influential in this regard. According to the research by Pereira et al. and Sebastián-Morillas et al. [27,28], perceived value is pivotal in determining consumer behavior. From this, we can see that perceived value is the subjective feeling of customers, involving the balance of interests and the emotional experience of customers. However, the perceptions of products or services vary based on a combination of needs, experiences, attitudes, and individual traits, suggesting that perceived value is a multifaceted construct encompassing various aspects, and it is applicable to areas such as sustainable fashion products [29], food delivery platform services [30], and live-streaming e-commerce [31]. Earlier, Sheth et al. [26] had divided the dimensionality of perceived value into five dimensions (functional value, conditional value, social value, emotional value, and cognitive value). Sweeney and Soutar [32] improved it and developed the classic four-dimensional scale (quality value, emotional value, price value, and social value). We employed Sweeney and Soutar's classic classification method for this research.

Our approach to exploring consumer behavior toward recycled apparel leverages the combined strengths of the KAB model and the PCV. These frameworks are selected for their proven effectiveness in discerning consumer behavior, especially in the realm of sustainable products. The KAB model, supported by research from scholars such as Polonsky et al. and Taufique et al. [33,34], addresses the critical gap between knowledge and subsequent action, which is particularly pertinent in the context of recycled apparel, where consumer decisions are heavily influenced by environmental awareness and attitudes.

Complementing the KAB model, the PCV delves into diverse types of consumption value, such as quality value, emotional value, price value, and social value that can guide consumer choices in the sustainable fashion sector, as noted by Busalim et al., Chi, and Kim et al. [14,35,36]. This layered approach is crucial in decoding the complexities of consumer decision-making processes in the sustainable or circular fashion context. The integration of these models serves to bridge the well-documented attitude–behavior gap that is prevalent in sustainable consumption practices, as indicated by Diddi et al. and Okur et al. [37,38]. By tracing the pathway from environmental knowledge to attitudes and then to behaviors while also considering the impact of various consumption values on these attitudes and behaviors, our research offers a comprehensive perspective on the dynamics at play.

Distinct from theories such as the Theory of Planned Behavior and the Theory of Reasoned Action, the fusion of the KAB model and the PCV uniquely addresses both the cognitive aspects (knowledge and attitudes) and affective components (values and

emotional connections) of consumer behavior in sustainable fashion, as mentioned by Riskos et al. and Tanrikulu [23,39]. This nuanced approach is especially relevant given the unique challenges within the recycled apparel market and is validated by its practical applicability in addressing contemporary market challenges, notably in studies focusing on the Chinese market [35,40], where sustainable fashion consumption is hindered by limited consumer knowledge and perceptions of value.

By combining the KAB model with the PCV, we aimed to provide an in-depth analysis that surpasses the insights provided by either framework independently, enabling a holistic understanding of how knowledge and values collectively shape consumer behavior toward recycled apparel. This strategy effectively addresses both the cognitive and affective dimensions of consumer behavior, offering a detailed and comprehensive exploration of consumer tendencies within the sustainable fashion domain. This integration not only addresses existing research gaps but also aptly captures the complexities of sustainable fashion consumption, highlighting our model's capacity to thoroughly examine the factors influencing consumer behavior in the recycled apparel sector.

2.3. Attitudes (ATT) and Purchase Intention (PI)

Purchase intention is a key focus in marketing research, linking attitudes with behavior to forecast consumer actions, as indicated by Sun et al. [41]. It was defined by Peña-García et al. [42] as the likelihood of a consumer buying a product after a thoughtful evaluation. Ajzen [43] defined intention as an individual's willingness to exert effort toward enacting a behavior. Researchers such as Onofrei et al. and Alwan et al. [44,45] have emphasized the importance of purchase intention in predicting future consumer choices, particularly in the realm of sustainable consumption. However, the variability of purchase intention leads to challenges in ensuring the robustness and consistency of findings related to attitudes and the prediction of purchase intention, as highlighted by the research of Maria et al. and Ajzen and Fishbein [46,47].

In addition, attitude plays a pivotal role in predicting intention, as posited by Ajzen [48], who describes it as a psychological tendency demonstrating favor or disfavor toward a particular behavior. This concept is essential in behavioral theories such as the Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB), which aim to understand human actions [49,50]. However, the effectiveness and universal applicability of these theories, particularly in a diverse range of consumer scenarios and across varying cultural environments, have generated considerable debate and examination. This leads to pressing questions regarding the global applicability and adaptability of these models across different contexts and cultural frameworks.

Despite the recognized impact of consumer attitudes on sustainable fashion product purchasing decisions, the existing literature has largely focused on Western cultural settings, such as those in America and Europe, leaving a significant gap in knowledge regarding other cultural contexts, including the Chinese cultural context, as documented by Mandarić et al., Wang et al., and Jain and Mishra [51–53]. Furthermore, research specifically addressing the purchase of recycled clothing remains notably scarce.

By addressing these knowledge gaps and the need for cultural diversity in research, the current study aims to explore the complex relationship between attitudes and purchase intentions within the context of recycled clothing consumption in China. This study proposes the following hypothesis:

H1: *Attitudes toward purchasing recycled apparel significantly affect purchase intention.*

2.4. Environmental Knowledge (EK) and Attitudes (ATT)

Research indicates that a major obstacle to the adoption of sustainable fashion, especially recycled apparel, is a lack of awareness and knowledge. Individuals do not fully understand how their fashion choices impact the environment, as outlined by Moon et al. and Muposhi and Chuchu [54,55], with many failing to see the negative effects of fast

fashion, as indicated by Fang [56]. This ignorance contributes to a lack of concern about wearing unsustainable clothing, according to Breen [57]. Thus, it is vital to understand how knowledge impacts the purchasing of recycled apparel, as highlighted by Abbate et al., Abrar et al., and Hassan et al. [58–60].

Previous studies have explored how environmental knowledge affects eco-friendly actions. However, as reported by Hossain et al. and Pratiwi et al. [61,62], while knowledge about environmental damage can increase individuals' likelihood of displaying eco-friendly behaviors, this does not always happen. Gkargkavouzi et al. [63] found that knowledge has weak or no effects on the purchase of sustainable products. These inconclusive and fragmented results regarding the association between environmental knowledge and sustainable consumption mean that continued exploration is required by scholars and researchers, as mentioned by Amoah and Addoah [64].

In our study, we focus on environmental knowledge specific to recycled apparel, seeking to understand consumers' knowledge of how recycled apparel affects the environment; this knowledge has been linked to positive attitudes toward purchasing recycled apparel. Considering these insights, this study proposes the following hypothesis:

H2: *Environmental knowledge significantly influences attitudes toward purchasing recycled apparel.*

2.5. Product Knowledge (PK) and Attitudes (ATT)

Product knowledge represents the extent of a consumer's understanding regarding the various attributes of a specific product, which is shaped not only by their direct experiences but also by targeted marketing efforts [65–68]. It is an essential factor in the decision-making process, impacting perceptions of the product's inherent value and the associated risks of purchasing it [69]. However, most studies have primarily addressed aspects such as cost or green practices when examining product knowledge [70,71], leaving a gap in our understanding of how comprehensive product knowledge influences consumer attitudes, particularly toward specialized items.

Recent research efforts, such as those by Nurhayati and Hendar and Harahap et al. [72,73], have begun to shed light on the relationship between product knowledge and consumer attitudes. They underscore the importance of product knowledge in nurturing positive attitudes, which, in turn, significantly influence the adoption rates and purchase intention regarding items such as halal cosmetics and bubble tea drinks [74,75]. Despite these advances, current research remains narrowly focused on specific product categories, with insufficient attention given to how product knowledge affects attitudes toward environmentally friendly products, including recycled apparel.

This lack of a comprehensive understanding in the context of eco-conscious consumer goods underscores the need for further investigation. By acknowledging this gap, our study seeks to delve deeper into the field of sustainable fashion, specifically examining the impact of product knowledge on consumer attitudes toward purchasing recycled apparel. With the above considerations, this study posits the following hypothesis:

H3: *Product knowledge significantly influences attitudes toward purchasing recycled apparel.*

2.6. Perceived Value (PV), Attitudes (ATT), and Purchase Intention (PI)

Perceived value (PV) represents a consumer's comprehensive assessment of a product's benefits, juxtaposing the gains against the sacrifices made, as Park et al. and Zeithaml [19,76] have pointed out. While perceived value has traditionally been segmented into quality and price dimensions, this binary classification neglects nuanced aspects such as emotional and social factors, leading to an incomplete understanding of consumer value perceptions [77]. Notably, the model developed by Liu et al. [78] introduces a more complex framework, suggesting that consumer assessments include emotional, social, price, and quality factors.

Our study's emphasis on the four dimensions of perceived value—emotional, social, quality, and price—is grounded in their well-documented influence on consumer purchasing decisions [79,80]. These dimensions encompass both the psychological aspects through emotional and social values and the tangible considerations of quality and price-weighted by consumers [81]. This distinction allows for an in-depth exploration of the myriad factors affecting consumer choices, enhancing the study's comprehensiveness.

Focusing on these specific dimensions enables a clear, detailed analysis by highlighting the unique influence of each on consumer behavior. This approach aligns with our aim to deconstruct the contribution of each dimension to perceived value, enriching our findings' clarity and depth. The selection of these dimensions is supported by a wealth of existing research, ensuring the relevance and applicability of our study's outcomes.

Opting to exclude dimensions such as environmental and epistemic values, which are critical to sustainable consumption, is a strategic choice intended to ensure that the research is focused on and tailored to our target consumer group and context, which might not emphasize these values to the same extent. However, we recognize their potential significance in other contexts or areas and encourage future studies to explore these dimensions for a fuller understanding of consumer decision-making, especially where these values are more critical.

Our research specifically addresses the Chinese market's demand for environmentally friendly apparel, prioritizing the dimensions that align with Chinese consumers' preferences, as indicated by Chi [36]. The analysis revealed a particular emphasis on social quality and price values, suggesting their cultural and market-specific importance in China's environmentally friendly apparel consumption. This focus reflects the unique cultural and market dynamics at play, justifying our research approach's targeted nature. This study, thus, aimed to discern the PV of recycled apparel through these multifaceted lenses.

Emotional resonance with products plays a pivotal role in shaping consumer preferences, as products are not merely functional items but also vehicles that elicit specific emotional responses [82,83]. Design elements are frequently crafted to elicit positive emotional reactions, contributing to the overall value that consumers derive from their purchases [84]. In the domain of sustainable fashion, aspects such as self-esteem and self-expression take center stage, reflecting the emotional benefits that consumers expect from their eco-friendly purchases [85,86]. However, there is a notable dearth in the literature regarding how the emotional value derived from recycled products impacts consumer attitudes and their subsequent purchase intention. A previous study [87] on consumers' purchase of recycled products focused on the functional value but largely neglected the emotional value.

This oversight in previous research highlights a crucial area for further investigation, particularly within the sustainable fashion sector, which is increasingly being recognized for its potential to foster emotional connections through eco-conscious purchasing choices. The perceived emotional value (PEV) associated with recycled apparel, encompassing feelings of pride, satisfaction, or alignment with personal values, remains underexplored in terms of its effect on consumer behavior.

By addressing this gap, our study aimed to investigate the intricate relationship between the emotional value that consumers perceive in purchasing recycled apparel and how this influences their attitudes and decision-making processes toward these products. By reflecting on these insights, this study proposes the following hypotheses.

H4a: *Perceived emotional value (PEV) significantly affects attitudes toward purchasing recycled apparel.*

H4b: *Perceived emotional value (PEV) significantly influences purchase intention toward recycled apparel.*

Social value in consumer behavior encompasses the perceived benefits that a product provides in enhancing an individual's interactions within their social sphere, as indicated by Liu et al. [78]. Clothing, beyond its basic functionality, serves as a potent symbol of individuals' social status and identity, influencing and reflecting social boundaries and affiliations, as highlighted by Özdil [88]. This perspective underscores the importance of apparel as a means of social expression, allowing individuals to navigate and assert their positions within various social groups, a concept reinforced by Crane, Entwistle, and Barnard [89–91]. The role of clothing extends into the realm of social signaling, where it transcends mere utility to embody social values and norms.

The influence of social value on consumer decisions is particularly pronounced in the context of visible consumer goods, such as apparel and jewelry, as Sheth [26] has observed. This notion is supported by Chi [36], who found social value to be a significant factor in the perceived value of eco-friendly clothing. Similarly, the research by Gwozdz et al. [92] on sustainable fashion among young Swedes emphasized the social signaling value of clothing, noting its importance in the consumer choices of male participants, particularly in terms of projecting an image of success.

By drawing on these insights, it is reasonable to infer that consumers may also associate social benefits with the purchase of recycled apparel, aligning with contemporary environmental consciousness and societal values. Such purchases not only reflect personal environmental commitments but also enhance one's social image and acceptance, particularly in communities prioritizing sustainability. Based on these considerations, our study seeks to explore the impact of perceived social value on consumer attitudes and behaviors toward recycled apparel. Thus, we propose the following hypotheses:

H5a: *Perceived social value (PSV) significantly affects attitudes toward recycled apparel.*

H5b: *Perceived social value (PSV) significantly influences purchase intention toward recycled apparel.*

Sustainable products, particularly in the fashion sector, are frequently commended for their superior quality, embodying the sustainability ethos of durability and longevity [93]. Recycled apparel, a major component of the sustainable fashion industry, exemplifies this focus on quality, which has emerged as a fundamental element influencing consumer perceptions and driving eco-friendly consumption patterns [94]. This correlation between perceived quality and sustainable purchasing behaviors has been substantiated by findings from scholars such as Wasaya et al., Queiroz et al., Cheung et al., and Tang et al. [95–98].

The significance of quality and durability has been further underscored in the aftermath of the COVID-19 pandemic, which has seen shifts in consumer priorities toward more long-lasting products in response to economic uncertainties and increased financial prudence, as documented by Hasbullah et al. [99]. The concept of perceived quality value, reflecting the comparison between experienced quality and anticipated or expected quality [100], is crucial in shaping consumers' overall evaluations and judgments regarding a product's excellence.

In this context, recycled apparel that aligns with or surpasses consumers' expectations regarding quality can significantly influence their purchasing preferences, positioning these products as desirable alternatives within the market. This transition underscores the importance of perceived quality value as a key determinant of consumer preferences for recycled clothing. Given the current market dynamics and consumer trends, this study aimed to delve into the intricate relationship between perceived quality value and consumer attitudes toward recycled fashion. In view of these considerations, we propose the following hypotheses to examine this relationship further:

H6a: *Perceived quality value (PQV) has a significant impact on attitudes toward purchasing recycled apparel.*

H6b: *Perceived quality value (PQV) significantly influences purchase intention toward recycled apparel.*

Perceived price value refers to a consumer's evaluation of a product's cost relative to its perceived benefits. Studies by Jeaheng et al. and Singh and Alok [101,102] and extensive research conducted by [103–105] have consistently indicated that perceived price value significantly shapes consumer attitudes and intentions across various contexts. However, the willingness of consumers to pay a premium for green products remains a complex issue, particularly in developing nations. Notably, in countries such as China, reports suggest that consumers might not be as discouraged by higher prices if they believe in the functional value and quality of sustainable products, a sentiment reflected in the findings of the studies by Zhang and Ito and Zhang [81,106]. However, these findings do not entirely concur with those of Shen et al. and Bigliardi et al. [107,108], who observed that consumers tend to balance considerations of both price and quality when deciding whether to purchase recycled products.

By considering these findings, our study aimed to explore this dimension within the sustainable fashion industry, particularly focusing on recycled apparel. Therefore, we propose the following hypotheses to guide our investigation:

H7a: *Perceived price value (PPV) has a significant impact on attitudes toward recycled apparel.*

H7b: *Perceived price value (PPV) significantly influences purchase intention toward recycled apparel.*

According to the hypotheses listed above, this study puts forward the theoretical model in Figure 1.

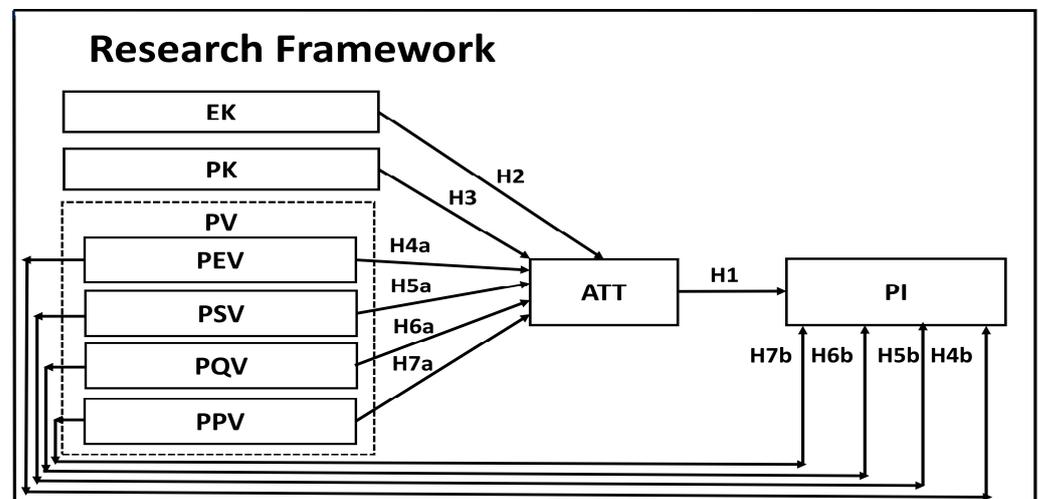


Figure 1. Proposed research model. EK for environmental knowledge, PK for product knowledge, PV for perceived value, PEV for perceived emotional value, PSV for perceived social value, PQV for perceived quality value, PPV for perceived price value, ATT for attitude, and PI for purchase intention.

3. Methodology

3.1. Questionnaire Design and Pre-Testing Study

This study utilized a survey questionnaire to collect data, beginning with demographic information before moving on to explore the study's key variables. We measured all latent variables using scales that have been previously validated. The respondents rated a series of statements on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), to provide detailed insights into their perceptions [109].

Prior to data collection, a pilot study ensured the questionnaire's validity and reliability. This phase involved a rigorous examination of the questionnaire's content, including the clarity of the items, the language used, the sequence, the format, and the complexity of the questions and instructions. To accurately reflect the participants' primary language, the questionnaire underwent a forward and backward translation process from English to Chinese [110].

With all measurement items achieving a loading factor above the 0.7 threshold, we decided to retain all 29 items for the in-depth analysis. The finalized survey items are detailed in Table 1.

Table 1. The measurement scales and their sources.

Variable	Item Number	Item Content	Source
Environmental Knowledge	EK1	I know microfiber pollution is related to the textile and apparel industry	Kim and Damhorst (1998) [111]
	EK2	I know the textile and apparel industry is a large contributor to greenhouse gas emissions	
	EK3	I know consumers contribute to the environmental issues associated with the apparel industry	
Product Knowledge	PK1	I am quite familiar with recycled apparel	Kang et al. (2013) [112]
	PK2	I know which brands sell recycled apparel	
	PK3	I can easily determine where I can purchase recycled apparel	
Perceived Emotional Value	PEV1	Recycled apparel would make me feel good	Walsh et al. (2014) [113]
	PEV2	Recycled apparel would give me pleasure	
	PEV3	Recycled apparel would make me want to use them	
	PEV4	Recycled apparel are the ones that I would enjoy	
Perceived Social Value	PSV1	Recycled apparel would improve the way I am perceived	Walsh et al. (2014) [113]
	PSV2	Recycled apparel would give their owner social approval	
	PSV3	Recycled apparel would make a good impression on other people	
	PSV4	Recycled apparel would help me to feel acceptable	
Perceived Quality Value	PQV1	Recycled apparel is well-made	Walsh et al. (2014) [113]
	PQV2	Recycled apparel has an acceptable standard of quality	
	PQV3	Recycled apparel would last a long time	
	PQV4	Recycled apparel has consistent quality	
	PQV5	Recycled apparel would perform consistently	
Perceived Price Value	PPV1	Recycled apparel would be economical	Walsh et al. (2014) [113]
	PPV2	Recycled apparel is reasonably priced	
	PPV3	Recycled apparel offers value for money	
	PPV4	Recycled apparel is good for the price	

Table 1. Cont.

Variable	Item Number	Item Content	Source
Attitude	ATT1	My attitude toward purchasing recycled apparel is very positive	Pruit and Yan (2016) [114]
	ATT2	I think purchasing recycled apparel is very favorable for me	
	ATT3	I think purchasing recycled apparel is a pleasant choice	
Purchase Intention	PI1	In the future, I intend to purchase recycled apparel	Pruit and Yan (2016) [114]
	PI2	In the future, I will tell my friends about the recycled apparel	
	PI3	I will prioritize recycled over fast-fashion apparel	

3.2. Sampling and Data Collection

Data collection for our study was carried out between October 2023 and January 2024 utilizing the renowned online survey platform Wenjuanxing for survey distribution. Online surveys are notably efficient in terms of cost and time, and they enable a broad reach, making them an attractive option for social science researchers [115]. Wenjuanxing, also known as Questionnaire Star, is a particularly popular online survey tool in China that is widely used in market research, educational assessments, customer satisfaction surveys, and many other contexts. Having over ninety million users, it covers a broad spectrum of the population, including individuals of various ages, genders, professions, educational backgrounds, etc. From a statistical perspective, this extensive user base enhances the representativeness of participants recruited through Questionnaire Star.

We employed purposive sampling to select participants who were likely to provide valuable insights into the study's subject matter. We also adopted purposive sampling due to ethical considerations, which necessitated that the survey be distributed only to individuals above the age of 18. On this basis, the survey platform randomly sent the questionnaire to its registered members who were 18 years of age or older. We assured respondents that their responses would be treated confidentially and anonymously since the information was intended for publication in scientific journals.

Table 2 details the respondents' demographic information. The demographic data revealed a balanced gender distribution among the respondents, with males at 50.1% (359 respondents) and females at 49.9% (357 respondents). The age range of 26–35 years dominated (287 respondents, 40.1%), with decreasing representation in older and younger groups. Most respondents earned below 3000 units of currency (CNY) monthly, with the majority falling into the <1000 (28.8%) and 1000–3000 (32.2%) income brackets. Higher income levels were less prevalent.

Table 2. Demographic information of respondents.

Characteristic	Category	N	%
Gender	Male	359	50.1
	Female	357	49.9
Age	18–25	146	20.4
	26–35	287	40.1
	36–45	195	27.2
	46–55	69	9.6
	56–65	16	2.2
	>65	3	0.4

Table 2. Cont.

Characteristic	Category	N	%
Income (CNY)	<1000	206	28.8
	1000–3000	231	32.2
	3001–5000	106	14.8
	5001–8000	81	11.3
	8001–10,000	41	5.7
	10,001–20,000	17	2.4
	>20,000	34	4.8
Educational Level	Junior high school	133	18.6
	Senior high school	189	26.4
	College diploma	235	32.8
	Bachelor's degree	140	19.6
	Master's degree	19	2.7
Occupation	Government employees	64	8.9
	Business managers	69	9.6
	Office workers	144	20.1
	Professionals	31	4.3
	Factory workers	90	12.6
	Salesperson	25	3.5
	Self-employed	111	15.5
	Agricultural workers	19	2.7
	Retired	23	3.2
	No occupation	28	3.9
Current students	112	15.7	

In terms of education, a substantial number of respondents held a college diploma (235 respondents, 32.8%) or a bachelor's degree (140 respondents, 19.6%), with fewer having completed only high school or attained a master's degree. In terms of occupation, office workers (144 respondents, 20.1%), self-employed individuals (111 respondents, 15.5%), and students (112 respondents, 15.7%) are the most common, with fewer respondents in various other professional and non-professional roles.

3.3. Statistical Analysis

For statistical analysis and structural equation modeling, we utilized the Smart PLS 4.0 software. The choice of partial least squares structural equation modeling (PLS-SEM) over covariance-based SEM (CB-SEM) was driven by several considerations:

1. The novelty and complexity of the research model: Our study explored a relatively new context where existing measurement models are not fully established or are inadequate. PLS-SEM is particularly advantageous in such new and complex scenarios, as it allows for the development and refinement of the measurement models in conjunction with the assessment of the structural model [116,117]. This dual capability was crucial for our research, which integrated the KAB model and the TCV.
2. The focus on theory development and prediction: Unlike CB-SEM, which is tailored toward theory confirmation and model fitting, PLS-SEM is better suited for theory development and exploratory research [118,119]. This distinction aligns with our study's objectives of theory expansion and predictive analysis, especially in the context of consumer behavior toward sustainable products.
3. Statistical power and model complexity: PLS-SEM provides robust statistical power even with smaller sample sizes and can handle complex models with many constructs and paths. This made it an ideal choice for our study, which involved multiple interrelated constructs within a comprehensive model [118]. Additionally, PLS-SEM does not impose the same stringent distributional assumptions as CB-SEM, which was beneficial given the nature of our data.

4. Prevalence in similar studies: PLS-SEM is used in many sustainable consumption studies. Works by scholars such as Yang(a) et al., Usman et al., Yang(b) et al., and Hair et al. [120–123] exemplify the application of PLS-SEM in sustainable consumption, reinforcing our methodological choice.

By providing these detailed justifications for our methodological approach, we hope to clarify our choice of PLS-SEM and demonstrate its alignment with the goals and data structure of our study.

4. Results

4.1. Measurement Model

This study rigorously evaluated the reflective measurement model, employing measures of reliability, convergent validity, and discriminant validity according to the guidelines by Hair et al. [124] and Memon et al. [125]. The confirmatory factor analysis results are summarized in Table 3, indicating factor loadings between 0.711 and 0.826, which surpassed the threshold of 0.60. The average variance extracted (AVE) for each construct exceeded 0.50, and the composite reliability ranged from 0.792 to 0.846, above the 0.70 threshold. The variance inflation factor (VIF) values ranged from 1.18 to 1.568, well below the maximum value of 3 suggested by Hair et al. [126], indicating the absence of collinearity issues and minimal common method bias. See Appendix A for a comprehensive series of detailed charts and graphical illustrations of the results.

Table 3. Reliability and validity of the study.

Construct	Item	Factor Loading	VIF	CR	AVE
EK	EK1	0.733	1.18	0.792	0.56
	EK2	0.708	1.231		
	EK3	0.8	1.235		
PK	PK1	0.765	1.308	0.8	0.571
	PK2	0.769	1.224		
	PK3	0.732	1.201		
PEV	PEV1	0.774	1.517	0.838	0.565
	PEV2	0.76	1.49		
	PEV3	0.713	1.301		
	PEV4	0.757	1.459		
PSV	PSV1	0.718	1.43	0.821	0.534
	PSV2	0.721	1.309		
	PSV3	0.744	1.398		
	PSV4	0.738	1.402		
PQV	PQV1	0.75	1.534	0.846	0.524
	PQV2	0.711	1.47		
	PQV3	0.72	1.426		
	PQV4	0.715	1.44		
	PQV5	0.722	1.503		
PPV	PPV1	0.776	1.531	0.836	0.561
	PPV2	0.717	1.422		
	PPV3	0.726	1.371		
	PPV4	0.774	1.568		

Table 3. *Cont.*

Construct	Item	Factor Loading	VIF	CR	AVE
ATT	ATT1	0.826	1.545	0.838	0.633
	ATT2	0.796	1.445		
	ATT3	0.763	1.281		
PI	PI1	0.786	1.378	0.824	0.609
	PI2	0.761	1.235		
	PI3	0.795	1.417		

EK for environmental knowledge, PK for product knowledge, PEV for perceived emotional value, PSV for perceived social value, PQV for perceived quality value, PPV for perceived price value, ATT for attitude, and PI for purchase intention.

Henseler et al. [127] suggested that the heterotrait–monotrait (HTMT) ratio can further detect the lack of discriminant validity and is superior to the Fornell–Larker criterion, considering that it “offers the best balance between high detection and low arbitrary violation”. Thus, this study used the HTMT ratio to evaluate discriminant validity; as reported in Table 4, all HTMT values were lower than the cut-off value of 0.85 [128].

Table 4. HTMT results.

ATT	EK	PEV	PI	PK	PPV	PQV	PSV
ATT							
EK	0.623						
PEV	0.827	0.696					
PI	0.832	0.713	0.838				
PK	0.801	0.757	0.712	0.846			
PPV	0.842	0.731	0.753	0.725	0.68		
PQV	0.744	0.716	0.821	0.799	0.818	0.808	
PSV	0.756	0.764	0.782	0.682	0.798	0.84	0.785

EK for environmental knowledge, PK for product knowledge, PEV for perceived emotional value, PSV for perceived social value, PQV for perceived quality value, PPV for perceived price value, ATT for attitude, and PI for purchase intention.

4.2. Structural Model

The validity of the structural model was confirmed using various metrics in this study. Key indicators, such as the coefficient of determination (R²) and predictive relevance (Q²), were evaluated by Hair et al. [124].

The model demonstrated moderate explanatory power, with an R² value of 0.672 for PI and 0.648 for ATT, exceeding the 0.5 threshold set by Falk and Miller [129]. The predictive relevance was assessed using the Q² values for exogenous variables, where PI (Q² = 0.432) and ATT (Q² = 0.297) both exhibited predictive relevance above 0, as per Geisser [130]. This confirmed the structural model’s validity.

4.3. Hypothesis Testing

The hypotheses were tested using a bootstrapping method with 5000 subsamples, maintaining a 95% confidence level, as recommended by Memon et al., Purwanto and Witte and Witte [125,131,132].

When a path coefficient is non-zero, a t-statistic surpassing the critical value of 1.69 signifies statistical significance, as does a *p*-value falling below the commonly accepted threshold of 0.05. It points to a substantial relationship between the variables. The confidence interval provides a range suggesting where the true effect size likely falls, enhancing our understanding of the estimate’s reliability and accuracy [132]. Moreover, a confidence interval excluding 0 (or 1) reaffirms this relationship’s significance [133,134]. Together, these

statistical metrics facilitate a thorough verification of the hypotheses, offering a detailed evaluation of the dynamics between the studied variables.

The detailed results of the hypothesis testing and their statistical significance are displayed in Figure 2 and Table 5. Attitudes toward purchasing recycled apparel (ATT) had a significant positive effect on purchase intention (PI) ($\beta = 0.273, t = 5.427, p < 0.001$), validating H1. Environmental knowledge (EK) showed a significant positive effect on attitudes toward purchasing recycled apparel ($\beta = 0.066, t = 1.914, p < 0.05$); therefore, H2 was supported. However, the relationship between product knowledge (PK) and attitudes toward purchasing recycled apparel (ATT) was not statistically significant, as the t-value was smaller than 1.69 and the p-value was larger than 0.05 ($\beta = 0.023, t = 0.564, p > 0.05$). Hence, H3 was not supported.

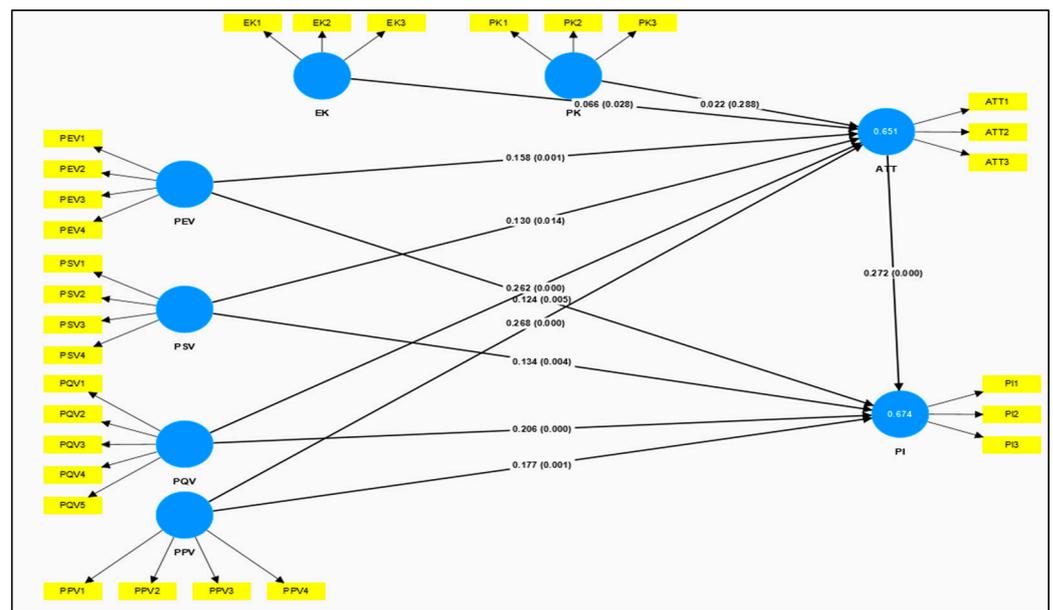


Figure 2. PLS-SEM output for path coefficients and *p*-values via bootstrapping procedure. EK for environmental knowledge, PK for product knowledge, PEV for perceived emotional value, PSV for perceived social value, PQV for perceived quality value, PPV for perceived price value, ATT for attitude, and PI for purchase intention.

Table 5. Hypothesis tests.

Hypothesis Number	Path	Path Coefficient	T-Statistic	<i>p</i> -Value	LLCI (5.00%)	ULCI (95.00%)	Supported
H1	ATT → PI	0.273	5.427	0	0.188	0.352	Yes
H2	EK → ATT	0.066	1.914	0.028	0.01	0.124	Yes
H3	PK → ATT	0.023	0.564	0.287	−0.039	0.092	No
H4a	PEV → ATT	0.158	3.129	0.001	0.074	0.241	Yes
H4b	PEV → PI	0.123	2.598	0.005	0.044	0.201	Yes
H5a	PSV → ATT	0.13	2.239	0.013	0.031	0.226	Yes
H5b	PSV → PI	0.134	2.665	0.004	0.053	0.219	Yes
H6a	PQV → ATT	0.263	4.282	0	0.157	0.359	Yes
H6b	PQV → PI	0.206	3.583	0	0.114	0.301	Yes
H7a	PPV → ATT	0.267	4.706	0	0.175	0.364	Yes
H7b	PPV → PI	0.176	3.293	0	0.087	0.264	Yes

EK for environmental knowledge, PK for product knowledge, PEV for perceived emotional value, PSV for perceived social value, PQV for perceived quality value, PPV for perceived price value, ATT for attitude, and PI for purchase intention.

In H4, perceived emotional value (PEV) ($\beta = 0.158$, $t = 3.129$, $p < 0.001$), perceived social value (PSV) ($\beta = 0.13$, $t = 2.239$, $p < 0.05$), perceived quality value (PQV) ($\beta = 0.263$, $t = 4.282$, $p < 0.001$), and perceived price value (PPV) ($\beta = 0.267$, $t = 4.706$, $p < 0.001$) positively affected attitudes. Thus, H4a, H5a, H6a, and H7a were all supported.

In H5, perceived emotional value (PEV) ($\beta = 0.123$, $t = 2.598$, $p < 0.01$), perceived social value (PSV) ($\beta = 0.134$, $t = 2.665$, $p < 0.05$), perceived quality value (PQV) ($\beta = 0.206$, $t = 3.583$, $p < 0.001$), and perceived price value (PPV) ($\beta = 0.176$, $t = 3.293$, $p < 0.001$) positively affected purchase intention. Thus, H4b, H5b, H6b, and H7b were all supported. For detailed graphical representations of the SmartPLS results, please see Appendix A.

5. Discussion and Conclusions

The aim of our study was to investigate consumers' value and knowledge perceptions of recycled clothing. The results of the study offer several key insights.

First, this study underscores that consumers with positive attitudes toward recycled clothing are more likely to buy such items, seeing them as beneficial, useful, and responsible choices. This observation aligns with Jalil and Shaharuddin [135], who found a direct correlation between consumer attitudes and their willingness to purchase recycled clothing. This result confirms that consumers' attitudes are important in creating a positive purchase intention toward recycled fashion consumption, which is also suggested by theories such as the Theory of Reasoned Action (TRA), the Theory of Planned Behavior (TPB), and the KAB model. Indeed, this study confirms that in the emerging Chinese market for recycled clothing, consumers' attitudes continue to play a crucial role in shaping their purchase intention. It is essential for brands in this sector to understand and address the attitudes of their potential customers to foster a more sustainable approach to fashion.

Second, this study's findings suggest that environmental knowledge increases positive attitudes toward purchasing recycled clothing, which is consistent with the findings of previous research, such as the studies by Bong Ko and Jin [136] and Vicente-Molina et al. [137]. This result confirms that consumers' lack of knowledge can act as an obstacle to eliciting a positive attitude toward recycled clothing, with many consumers failing to translate their environmental awareness into action. As there have been contradictory findings in the past, such as those by Jaiswal and Kant [138] and Gkargkavouzi et al. [63], it was found that knowledge has weak or no effects on the purchase of sustainable products. Our finding thus adds clarity to the accumulated knowledge. It implies that consumers are aware that environmentally sustainable products help to conserve natural resources, which leads to the formation of an attitude that favors the use of environmentally sustainable products.

However, the positive relationship between product knowledge and attitudes toward purchasing recycled apparel was not supported. Many consumers remain uninformed regarding where to find sustainable fashion, often due to the scarcity of such products in the market [139,140]. This highlights the importance of product knowledge in building positive attitudes toward recycled clothing, suggesting that consumers' attitudes are more strongly influenced by their perceived value of these products. This could also imply that even if consumers are well informed about recycled clothing, this knowledge does not necessarily translate into a favorable attitude toward buying them. It is an interesting insight that suggests that other factors may play a more significant role in shaping attitudes toward the purchase of recycled apparel, such as cultural norms, social influences, perceived quality, or personal values. Understanding why product knowledge does not correlate with a positive attitude, in this case, could open up new avenues for research and action for marketers and sustainability advocates.

Next, consumers' perceptions of the benefits that they will obtain, including positive emotions (emotional value), an improved social life (social value), good quality (quality value), and good value for money (price value), all increase their positive attitudes toward purchasing recycled apparel. However, these results are in contrast to Sener et al.'s [13] study, which was conducted in Türkiye and found that social value and emotional value perceptions did not impact attitudes toward recycled fashion consumption. This discrep-

any highlights the cultural and market-specific differences in consumer attitudes toward recycled fashion, underscoring the need for targeted strategies in promoting sustainable fashion consumption.

Finally, the findings of this study also suggest that perceived emotional, social, quality, and price values all enhance the likelihood of purchase. These findings are consistent with past research [141–144] that underscores the positive impact of these value dimensions on sustainable purchasing behaviors. They suggest that the fashion industry should leverage these value dimensions in their design and marketing strategies.

Notably, the consumers surveyed in this study rated quality as the most crucial factor for recycled apparel. Consumer decision-making is typically intricate, with specific preferences impacting every facet of a product. In the world of recycled apparel, the value placed on meticulously crafted garments is significant. These findings reveal that high quality is essential, acting as a primary consideration for consumers contemplating the purchase of recycled clothing. This result also provides evidence that quality is the core content at the innermost level of a product concept.

Additionally, perceived price value had the second most important influence on purchase intention. However, Yoo et al. [145] reported that price value is one of the most important factors, as consumers are price-sensitive, even if they purchase sustainable products. Biswas and Roy [146] also found that price value was an important factor that had an impact on behavioral intention. Perceived social value also plays a key role, with the use of recyclable products potentially enhancing individuals' self-image as being environmentally conscious. This result underlines the needs of consumers for social approval and to make a good impression. Perceived emotional value, including comfort and satisfaction with one's self-image, further influences purchase intention. This result provides further support for the findings of a previous study, which implied that the consumption of recyclable and green products encourages consumers to consider themselves as being environmentally conscious by helping to protect the planet [147].

These results support the theory of perceived value, which emphasizes the role of perceived value in sustainable consumer behavior and suggests the need for tailored marketing strategies that highlight different value dimensions in different contexts.

6. Implications

6.1. Theoretical Implications

This study presents an integrated model combining the KAB and PCV frameworks to explain purchase intention toward recycled apparel. It enriches the literature in several key ways.

Firstly, by combining the PCV with the KAB model, this study illuminates the link between environmental concerns and the consumption of recycled fashion by considering both consumer-specific and product-specific factors. Environmental and product knowledge, as consumer-specific elements, alongside the PCV's product-specific factors, significantly enhance the model's capacity to bridge the attitude–behavior gap in sustainable fashion consumption.

Secondly, this research introduced and examined four distinct value dimensions—social, price, emotional, and quality value—as metrics for perceived value. It uniquely identified the paramount importance of perceived quality value in recycled apparel, offering fresh insights into the persistent attitude–behavior gap and underlining the significance of tailoring perceived value considerations to specific product categories [36,148]. This aspect sheds light on the crucial value dimensions influencing consumer preferences for recycled apparel, providing valuable guidance for further research and practical applications in sustainable fashion [18,149].

Lastly, this study makes a pivotal contribution to the field of sustainable and recycled fashion, specifically within the non-Western context of China. It tackles the underexplored area of recycled apparel consumption in China, addressing a vital issue amid the global challenge of textile waste and the fashion industry's efforts to promote sustainable prac-

tices. By focusing on this specific geographical and cultural setting, the research fills a significant gap, offering a comprehensive understanding of consumer behavior toward recycled fashion in China and laying the groundwork for future studies and sustainable fashion initiatives.

6.2. Managerial Implications

This research sheds light on the decision-making process regarding recycled apparel, offering critical insights for fostering sustainable fashion consumption. It can support a multifaceted strategy to boost consumer interest in recycled apparel by engaging various stakeholders beyond merely fashion companies.

Enhancing consumers' environmental knowledge is essential. A joint effort between policymakers, educators, and media professionals to promote environmental awareness is crucial. Policymakers should introduce educational programs focusing on sustainability, while educators should incorporate these principles into their teaching. The media, especially social media platforms, should prioritize content that educates the public on environmental sustainability and the benefits of recycled and second-hand clothing, with the aim of increasing awareness and acceptance of these sustainable options.

Transparency and effective communication from retailers are key. Retailers should strive for openness about their sustainable practices, including the use of ecolabels and the promotion of their environmental initiatives. The media can support this by spotlighting these practices, thus bolstering consumers' trust in the fashion industry and its credibility.

Creating value through stakeholder collaboration is vital for aligning recycled apparel with consumer values. This requires a united effort from producers, marketers, and educators in communicating the multifaceted value of recycled apparel, enhancing the marketing strategies and educational programs.

Focusing on quality and fair pricing, companies should be transparent about the quality of their products and adopt pricing that reflects the true value of recycled apparel. Educators and policymakers can aid in this by educating consumers about the significance of quality and fair pricing in sustainable fashion.

Leveraging social and emotional values requires companies to collaborate with communities and influencers to create a sense of belonging and emotional connection to sustainable fashion. This can be achieved through community-focused content, influencer collaborations, and initiatives that engage consumers on an emotional level, including storytelling that underscores the environmental implications of fashion choices.

Promoting cross-sector partnerships for sustainable fashion is also critical. Encouraging collaborations among fashion companies, non-profits, educational institutions, and government bodies can lead to innovative solutions and a wider societal commitment to sustainable fashion. These partnerships should not only champion recycled apparel but also advocate for a broader spectrum of sustainable choices, including other eco-friendly products and practices.

By proposing these strategies, this study outlined a comprehensive approach to cultivating a more sustainable fashion industry, emphasizing the role of education, transparency, value creation, and collaboration in promoting recycled apparel and other sustainable fashion alternatives.

7. Limitations and Future Directions

This study, while insightful, presents several limitations. Firstly, it restricts the concept of perceived value (PV) to only four dimensions: social, emotional, functional, and price. Future studies could potentially explore and expand upon the dimensions of perceived value. Moreover, this study employs only two types of knowledge for analysis: environmental and product knowledge. Future research could benefit from the integration of other knowledge dimensions to enhance our understanding. It is important to consider that variables such as consumer demographics, their levels of involvement, and marketing strategies might also impact consumers' attitudes and behaviors. Future research could ben-

efit from incorporating a broader range of dimensions and variables to capture the evolving trends in clothing consumption. Additionally, it would be valuable to explore the barriers and concerns that consumers face when choosing recycled clothing. Understanding these obstacles could provide deeper insights into consumer decision-making processes and help in developing more effective strategies to promote sustainable fashion consumption. We recognize that our study's focus on recycled apparel without encompassing all types of sustainable fashion products, such as upcycled clothing and second-hand garments, may limit the generalizability of our conclusions.

Another limitation of this study is its geographical scope. As it was conducted in China, its findings may not fully represent the perspectives of fashion consumers globally. Therefore, conducting similar research with a more diverse and larger sample group across different regions would enhance the generalizability of the results. Such an expanded study would not only validate the current findings but also offer a more comprehensive understanding of fashion consumers' attitudes and behaviors worldwide. Future research should consider incorporating a broader array of sustainable fashion products to offer a more comprehensive perspective and explore the role and effectiveness of different value dimensions in promoting sustainable fashion consumption.

Author Contributions: Writing—original draft, X.J. and K.F.; Writing—review & editing, A.O. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not Applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A. SmartPLS Graphical Presentations

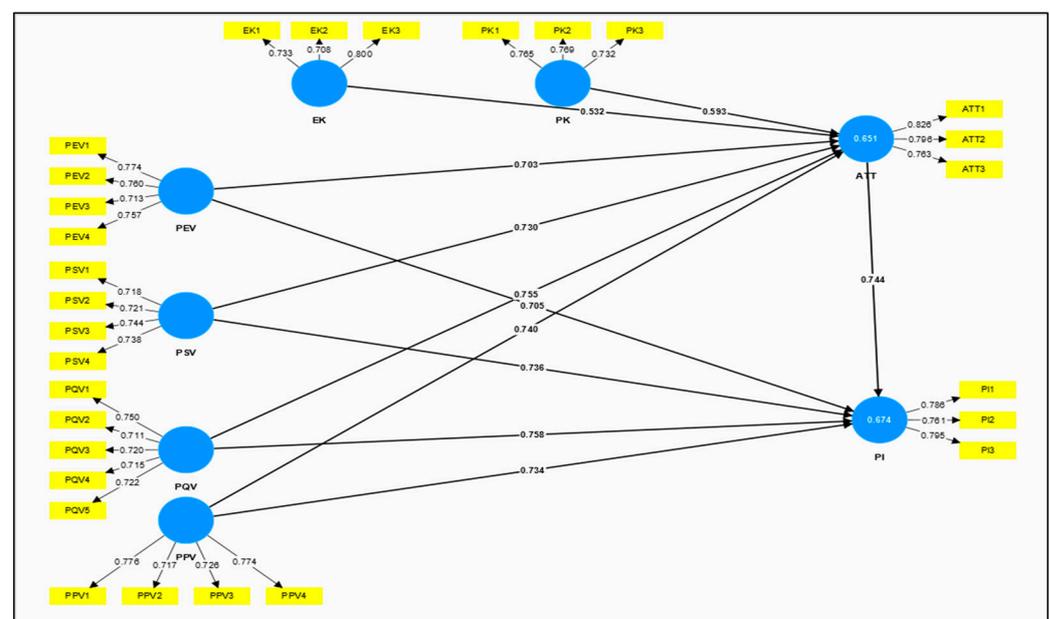


Figure A1. PLS-SEM output for factor loadings, correlations, and coefficients of determination. EK for environmental knowledge, PK for product knowledge, PEV for perceived emotional value, PSV for perceived social value, PQV for perceived quality value, PPV for perceived price value, ATT for attitude, and PI for purchase intention.

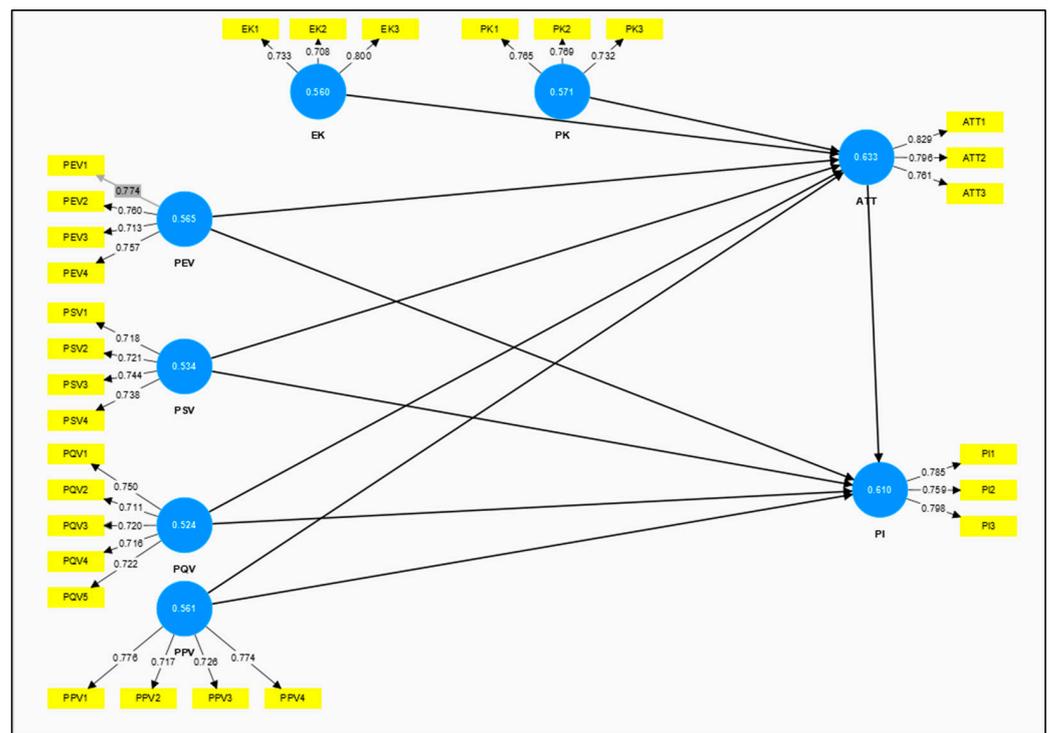


Figure A2. PLS-SEM output for factor loadings and AVE. EK for environmental knowledge, PK for product knowledge, PEV for perceived emotional value, PSV for perceived social value, PQV for perceived quality value, PPV for perceived price value, ATT for attitude, and PI for purchase intention.

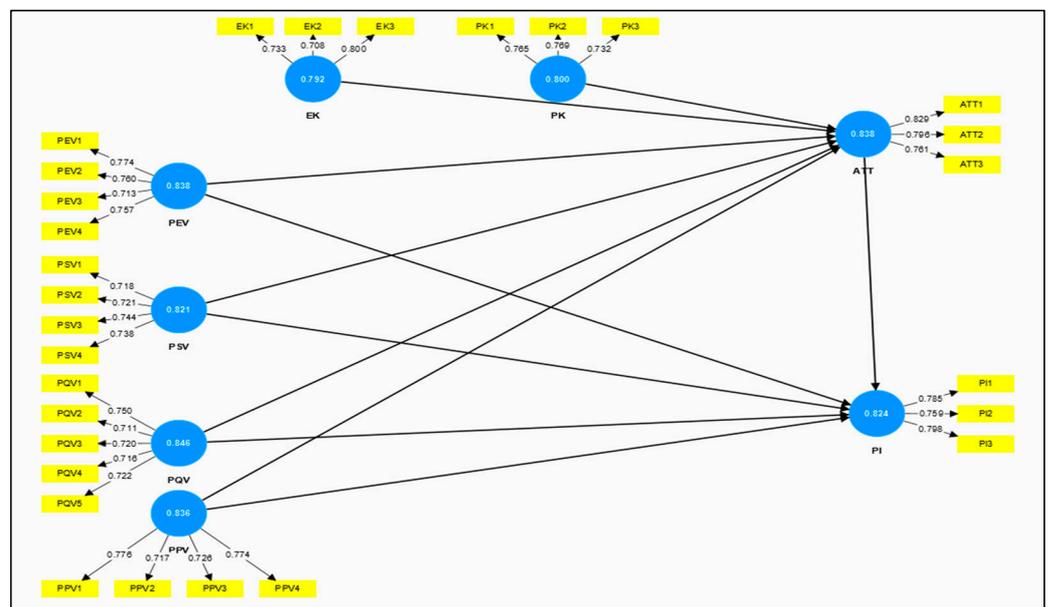


Figure A3. PLS-SEM output for factor loadings and CR. EK for environmental knowledge, PK for product knowledge, PEV for perceived emotional value, PSV for perceived social value, PQV for perceived quality value, PPV for perceived price value, ATT for attitude, and PI for purchase intention.

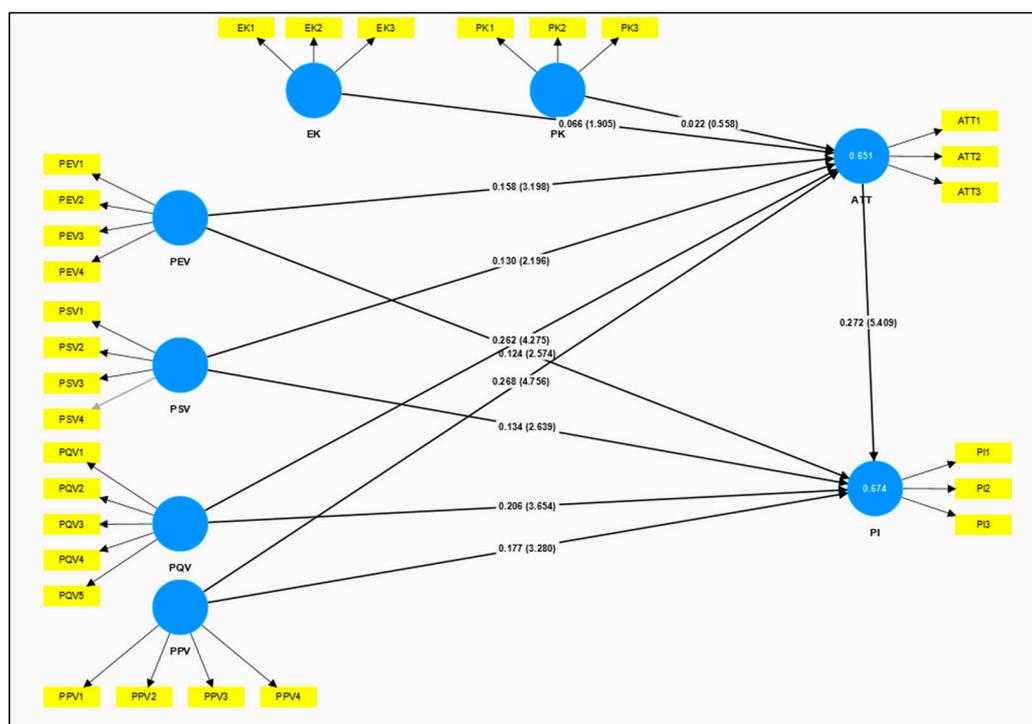


Figure A4. PLS-SEM output for path coefficients and t-values via bootstrapping procedure. EK for environmental knowledge, PK for product knowledge, PEV for perceived emotional value, PSV for perceived social value, PQV for perceived quality value, PPV for perceived price value, ATT for attitude, and PI for purchase intention.

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