Towards a Greener Future: Exploring Factors Influencing Green Purchase Intention and Pro-Environmental Behavior among Young Consumers

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Abstract

While economic growth has undeniably enhanced individuals' quality of life, it has also played a role in numerous environmental issues, such as pollution, depletion of natural resources, escalating greenhouse gas emissions, and the consequential phenomena of global warming and climate change. This study examines the antecedents of green purchase intention (GPI) and pro-environmental behavior (PEB) and the role of green purchase attitude (GPA) and green trust (GTR) as mediators. The results revealed that green knowledge, social status and perceived value are significant predictors of GPI, which significantly predicted PEB, while GPA and GTR are significant mediators.

Keywords: Green Purchase Intention; Pro-Environmental Behaviour; Green Purchase Attitude; Green Trust

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1.0 Introduction

The global community is today facing a multitude of environmental challenges (Chen et al., 2023), with the use of non-sustainable products playing a substantial role in exacerbating these concerns (D'Angelo et al., 2023). The issue described is notably conspicuous in the packaging of consumer products, whereby the utilisation of non-green friendly materials leads to the emission of detrimental chemicals and gases, hence posing risks to both human well-being and the natural surroundings. There are many pollutants that significantly contribute to a range of health concerns, including issues with central nervous and reproductive systems, cancer, and respiratory and heart conditions, (Sharma et al., 2023). Failure to address these environmental challenges, such as pollution, may result in significant ramifications for all forms of life.

The increase in mean temperatures on a global scale has led to the elevation of sea levels, inducing the acceleration of ocean warming, the thawing of ice sheets, and the withdrawal of glaciers. Regrettably, most widely-used non-green products frequently depend on packaging materials that are non-biodegradable and environmentally detrimental, lacking the ability to decompose naturally and emitting methane, a strong greenhouse gas that adds to the phenomenon of global warming. The rapid development of the economy has resulted in a dramatic deterioration of the natural environment, including the destruction of the ozone layer and the acceleration of global warming (Rasiah, 2018; Chong et al., 2022), resulting in a rise in sea levels, impeding effective drainage mechanisms and resulting in the accumulation of water in inland areas. Governments are now undertaking initiatives to address the environmental
degradation resulting from pollution and the unsustainable use of natural resources. These efforts primarily focus on restricting pollution emissions and promoting cleaner manufacturing practices. This study is, therefore, justified and in the right direction as it examines the antecedents of green purchase intention (GPI) and pro-environmental behaviour (PEB) to find out what strengthens and hinders green intention and behaviour. The study specifically explores how environmental knowledge (EK), green social status (GSS), and green perceived value (GPV) affect GPI and PEB and the mediating roles of green purchase attitude (GPA) and green trust (GTR) in the extended model of the study among adults in China. The specific objectives of the study are as follows:

i. To examine the influence of environmental knowledge, green social status, green perceived value and green trust on green purchase intention.
ii. To investigate the mediating role of green purchase attitude on the relationship between environmental knowledge and green purchase intention.
iii. To investigate the mediating role of green trust on the relationship between green perceived value and green purchase intention.
iv. To examine the influence of green purchase intention on pro-environmental behaviour.

2.0 Literature Review

The Theory of Planned Behavior (TPB) is the underlying theoretical framework for this study, as it has been widely explored in research on the behaviour of consumers. According to Zhang et al. (2018), the TPB is a theoretical framework that has been widely used in the prediction of green purchasing behaviours. The main drivers of behaviour, according to the theory, are attitudes towards the behaviour, SN, and PBC, with GPI being the mediator.

2.1 Environmental Knowledge and Green Purchase Intention

Environmental knowledge encompasses understanding the adverse effects of harmful chemicals, pollutants, greenhouse gases, packaging waste, and other factors that may influence individuals’ attitudes towards environmentally friendly products (D’Angelo et al., 2023). Existing studies have shown that EK is an important influence on green purchase intention, and most of the studies have verified that EK is positively related to GPI (Saraireh, 2023; Moslehpour et al., 2022; Sinha & Annamdevula, 2022). In a recent study conducted by Bigliardi, Filippelli, and Quinto (2022), it was shown that green perceived value and environmental knowledge emerged as the most significant factors in predicting the intention to acquire refurbished smartphones with environmentally friendly features. In a recent study conducted by Hamzah and Tanvir (2021), it was found that EK plays a significant role in moderating the relationship between GPV and GPI. The study focused on investigating the factors influencing Malaysians’ intention to purchase hybrid vehicles. To analyse the data collected from a sample of 256 respondents, the researchers employed PLS-SEM.

H1: Environmental Knowledge has a significant relationship with Green Purchase Intention

2.2 Green Social Status and Green Purchase Intention

The concept of green social status pertains to the degree of acknowledgement, esteem, or adoration that a person or collective entity garners as a result of their dedication to environmentally conscious and sustainable behaviours (Han et al., 2022). In contemporary society, as the significance of environmental issues continues to grow, individuals and entities who place a high value on sustainability may attain elevated social standing or enhanced credibility within their respective communities or sectors. Limited scholarly investigation has been conducted on the concept of GSS (Sestino et al., 2023), leading to a neglect-spotting gap in the literature. There is a prevailing belief that an elevation in consumers’ social status is positively associated with a greater inclination to engage in environmentally friendly consumption. This phenomenon serves as a motivating factor for consumers to allocate their financial resources towards the acquisition of green products or services, thereby heightening their perceived level of GSS and subsequently reinforcing their GPI (Han et al., 2022).

H2: Green Social Status has a significant relationship with Green Purchase Intention

2.3 Green Perceived Value and Green Purchase Intention

Green perceived value refers to the favourable association consumers have with eco-friendly products, encompassing benefits like lower environmental impact, cost savings, health improvements, and social responsibility (Zhuang et al., 2021). It gauges how consumers value eco-products, considering attributes like environmental friendliness and alignment with personal values. Zhuang, Luo, and Riaz (2021) concurred on the significant and positive relationship between GPV and GPI. Using a digital survey to collect data on green product purchasers, Román-Augusto et al. (2022) revealed that GPV is a significant predictor since it initiates the chain of events that ends in a green purchase intention. Nguyen (2023) validated the findings, employing a nonprobability sampling technique in conjunction with the snowball sampling method to identify 214 participants actively engaged in the acquisition of environmentally sustainable products. Utilising the PLS-SEM approach for data analysis, the study revealed that the perceived value of green products was positively associated with both the establishment of ecological trust and the inclination to make environmentally conscious purchase decisions. Similarly, Zhuang et al. (2021) also found GPV to have a favourable influence on customers’ GPI.

H3: Green Perceived Value has a significant relationship with Green Purchase Intention

2.4 Environmental Knowledge and Green Purchase Attitude

EK is cultivated through two distinct avenues: firstly, consumers must undergo educational initiatives to comprehend the environmental implications associated with various goods, and secondly, consumers acquire information pertaining to environmentally sustainable production methods employed in the creation of those items (Pratiwi et al., 2018). There exists a proposition that posits a correlation...
between an individual's awareness of environmental concerns and their corresponding attitude towards these issues (Moslehpour et al., 2022). Several studies have demonstrated that environmental knowledge plays a crucial role in fostering individuals' commitment to maintaining a robust environmental attitude (Moslehpour et al., 2022).

H4: Environmental Knowledge has a significant relationship with Green Purchase Attitude

2.5 Green Purchase Attitude and Green Purchase Intention

Attitude, as conceptualised within this context as a behavioural phenomenon, encompasses the evaluation of whether a certain conduct is seen as favourable or unfavourable, as well as the individual's inclination or disinclination to engage in said behaviour (Wang et al., 2018). Jaiswal and Kant (2018) found that individuals with a more positive attitude were more likely to exhibit a positive purchase intention. Numerous studies have consistently demonstrated a positive correlation between GPA towards GPI (Wang et al., 2018).

H5: Green Purchase Attitude has a significant relationship with Green Purchase Intention

2.6 Green Perceived Value and Green Trust

Numerous studies have demonstrated that the concept of green perceived value plays a crucial role in influencing the level of trust in environmentally conscious matters among corporate consumers (Muflih et al., 2023). This significance is not solely confined to the trustworthiness of businesses in adopting eco-friendly practices through their commercial offerings but also extends to the overall standing of these enterprises in actively promoting an environmentally friendly atmosphere (Shin & Ki, 2019). In a study conducted by Román-Augusto et al. (2023) involving an online questionnaire administered to 297 participants, the Smart-PLS analysis corroborated the significant impact of green perceived value on the development of green trust. Lutfie Marcelino (2020) concurred when they sought to evaluate the efficacy of Starbucks' green marketing strategy and ascertain the impact of GPV on Green Trust, with Green Satisfaction acting as a mediating factor among consumers in the Bandung area. Their results demonstrated that both the Green Perceived Value and Green Satisfaction factors exerted a positive and substantial impact on the Green Trust variables concurrently.

H6: Green Perceived Value has a significant relationship with Green Purchase Intention

2.7 Green Trust and Green Purchase Intention

The level of confidence that individuals have in a product is shown by the level of trust that they have in that product. When talking about green or environmentally friendly products, the term "level of trust," also known as "green trust," refers to the amount of confidence or faith that individuals have in items that support the long-term viability of the environment. Jamal (2021) found that green trust enhances intentions for environmentally responsible purchases by considering functional value. This trust drives intentions to buy eco-products, impacting purchasing behavior. Trust connects to consumer perception of a product's competence, accountability, thereby driving green product adoption. In their study conducted in China, Zaidi et al. (2019) collected survey data from 207 Chinese consumers of organic food across various shopping marts. Employing PLS-SEM, the research found that green trust serves as a substantial mediating factor between consumption values and GPI.

H7: Green Trust has a significant relationship with Green Purchase Intention

2.8 Green Purchase Intention and Pro-Environmental Behaviour

For humans to exhibit pro-environmental behaviour, it is essential that they possess a positive intention towards the environment, as intention serves as a fundamental precursor to behaviour. Although it is not definitively established that individuals with a strong intention would invariably follow through with corresponding actions, empirical research suggests that a strong intention to engage in green purchasing has been consistently identified as a major and positive predictor of pro-environmental behaviour (Wang et al., 2022). Duong (2023) collected data from a representative sample of 583 consumers across five key cities in Vietnam. Analysis conducted through the PROCESS macro indicated that GPI is not only positively and directly related to actual pro-environmental behaviour but also significantly mediates the relationship between the attitude towards green purchasing and subsequent behavioural choices. 

H8: Green Purchase Intention has a significant relationship with Pro-Environmental Behaviour

3.0 Methodology

3.1 Research Design and Sampling

This study uses a cross-sectional questionnaire design for its investigation. The study utilised the convenience sampling technique to select the respondents (comprising of Chinese adults) of the online self-administered questionnaire-based survey method, which served the purpose of statistically validating the proposed model while establishing a connection between the theoretical constructs and real-world business scenarios. The online survey was conducted in China over the period from January to April 2023, utilising the Microsoft Forms platform. Given the considerable size of China's population and its rapid economic growth, there is a notable potential market for products that prioritise environmental sustainability. This study's sample choice of adults from China is therefore justified, as gaining a comprehensive understanding of the various predictors of green purchase intention and behaviour of Chinese adults could offer significant insights for businesses seeking to target and engage with this expanding consumer sector. The demographic characteristics of the respondents consisted of 330 females and 272 males, with 5.98 per cent of the total respondents being in the 18 and below age group, 23.75 per cent being in the 19-23 years age group, 16.11 per cent in the 24-28, 28.74 per cent 29-32, and 0.45 per cent 33 and above. The proposed research framework of this study is shown in Figure 1.
3.2 Measures

The instrument used in this quantitative analysis was derived from several questionnaires that had been employed in previous studies. The scale used to evaluate GPI in this study was derived from the works of Kim, Njite, and Hancer (2013) and Akbar, Hassan, Khurshid, Niaz, and Rizwan (2014). Similarly, the measurement of EK was based on a scale consisting of five items, which was modified from the research conducted by Mostafa (2007). The measurement of various constructs related to PEB has been extensively studied in the literature. In this regard, Swait and Sweeney (2000) and Akbar et al. (2014) have developed a 5-item scale to assess GPA. Similarly, O'Cass & Frost (2002) developed the scale to measure GSS. Additionally, Chaudhuri (1997) developed a 5-item scale to assess GPV, while Chen (2010) developed a 5-item scale to measure GTR; and finally, a 6-item scale was adapted from Cardoso & van Schoor (2017) to measure PEB.

![Fig. 1: Research Framework](Source: Author)

3.3 Data Analysis

Smart PLS 4 was used to analyse the data for this study. In accordance with the guidelines provided by Henseler, Ringle, and Sinkovics (2009), a two-step approach was used, first evaluating the measurement model and then the structural model. For the measurement model, the internal consistency and construct validity were tested using the Cronbach's alpha and composite reliability (CR) cut-off of above 0.7, while the convergent validity was tested using the CR of above 0.7 and the Average Variance Extracted (AVE) of greater than 0.5. In order to assess discriminant validity, the Fornell-Larcker criterion (Fornell & Larcker, 1981) was used. Each construct's AVE should be larger than its correlation with other constructs, as per this criteria.

<table>
<thead>
<tr>
<th>Table 1. Measurement Model Assessment</th>
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<tbody>
<tr>
<td>Cronbach’s alpha</td>
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<tr>
<td>-------------------</td>
</tr>
<tr>
<td>Environmental Knowledge (EK)</td>
</tr>
<tr>
<td>Green Purchase Attitude (GPA)</td>
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<tr>
<td>Green Purchase Behaviour (GPB)</td>
</tr>
<tr>
<td>Green Purchase Intention (GPI)</td>
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<tr>
<td>Green Perceived Value (GPV)</td>
</tr>
<tr>
<td>Green Social Status (GSS)</td>
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<td>Green Trust (GTR)</td>
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</tbody>
</table>

(Source: Author)

The outcomes depicted in Table 2 elucidate that the AVE square root for each construct surpassed the corresponding correlations with alternative constructs. This observation underscores the establishment of discriminant validity across all constructs, aligning with
After it was proven that the measurement model had both convergent and discriminant validity, the analytical attention switched to the assessment of the structural model and the empirical testing of the proposed hypotheses.

<table>
<thead>
<tr>
<th>Path Coefficients</th>
<th>t statistics</th>
<th>95% Confidence Level (Lower Bound, Upper Bound)</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Effect Model</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EK -&gt; GPI (H1)</td>
<td>0.389</td>
<td>6.076***</td>
<td>Supported</td>
</tr>
<tr>
<td>GPV -&gt; GPI (H3)</td>
<td>0.366</td>
<td>5.308***</td>
<td>Supported</td>
</tr>
<tr>
<td>Direct Effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EK -&gt; GPA (H4)</td>
<td>0.523</td>
<td>13.205***</td>
<td>Supported</td>
</tr>
<tr>
<td>EK -&gt; GPI</td>
<td>0.222</td>
<td>3.742***</td>
<td>Supported</td>
</tr>
<tr>
<td>GPA -&gt; GPI (H5)</td>
<td>0.319</td>
<td>5.771***</td>
<td>Supported</td>
</tr>
<tr>
<td>GPI -&gt; PEB (H8)</td>
<td>0.627</td>
<td>19.935***</td>
<td>Supported</td>
</tr>
<tr>
<td>GPV -&gt; PEB (H6)</td>
<td>0.256</td>
<td>3.788***</td>
<td>Supported</td>
</tr>
<tr>
<td>GPV -&gt; GTR (H6)</td>
<td>0.675</td>
<td>21.299***</td>
<td>Supported</td>
</tr>
<tr>
<td>GSS -&gt; GPI (H2)</td>
<td>-0.096</td>
<td>2.28**</td>
<td>Supported</td>
</tr>
<tr>
<td>GTR -&gt; GPI (H7)</td>
<td>0.192</td>
<td>3.495***</td>
<td>Supported</td>
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<tr>
<td>Indirect Effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EK -&gt; GPA -&gt; GPI</td>
<td>0.167</td>
<td>5.01***</td>
<td>Supported</td>
</tr>
<tr>
<td>GPV -&gt; GTR -&gt; GPI</td>
<td>0.130</td>
<td>3.362***</td>
<td>Supported</td>
</tr>
</tbody>
</table>

(Source: Author)

5.0 Discussion
This study investigated the impact of environmental knowledge, green social status, and green perceived value of green purchase intention, alongside the mediating roles of green purchase attitude and green trust, and how green purchase intention influenced pro-environmental behaviour among adults in China. The study’s findings show that, among others, the significant and positive roles played
by EK, GPV, GPA and GTR in explaining GPI. The findings are supported by previous studies, where Moslehpour et al. (2023), Saraireh (2023), Sinha & Annamdevula (2022), and Bigliardi, Filippelli & Quinto (2022) concurred with the findings of the significant and positive relationship between EK and GPI; while Sestino (2023) and Han et al. (2022) concurred for the significant and positive relationship between GSS and GPI; and Zhuang, Luo & Riaz (2021); Román-Augusto et al. (2022); and Nguyen (2023) concurred with the findings of the significant and positive relationship between GPV and GPI. The results of the study also reveal the significant and positive role played by GPA in mediating the relationship between EK and GPI, aligning with the findings of Moslehpour et al. (2023). There has been a shift in customer attitudes towards green products as more information about their positive effects on the environment and human health has been widely available. The findings suggest that educational interventions have the ability to effectively promote environmental knowledge, which in turn can positively influence consumer intention towards environmentally responsible behaviour. It is imperative to modify the academic curriculum to incorporate environmental consciousness and Sustainable Development Goals (SDGs) across all educational levels. This integration aims to foster a shift in individuals' ecological attitudes, encompassing their values, beliefs, and ethical considerations. Consequently, this transformation will impact their inclination to prioritise environmentally friendly products and actively participate in sustainable consumption practices. The inclusion of topics related to evaluating the environmental benefits, cost-effectiveness, and overall utility of green products within the enhanced green curriculum in schools and higher education institutions can contribute to raising awareness among individuals. This heightened awareness can subsequently impact their perception of the value of green products, as well as their intentions and decisions regarding purchasing such products. The impact of green trust on green purchase intention is mostly manifested through the promotion of corporate transparency and accountability, which plays a crucial role in fostering consumer trust in environmentally sustainable practices. This may entail discussions regarding the significance of firms showcasing openness in their sustainability practices in order to establish trust and credibility with consumers who prioritise environmental concerns. Clear evidence exists that customers' attitudes mediate the impact of EK on their purchasing decisions. Green Trust, on the other hand, was found to be a significant mediator in explaining the relationship between GPV and GPI.

Finally, green purchase intention was found to be a significant and positive predictor for pro-environmental behaviour, aligning with the findings of Duong (2023) and Wang, Wang & Li (2022). Given the significant positive relationship between GPI and PEB, it is important to investigate what factors facilitate or impede the relationship (i.e., which mediators or moderators are at play). A great deal of conversations must also take place about the possibility of encouraging a systemic shift towards sustainable consumption practices, which would have major positive effects on the environment and help advance larger sustainability goals.

6.0 Conclusion and Recommendation
The empirical findings indicate the important role played by environmental knowledge and green purchase attitude on green purchase intention, given the strength of their coefficients. Individuals who possess a comprehensive understanding of environmental issues and possess the ability to evaluate their impact on both society and the environment are more likely to exhibit a greater inclination to purchase environmentally friendly products that prioritise the well-being of the Earth. This inclination has significant implications for the long-term sustainability of development. This calls for a collaborative endeavour to establish environmental awareness initiatives, commencing with early childhood education and extending through primary, secondary, tertiary, and post-tertiary levels of instruction. The aim is to foster heightened consciousness that can engender shifts in attitudes and behaviours, ultimately leading to long-lasting consequences for sustainability. The study also established that GTR had a favourable impact on individuals' inclinations to engage in green purchasing. Therefore, the concept of GTR is expected to have a significant impact on consumers' decisions to engage in environmentally friendly purchasing behaviours during the current era focused on environmental concerns. The empirical findings provide support for the aforementioned assertion and suggest that the level of confidence in environmentally friendly practices has an impact on individuals' intentions to make green purchases. Furthermore, this study provides empirical evidence supporting the partial mediation role of green trust in the relationship between green perceived value and green purchasing intentions. Consequently, it is imperative for enterprises to augment their perceived worth in terms of environmental sustainability in order to bolster confidence and buy intents related to green products, thereby meeting the ecological requirements of their consumers.

These findings provide light on the "intentions-behavior gap" in sustainable consumption. While many consumers state their desire to do their part for the environment by purchasing environmentally friendly goods, it has proven difficult to put those words into action. Finding this disconnect and explaining it helps researchers better grasp the intricate interplay between sustainability-related beliefs, intentions, and behaviours.

There are substantial policy and pedagogical consequences of the study. It highlights the need for policies and actions that reduce external barriers, increase access to eco-friendly products, and promote sustainability education in order to close the intentions-behavior gap. These results can be used to better promote sustainability, educate the public, and incentivise ethical practices.

While the study provided insights into the significant roles played by environmental knowledge, green perceived value, social status, green purchase attitude, and green trust in influencing eco-friendly purchasing behaviour among Chinese adults, there are, however, some limitations. These include the narrow sample representation, the use of a cross-sectional design limiting causal inferences, and the need for future research to explore the model in different populations (working adults, university students). Addressing these limitations will contribute to a more comprehensive understanding and effective promotion of sustainable consumption practices in China.

Paper Contribution to Related Field of Study
The research provides valuable information for organising environmental protection campaigns to educate people. Several societal
ramifications stem from this study. Since adults make up a sizable portion of society, this framework can help communities cater to their members’ unique requirements. All demographics of the population are expected to gain more information about the environment as a result. The validated model describes the path from environmental awareness to eco-friendly purchasing decisions. The approach may be used by government and non-government entities to create a national and regional plan to safeguard the environment.

References


