

Exploring the drivers of sustainable intention in clothing purchases among students

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ABSTRACT,

In the last decade, environmental health has become increasingly more important, necessitating changes in the clothing industry to reduce its environmental impact. This study explores the factors driving students' sustainable apparel buying intentions, focusing specifically on key motivators. An online survey was conducted with 148 participants to gather data. With PLS-SEM the measurement and structural models have been analyzed. The results indicate that green attitude, personal norms, and green self-efficacy significantly influence students' intentions to purchase sustainable apparel. These findings highlight the need for companies and institutions to prioritize these drivers to better influence this demographic and encourage sustainable purchasing behaviors.

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Keywords

Sustainable purchase intention; Drivers; Behavioral intention; Personal norms; Green attitude, Green self-efficacy; PLS-SEM

1. INTRODUCTION

The rise of fast fashion in recent years has revolutionized the fashion industry by offering consumers the newest trends. 'Fast fashion is the constant provision of new styles at very low costs' (European Parliament, 2024). This trend, however, comes with a significant environmental cost. Statistics published by the European parliament (2024) show the consequences of these fast-paced trends. The volume of clothing production has nearly doubled in the past two decades leading to extreme levels of carbon emission. On average a person in the EU causes a carbon footprint of around 270 kg of CO₂ emission from textile consumption alone. Production of textile is estimated to be responsible for 20% of global clean water pollution and the fashion industry accounts for 10% of global carbon emissions. To mitigate these environmental impacts, there is a need to steer consumers towards choosing more sustainable options, such as buying from companies that are selling slow fashion, renting clothing, buying second-hand, repairing old clothes, limiting unnecessary purchases and buy locally when possible (European Parliament, 2024). To address this issue, a certain understanding of the drivers to buy sustainable clothing is needed. Previous research has examined and developed various concepts concerning drivers of sustainable buying behavior of apparel. For example, research done by Tandon et al. (2023), indicates that a person's green self-efficacy, green-attitude, and their personal norms affect an individual's purchasing intentions. As stated before, fast fashion has led to environmental degradation. A shift towards more sustainable consumption and practices is therefore important. Despite existing efforts, there remains an information-gap concerning the demographic of students. Therefore, the research question that the paper seeks to answer is: *What are the most important drivers of sustainable apparel buying intent among students?*

The lack of comprehension on student's behavioral intentions, significantly influences the possibilities on influencing students intended buying behavior (Charm et al., 2020). This paper provides valuable insights to for example: researchers, companies and institutions, by enhancing the understanding of consumer behaviors and offering market insights. This information can be used to develop strategies aimed at influencing students' sustainable buying intentions. Furthermore, the results can inform further research and additionally support the improvement of targeted initiatives related to sustainable behaviors.

The study moreover provides new insights on the contribution of personal norms to the theoretical model of Theory of Planned Behavior. This inclusion of personal norms has not been widely standardized, and this paper offers additional evidence on the significance of this construct. The findings on this construct can be used to further develop this and similar theoretical models concerning consumer psychology and sustainable behavior. Lastly, this study provides additional evidence on the suitability and effectiveness of using TPB in the environmental context.

2. LITERATURE REVIEW

Organizations must slowly adopt more sustainable practices to lessen environmental impacts (European Parliament, 2024). The success of this shift, however, depends on the adaptation of consumers. Understanding the key drivers, impacting the intent of sustainable buying, is therefore crucial to be able to shape consumers' choices. In this paper the drivers, green self-efficacy, personal norms and green attitude are investigated. Based on previous research this literary review is going to expand knowledge on the predicted effects of green attitude, personal norms, and green self-efficacy on sustainable buying intentions.

2.1 GREEN ATTITUDE

Green attitude is defined as 'a positive inclination to perform actions to promote environmental protection and preservation' (Tandon et al., 2023). It is important to consider that the construct attitude has an affective component and a cognitive component (Ajzen, 1992). The construct both describes and individuals' emotional response towards the behavior, but also the beliefs and thoughts about the behavior. To test the green attitude the items should include substance about emotions towards the behavior and about the belief that the behavior is beneficial for the environment. It is crucial to incorporate these aspects when investigating the construct to fully explain the complexity and content of the full construct. The research on green consumption conducted by Wu and Chen (2014), acknowledges this importance and incorporated this in their data collection. A positive and significant relationship was found for attitude on the consumption intentions and by this adds evidence to the importance of attitude in explaining intention.

Other researchers documented the same relationship. For instance, Tandon et al. (2020) determined that attitude strongly predicts purchase intentions of organic foods. Similarly, Chen (2020) has found that individuals' attitudes towards locally produced organic foods are a key deterrent of their consumption. Moreover, Yadav and Pathak (2016) and Dhir et al. (2021) all observed a significant and notable relationship between attitude and purchase behavior of green products. This relationship has been confirmed in research from Tandon et al. (2023). The relationship is further supported by the theory of planned behavior (Ajzen, 1992), where it has been documented that attitude plays a crucial role in influencing intention.

Consistent with literature of this relationship, a hypothesis about the relationship can be made:

H1. Green attitude positively influences the sustainable apparel buying intentions of students.

2.2 PERSONAL NORMS

Personal norms refer to sentiments stemming from a self-evaluation of the rightness or wrongness of an action, influenced by a sense of personal obligation and inclination (Tandon et al., 2023). Schwartz and Howard (1981) describe these norms as 'feelings of moral obligation to perform or refrain from specific actions', which signify an individual's self-expectations for actions in particular situations. Studies additionally found that people who have powerful personal norms to act pro-environmentally, feel morally obligated to act suitably and more often engage in pro-environmental behavior (Van der Werff et al., 2013, Stern et al., 1999).

The construct personal norms is not included in the theory of planned behavior, however it has been combined with the TPB in several researches on consumer psychology and sustainable behaviors. An example is the study from Tandon et al. (2023), they incorporated PN and found a clear relationship between PN and green apparel buying intention. Similarly, another study has proven that personal norms affect pro-environmental behavior (Onwezen et al, 2013). Additionally, Ateş (2020) has found a direct connection between PN and pro-environmental behavior (PEB). The found literature mostly investigate the relationship with behavior. However, in this study it is assumed that intention leads to behavior and that personal norms must also affect intention and not only behavior itself. The TPB supports this by stating that behavior is the main predictor of people's behavioral intentions (Ajzen, 1992). This connection has also been found in research related to environmental actions. De Leeuw et al. (2015), has found that high school students' intentions to perform

pro- environmentally are strong antecedents of their pro-environmental behavior.

Aligning with the findings in other theories, the following hypothesis is proposed:

H2. Personal norms positively influence the sustainable apparel buying intentions of students.

2.3 GREEN SELF-EFFICACY

Green self-efficacy is ‘Personal belief regarding the ability of one’s actions can positively contribute towards improving the quality and sustainability of the environment’ (Tandon et al., 2023). Green self-efficacy is based on the construct perceived behavioral control, which is used in TPB. Green self-efficacy can be considered part of an individuals perceived behavioral control (Pavlou & Fygenson, 2006). In this study they will be considered as closely related since they both consider a persons perceived ability to perform certain behavior. For instance, Ajzen and Madden (1986) describe perceived behavioral control as ‘the persons belief as to how easy or difficult performance of the behavior is likely to be.’ This aligns with the definition of green self-efficacy as stated above.

Extensive research on its significance in predicting green behavior, has shown that an individuals perceived behavioral control can predict and impact green purchase behavior (e.g., Chen, 2020, Shin et al., 2018). Moreover, Pang et al. (2021) have found positive relationships between self-efficacy and the prediction of organic food purchase intentions.

The following hypothesis, aligning with the findings of the studies, can be proposed:

H3. Green self-efficacy positively influences the sustainable apparel buying intentions of students.

2.4 SUSTAINABLE BUYING INTENT

Sustainable buying intent refers to individuals plans to purchase and use green apparel (Tandon et al., 2023). This construct is important to investigate since it is seen as the main predictor of individuals behaviors (Ajzen 1991). According to the theory of planned behavior the stronger the intention, the greater the probability of the behavior being performed (Ajzen, 1991). In the environmental context this principle has been seen as well. These studies found that intentions on specific environmental actions are closely related to the actual behavior (e.g., Lai and Cheng, 2016, Laudenslager et al., 2004). This means that impacting people’s intentions, can lead to a change in their sustainable behaviors. This connection makes the knowledge on the sustainable buying intent of students important to predict and influence their behaviors.

2.5 THEORITICAL FRAMEWORK

To test the significance of these drivers a theoretical model was made to measure their impact on sustainable buying intent. The model (figure 1) is based on research by Tandon et al. (2023) and on The Theory of Planned Behavior. The research executed by Tandon et al. (2023) investigated identical relationships of the constructs on sustainable apparel buying intentions. Therefore, parts of this study are replicated to be able to compare the results. The TPB is used as a basis for the theoretical model, since it is well-established and widely recognized framework in the field of psychology and behavioral sciences. According to TPB, planned behavior is determined by behavioral intentions. These intentions are influenced by the individual’s attitude, subjective norms and perceived behavioral control (Ajzen, 1991).

In this study, personal norms has been added as a driver to the framework due to the recognized importance in explaining Pro-environmental behavior (Onwezen et al, 2013). The relevance, for the context of apparel consumption, was further supported by Tandon et al. (2023). Their study demonstrated a positive relationship between PN and SBI. In this study the construct subjective norms, from the TPB, is replaced by the construct personal norms, because of an overall interest in exploring the functionality of PN. The removal of the construct is supported by the findings of Ateş (2020) that subjective norms do not directly influence pro-environmental buying intention.

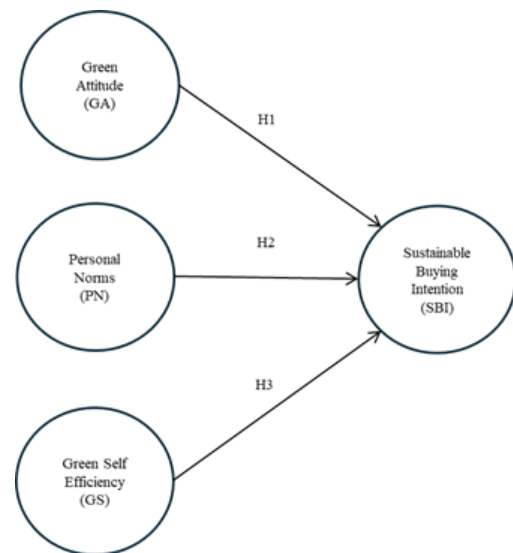


Figure 1. Theoretical model and results

Source: Tandon et al. (2023); own formation

3. METHOD AND DATA

The study employs a quantitative research approach. It investigates the relationship between the variables green-attitude, personal norms, green self-efficacy, and sustainable buying intention. A cross-sectional survey has been used to gather a sample of 148 respondents in May of 2024. The survey has been distributed using snowball sampling. With this method the survey has been distributed through different schools, cities, countries and groups. To test if participants fit the demographic a few questions were asked. Participants that indicated that were not a student, were under 18 or that did not finish the survey, were eliminated from the analysis. Additionally, items including missing values, or repeating the same answer on every question, have been taken out. After this elimination a sample of 103 was left.

The survey was developed based on a review of relevant literature and established theoretical frameworks. Through a structured questionnaire, data was collected about the different constructs through asking items that explain the constructs (Table A1).

For the construct green attitude, it was important to ask questions that considered both the affective component and the cognitive component. The items used are mostly based on Tandon et al. (2023) and Y Wang et al. (2024) their research. The selected items have been compared to those used by Wu and Chen (2014) to ensure complete coverage of the construct’s context, since their study designed their items to include the two components that relate to attitude.

Table A1. Measurement items for the constructs in the theoretical model

Constructs	Items	Sources
Green attitude (GA)	GA1. I think buying green clothes is good for the environment.	Tandon et al. (2023), Y. Wang et al. (2024) Wu & Chen (2014)
	GA4. I think purchasing green apparel is worthwhile.	
	GA7. I like the idea of consuming green apparel.	
	GA8. Consuming green apparel rather than non-green apparel is a good idea.	
Personal norms (PN)	PN1. I feel morally obligated to use green apparel.	Tandon et al. (2023)
	PN2. I feel I should not use non-green apparel.	
Green self-efficacy (GSE)	GSE3. I think of myself as an 'environmental consumer'.	Tandon et al. (2023)
	GSE4. I think of myself as an 'organic consumer'	
	GSE5. I am socially responsible consumer.	
Sustainable buying Intentions (SBI)	SBI1. I am intending to buy sustainably produced apparel over the next month.	Tandon et al. (2023)

Source: Smart PLS 4; own formation

For the construct personal norms, the items must comprehend the feeling of obligation for a certain behavior and the recognition of the rightness and wrongness of these behaviors (Tandon et al., 2023, Schwartz & Howard 1981). The items from Tandon et al. (2023) have been duplicated. These items have been compared to those in the research from Onel (2023), which had comparable items. No additional items were included from this study since the other items did not capture the construct's context in a straightforward manner. Moreover, solely using the items from Tandon et al. (2023) enhances the comparability of the results.

For the construct green self-efficacy, the items are entirely based on the study from Tandon et al. (2023). This study serves as the primary reference for comparison, thus has been chosen to duplicate this research.

The answers to these items are measured on a Likert-scale ranging from 1 (completely disagree) to 5 (completely agree). The data collected from the survey has been analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) PLS-SEM is a relevant method in this research as it is designed to analyze complex models with small sample sizes and non-normal data distribution, which aligns with this study (Hair et al., 2020). The relationships found between the constructs will be visualized in a model. Before the analysis the data has been screened for possible mistakes, missing values, and outliers to ensure quality of the data set. After an initial analysis of the cleaned data, multiple explanatory items have been removed. The survey consisted of 8 SBI items and ended with 1. These items have been removed as SBI 1 explains the construct more clearly by itself. From GA, 4 items have been removed from the original 8. There were too many items used compared to the other constructs and it was decided to retain the most relevant ones. For GSE, 2 items have been removed. These have been removed as the model showed an inaccurate representation of the construct. For PN all items were retained.

Regarding the demographics of the used sample, nearly 81% of respondents are originally from the Netherlands and 98% is from Europe (Table A2).

Table A2. Demographic data

Origin	N	%
Belgian	1	0,97%
Dutch	83	80,58%
Danish	1	0,97%
Bulgarian	1	0,97%
Bosnien	1	0,97%
French	2	1,94%
Estonian	1	0,97%
Indian	1	0,97%
Mexican	1	0,97%
Polish	1	0,97%
Romanian	1	0,97%
Swedish	1	0,97%
German	8	7,77%

Source: Smart PLS 4; own formation

4. RESULTS AND ASSESSMENT

4.1 REFLECTIVE MEASUREMENT MODELS

To assess the measurement models, the guidelines by Hair et al. (2022) are followed. The reflective measurement models are assessed on indicator reliability, internal consistency (composite reliability and ρ_A), convergent validity (average variance extracted; AVE) and discriminant validity (heterotrait-monotrait ratio of correlations; HTMT). The model has been tested using bootstrapping. I used 10.000 samples and the two-tailed test based on a 95% significance level. Analyzing the results, most indicator loadings are above the recommended threshold of 0.7 (Table B1).

Table B1. Indicator loadings

Construct	Item	Loading
Green Attitude	GA1	0.730
	GA4	0.818
	GA7	0.825
	GA8	0.743
Personal Norms	PN1	0.975
	PN2	0.665
Green Self-Efficacy	GSE3	0.925
	GSE4	0.923
	GSE5	0.720
Sustainable Buying Intent	SBI1	1.000

Source: Smart PLS 4; own formation

One (PN2) is 0,652, which is slightly below the threshold. The AVE is used to measure the constructs convergent validity. The threshold is 0.5 and all reflective constructs exceed this. The overall AVE of PN meets the threshold. This means that the construct itself demonstrates sufficient convergent validity. Because of this PN2 is retained as it is considered to be acceptable (Hair et al., 2022). Thus, the model has sufficient indicator reliability. The internal consistency reliability is assessed using the composite reliability and ρ_A (Table B2).

Table B2. Reliability and validity

	ρ_A	Composite reliability	Average variance extracted (AVE)
Green Attitude	0.810	0.861	0.609
Personal Norms	1.404	0.816	0.697
Green Self-Efficacy	0.904	0.895	0.742

Source: Smart PLS 4; own formation

The ρ_A results lie between the threshold of 0.70 and 0.95 (Hair et al., 2019) except for PN. This value is above the criterion. Looking at the composite reliability, which is satisfactory (Table B2), I am assuming that the ρ_A value is still satisfactory. Heterotrait–monotrait ratio of correlations (HTMT) is used to determine discriminant validity (Henseler et al., 2015). All values are smaller than the threshold of 0.85, as the highest value is 0.833 (one-tailed test, $p < 0.05$) (Table B3). Therefore, they can be clearly distinguished from one another (Henseler, 2015). Subsequently, discriminant validity is confirmed.

Table B3. Heterotrait-monotrait (HTMT) ratio of correlations

	Green Attitude	Personal Norms	Green Self-Efficacy
Personal Norms	0.671 CI _{95,0} =0.830		
Green Self-Efficacy	0.400 CI _{95,0} =0.600	0.641 CI _{95,0} =0.833	
Sustainable Buying Intent	0.531 CI _{95,0} =0.701	0.516 CI _{95,0} =0.649	0.466 CI _{95,0} =0.607

Source: Smart PLS 4; own formation

4.2 STRUCTURAL MODEL

To assess the structural model, the guidelines by Hair et al. (2022) are followed. The structural model is analyzed on collinearity issues, the significance and relevance of the path coefficients in the model, and on the models explanatory and predictive power. The variance inflation factor (VIF) is used to check for collinearity issues. All VIF's of the items are below the threshold 3.3 (Kock, 2015) as the highest value is 2.802 (Table B4). Because of this it is assumed that there are no collinearity

Table B4. Variance inflation factor VIF

Construct	Item	VIF
Green Attitude	GA1	1.579
	GA4	1.661
	GA7	1.641
	GA8	1.458
Personal Norms	PN1	1.305
	PN2	1.305
Green Self-Efficacy	GSE3	2.802
	GSE4	2.559
	GSE5	1.497
Sustainable Buying Intent	SBI1	1.000

Source: Smart PLS 4; own formation

The P-value is used to test the path coefficients significance. All paths are assessed as statistically significant (Table B4), since they all fit the criterium of $p < 0.05$ (Dahiru, 2011).

The path significance is illustrated in figure 2. As illustrated, the constructs green attitude ($\beta = 0.273$), personal norms ($\beta = 0.244$), and green self-efficacy ($\beta = 0.230$) all show significant positive relationships and play a crucial role in explaining the key target construct, sustainable buying intent ($R^2 = 36\%$). To evaluate the variance of SBI explained by the constructs, the R^2 value is assessed by comparing it to results of previously done studies. Wang et al. (2024) found 60.2% and 31.1% of variance explained and Tandon et al. (2023) found 28.8%. This model has 36.0% of explained variance, which is similar.

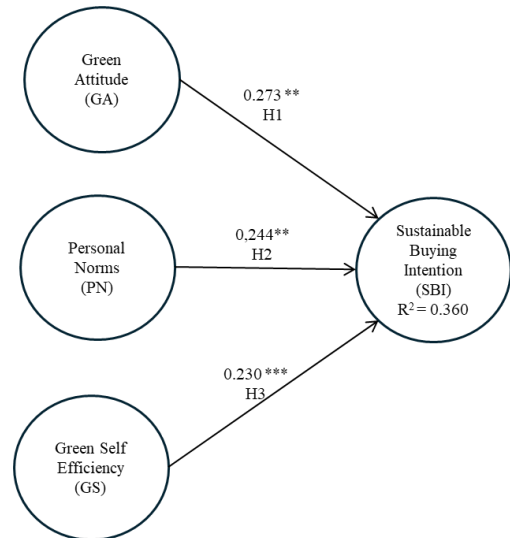


Figure 2. Theoretical model with results

Note: *** < 0.01 ** < 0.05

Source: Tandon et al. (2023); own formation

With PLSpredict I tested the predictive relevance. The linear regression model (LM) is used to generate prediction for the manifest variables (Hair et al., 2019). As the Q^2 value is higher than 0 (Table B5) we can assume that it can predict accurate new observations.

Table B5. PLSpredict analysis results

	$Q^2_{predict}$	PLS-SEM_RMSE	LM_RMSE
SBI	0.293	0.872	0.874

Source: Smart PLS 4; own formation

To assess the predictive power the higher root-mean-square deviation (RMSE) values of the PLS-SEM analysis and the LM model are compared. If the indicator in the PLS-SEM analysis does not have a higher RMSE value than the LM model, the model has high predictive power (Hair et al., 2022). The PLS-SEM RMSE value of the target construct is lower than for the LM RMSE benchmark (Table B6). This indicates high predictive relevance.

Table B6. Path coefficients

	β	P value	Significance
Green Attitude → Sustainable Buing Intention	0.273	0.011	Yes
Green Self-Efficacy → Sustainable Buing Intention	0.230	0.006	Yes
Personal Norms → Sustainable Buing Intention	0.244	0.015	Yes

Source: Smart PLS 4; own formation

5. DISCUSSION

The goal of this research was to assess the relationship of the constructs green attitude, personal norms, and green self-efficacy, with the key target construct, sustainable buying intent. To reach this objective, multiple hypotheses were made.

For the first hypothesis, “*Green attitude positively influences the sustainable apparel buying intentions of potential green apparel customers.*” the analysis revealed a strong and positive relationship between green attitude and sustainable buying intention ($\beta = 0.273$, $p < 0.05$). This means that people with a greener attitude, are more likely to have sustainable buying intentions. These findings align with previous research, and particularly the study by Tandon et al. (2023), which is also the study my theoretical model is based on. Their study also emphasizes the critical role of green attitude in promoting sustainable consumer behaviors on green apparel. The main difference is that for this research GA has the biggest total effect. In their study this is not the case, and it was the least significant of the constructs used. Wang et al. (2024) has found a significance level of 0.214 between attitude and behavioral willingness. This is comparable as well. Chen (2020), however found that attitude has an effect of 0.49, and as well found that attitude, from the compared constructs, has the most significant path. This comparison shows that my results are aligning with what was anticipated after reviewing the literature.

The reviewed literatures all investigate topics related to sustainability with diverse subjects and demographics. From this we can analyze that attitude significantly influences sustainable behavioral intentions overall, though its importance might vary slightly depending on the specific context. However, it might be challenging to ensure the comparability of these studies, as each use different explanatory items. Nonetheless, the concept of attitude impacting intention, has been extensively researched and confirmed for many years by the TPB. This study adds to the body of confirming literature by examining its relevance in the context of sustainable apparel consumption.

The second hypothesis, “*Personal norms positively influence the sustainable apparel buying intentions of potential sustainable apparel consumers.*” a strong and positive relationship has been found as well between personal norms and sustainable buying intentions ($\beta = 0.244$, $p < 0.05$). This means that people with personal norms concerning the wrongness of buying unsustainable clothing are more likely to intent on buying sustainable apparel. These findings align with the literature of Ateş (2020) and Tandon et al. (2023). Ateş (2020) found that people who have powerful personal norms to act pro-environmentally, feel morally obligated to act suitably and more often engage in pro-environmental behavior. As the buying of sustainable apparel is in line with pro-environmental behavior, this supports the findings of this research. The significant relationship in this study suggests that this is also the case for students and their buying intentions. Tandon et al. (2023) found a path of 0.27. This is comparable to the results of this research. Furthermore, PN was the second most significant construct. This is the same for my research. PN is a construct that is not officially part of the TPB and not every research uses the construct in the

same manner. The use of the construct in this research is most comparable to that from Tandon et al. (2023). They tested the same relationships, used the same explanatory items for PN and are testing the same topic. The results are similar and from this we can make assumptions that personal norms affect sustainable buying intentions for different demographics in similar ways. When considering the results of this relationship it is important to take notice of the fact that only 2 explanatory items have been used. Small biases or errors in the responses could lead to disproportional effects on the measurement of the construct (Jarvis et al., 2003). Additionally, two items might not fully grasp the complexity or the content of the full construct. This can reduce the extent to which the items adequately represent the construct and consequently impact the constructs validity (Eisinga et al., 2012).

The third hypothesis, “*Green self-efficacy positively influences the sustainable apparel buying intentions of potential sustainable apparel consumers.*” is additionally found to have a strong and positive relationship between green self-efficacy and sustainable buying intentions ($\beta = 0.230$, $p < 0.05$). This confirms that people with the feeling of green self-efficacy are more likely to have a higher sustainable apparel buying intent. These results confirm the findings of the literature of Tandon et al. (2023), where a comparable relationship of 0.29 was found. However, in this research the relationship between GSE and SBI is the strongest of the compared used constructs. This is the opposite of the outcome of this research. The results between their research and this one are comparable as they use identical items to explain the construct.

When reflecting on these results it is important to consider the validity of the explaining items. The items used in this research to describe the construct are a duplication from the items used in Tandon et al. (2023). Reevaluating the items used and comparing them to other research it can be opinionated that the items do not align or completely relate to common items used for perceived behavioral control (e.g., Chen, 2020, Shin et al., 2018. In this literature and others, the items mostly concern ones feeling of being capable of carrying out a certain behavior. The items used now, concern the persons perception of themselves as a pro-environmental consumer. This is why it is important to take notice of this difference and consider if the results can accurately represent the construct.

In addition, the target construct sustainable buying intention, should be examined. Firstly, the explained variance of the construct. The explained variance of SBI is 36% This is in line with comparable literature (e.g., Tandon et al., 2023, Wang et al., 2024), which means that it aligns with the standards of the field and the variance of SBI is explained by the constructs sufficiently.

Secondly, there has been decided to explain the target construct with one item. This decision has been made, because the construct itself can be explained clearly by this one item. According to Diamantopoulos et al. (2012) a key target construct can be well-defined by a single item. While traditionally a multi-item scale offers better predictive validity, in specific situations a single item can be effective if the construct is simple and unidimensional (Diamantopoulos et al., 2012). However, it should still be considered when evaluating the results that using a single construct can lead to disproportional effects caused by errors and biases (Jarvis et al., 2003).

Other notable considerations should be made about the research. Firstly, there is a difference between the significance of the variables in the literature and the significance found in this research. This difference could stem from several causes.

One reason for the GSE construct being the least significant, while in the literature from Tandon et al. (2023) being the opposite, could be that the participants in the used sample are students, whereas the literatures sample consists of individuals from different backgrounds within the USA. Students often do not have full-time jobs and may lack financial resources to purchase expensive apparel, which can make it more challenging to buy sustainable clothing due to its higher price deriving from the high material and productions costs (Sehnm et al., 2023). As a result, more participants might not consider themselves to be a pro-environmental consumer. A reason for the lower relationship and influence that GSE has on SBI could be the subjectiveness of the participants and the lack of context provided on the items in the survey. In the survey, the GSE items were framed in a way that allowed participants to consider the topic either in a general context or specifically regarding apparel. This ambiguity means that participants might rank themselves low on GSE but still indicated intentions to buy sustainable apparel, or vice versa. The variation could arise from differences in their pro-environmental behaviors in other contexts compared to apparel. This makes the relationship less reliable and could explain the lower significance of GSE in this research.

Furthermore, what is not considered in this research and especially for the GSE items, is peoples educational background considering the topic. Participants might have answered honestly, but the questions relate to one’s own vision on themselves, and on what they perceive as an ‘organic’, ‘sustainable’, or ‘socially responsible’ consumer. Research has shown that individuals that got educated on pro-environmental behaviors exhibit more long-term pro-environmental behaviors (Cordero et al., 2020). As said GSE tests primarily whether the individual sees themselves as a pro-environmental consumer. However, the lack of education on what pro-environmental behavior constitutes and which behavior is unknowingly harmful, might lead participants to incorrectly consider themselves as pro-environmental. With more information, their-self assessment might differ. Currently, the responses on the items can be seen as subjective, with participants potentially using different definitions, which complicates the validation of the construct and the items used. This could have impacted the observation of the relationship between GSE and SBI.

Additionally, various considerations about the sample should be made. Firstly, for the collection of the data, snowball sampling has been used for the distribution of the survey. This method comes with certain concerns. One key issue is that snowball sampling relies on social networks, because of this the sample cannot be fully representative of the broader population as you might only have participants who are similar (Krumpal, 2011). This makes the results less generalizable for the population of students in a general sense. Another problem is respondents that fill out the survey without genuine engagement, there is evidence that responses by individuals that participate as a favor, can be less thoughtful about their answers and they are more prone to errors. This is known as insufficient effort responding, which can significantly impact the quality of the data sample (Huang et al., 2011). The quality decreases as participants might rush through the survey and select answers without consideration, which impacts the validity and reliability of the data (Huang et al., 2011).

Another thing to consider is the seriousness of the participants. After conducting the survey, I got feedback that they did not understand what was meant with green apparel. However, above every page this was explained clearly. This means that not all participants paid close attention to the information provided and

might have answered differently than what would have been representative of their actual opinion.

5.1 THEORITICAL IMPLICATIONS

Firstly, this study has tested the applicability of the TPB in predicting sustainable consumer intention. By demonstrating that attitudes and perceived behavioral control significantly influence the sustainable buying intentions. This adds to the evidence validating the TPB across different domains, in this case sustainable consumption intentions.

Secondly, the study extends the evidence on the importance of the addition of personal norms to theoretical models predicting sustainable buying intentions. By providing results that show a significant relationship between the constructs, the value of the construct is validated.

Thirdly, the study extends the evidence on this theoretical model and the constructs used, in the context of green apparel consumption among students. Previous research has primarily been focused on other environmental behaviors like recycling, energy conservation or organic foods (e.g., Lai and Cheng, 2016, Laudenslager et al., 2004). By applying the theory to sustainable apparel purchases it extends the knowledge on an increasingly important are of consumer behavior.

Moreover, the study highlights the role of students as a critical demographic for the promotion of sustainable practices. The focus on the young demographic of students is beneficial, as they are in the process of forming lifelong purchasing habits (Danner et al., 2008). Additionally, the focus on a specific demographic contributes to the knowledge on certain population segments and can effectively be used in influencing sustainable intentions.

Finally, the study is a basis for future studies to explore the variable personal norms in the context of sustainable buying intentions. By testing these variables, future research can define the theoretical models and construct further and more effectively. This will lead to more effective strategies for the promotion of sustainable behaviors.

5.2 PRACTICAL IMPLICATIONS

An importance-performance map analysis (IPMA) has been conducted to identify the impact and importance of the constructs on the sustainable buying intent (Figure 3).

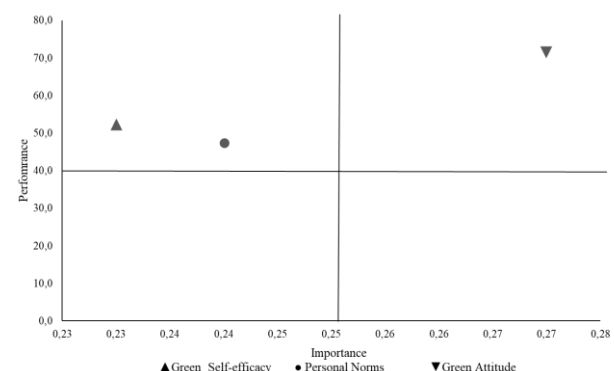


Figure 3. Importance-performance map analysis (IPMA) results

Source: Smart PLS 4; own formation

The results (Table B7) illustrate which constructs have the most substantial total effects in explaining the variance of the target construct sustainable buying intentions (Hair et al., 2018).

Table B7. Importance-performance map analysis (IPMA) results.

IPMA (on Sustainable Buying Intention)	Unstandardized Total Effect	Performance
Green Attitude	0.273	71.719
Personal Norms	0.244	47.461
Green Self-Efficacy	0.230	52.092

Source: Smart PLS 4; own formation

The model highlights critical variables that companies or institutions can focus on to enhance consumers sustainable buying intentions for apparel. The results indicate that green attitude (0.273) has the largest total effect and is the most important in explaining sustainable buying intent (71.719). This suggests that a strong green attitude among consumers is highly correlated with their intentions to buy sustainably. Personal norms, follows as the second most impactful construct with a total effect of 0.244. However, it has a relatively lower performance score of 47.461. Despite the lower performance it still has a significant effect on SBI and cannot be overlooked. Green self-efficacy has the smallest total effect of 0.230. But it does show moderate performance with a score of 52.092. This indicates that consumers belief in their ability to buy sustainably has a moderate influence on the buying intentions.

As seen in Figure 2, green attitude is distinctly high-performing and crucial. In contrast, the other two constructs, while important, do not show comparable levels of importance and performance. By improving customers' green attitudes, businesses can significantly influence their intentions and willingness to purchase more sustainable apparel, thereby promoting a more durable and circular fashion industry. This aligns with the European Union's sustainability goals, as outlined by the European Parliament (2024).

The green attitude of individuals could be increased using various methods.

Firstly, effective green marketing strategies, that enhance consumers attitudes towards green products. Green advertisement has been shown to impact a consumers purchase intentions by increasing their awareness and perceived value of green products (Amin & Tarun, 2020, Ankit & Mayur, 2013).

Secondly, the promotion of individuals concern for the environment can impact their attitude towards green consumption. Campaigns that show the environmental impacts of unsustainable practices and the benefits coming with sustainable alternatives, help in fostering pro-environmental attitudes (Dunlap et al., 2000).

Lastly, educational programs could be used to shape attitudes. Informing individuals about the environmental benefits of green products and sustainable practices increases their knowledge and encourages a positive attitude towards green behaviors (Kamalanon et al., 2022).

Aside from the primary observations on green attitude, it is important to mention that none of the other constructs are low performing, which indicates that participants overall feel capable

to buy green apparel and that they feel morally intrigued to participate in sustainable buying.

The moderate importance of PN and GSE, however indicate that they have minimal effect on the overall outcome. This means that focusing on these constructs, when trying to increase SBI, should not be the main priority.

6. CONCLUSION

The central question of this research was, "What are the most important drivers of sustainable apparel buying intent, among students?". This study identified significant and positive relationships between the construct variables, green attitude, personal norms, and green self-efficacy, and the key target construct sustainable buying intention.

The findings reveal that the most important driver of sustainable buying intention among students is green attitude. This suggests that a student with a strong green attitude, is more likely to have intentions to buy sustainable apparel.

Furthermore, while personal norms and green self-efficacy also influence sustainable buying intentions, their impact is not as significant as that of green attitude. These results make the focus on these constructs less important than influencing positive environmental attitudes to promote sustainable purchasing behaviors among students. Efforts to strengthen personal norms and enhance green self-efficacy should still be considered, as these factors still contribute to the encouragement of sustainable buying intentions.

Overall, the study highlights the critical role of the constructs in driving sustainable apparel buying intentions and provides valuable insights for educational institutions, companies, and researchers to develop effective strategies to promote sustainable consumption behaviors in the student population. Future research should continue to explore these relationships and expand the scope to include diverse populations and additional constructs to gain a more comprehensive understanding of the factors influencing sustainable buying intentions.

6.1 LIMITATIONS

This research has several limitations.

Firstly, the relatively small sample size limits the potential to accurately generalize the findings to a broader population. This limitation is further strengthened by the fact that the sample was collected through snowball sampling. This method introduces a risk of convenience sampling, where participants are not entirely random and may share similar characteristics, potentially skewing the results.

Secondly, the limited number of demographic questions asked has resulted in a lack of detailed information about the sample. This deficiency hinders the ability to form implications about the general student population, making such conclusions difficult and unrealistic.

Thirdly, the sample itself consists solely of students from diverse backgrounds and origins, which could impact their perspectives and responses. Despite this diversity, the sample is primarily composed of Dutch individuals. The presence of non-Dutch participants introduces variability that complicates the ability to make specific implications about a general population of students, and simultaneously limits the generalizability of the findings for only Dutch students.

Lastly, the items used to describe the construct of personal norms are limited in scope. This limitation may lead to an incomplete understanding of the construct, reducing the accuracy and reliability of the findings related to personal norms.

The study also faces constraints concerning the construct of green self-efficacy. The items used to measure this construct do not align as closely with the definition as needed, potentially affecting the validity of the results.

6.2 FUTURE RESEARCH

For future research, it is recommended to use a larger sample size to enhance the generalizability of the findings. Additionally, using a more random sampling method, rather than snowball sampling, would help in obtaining a more representative sample and reducing sampling bias. It is also advisable to include a broader range of demographic questions in future surveys. This approach will provide better insights into the sample characteristics and allow for a more insightful analysis of how different demographics may impact the results.

Expanding the scope of the measurement tools is another critical recommendation. Future studies should develop more comprehensive items to capture the full content of constructs such as personal norms, thereby improving the accuracy and reducing the potential errors. Regarding the construct of green self-efficacy, future research should investigate using different, more precise items that better align with the construct's definition. Additionally, exploring what construct the current items might better describe could lead to the identification of a new, significant construct.

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