

Exploring Sustainable Clothing Consumption in Middle-Income Countries: A case study of Romanian consumers

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Abstract. *The overconsumption of consumers under today's increasingly scarce natural resources has overwhelmed the textile industry in middle-income countries, such as Romania. It is becoming more and more essential to encourage sustainable clothing consumption behaviors, such as purchasing recyclable clothes. Notwithstanding, there is a limited number of studies trying to understand the intrinsic factors that motivate consumers' purchase intention toward sustainable clothes in middle-income countries. Moreover, the effect of consumers' environmental knowledge on determining their purchase intention of sustainable clothes remains understudied. Consequently, the purpose of this paper is to make a significant contribution to the sustainable consumption literature by providing a consolidated framework that explores the behavioral factors inclining Romanian consumers' purchase intention towards sustainable clothes. The foundation of this study combines consumers' altruistic value orientations and the theory of planned behavior. The partial least squares path modeling procedure was used to analyze the data of 1,018 Romanian respondents. The findings of this study show that altruistic value orientation, subjective norms, and sustainable attitudes have a positive effect on Romanian consumers' purchase intention of sustainable clothing. Thus, these insights provide essential practical implications of advocating for the consumption of sustainable clothes along with useful guidelines for practitioners in the textile industry among middle-income countries, especially in Romania, to reduce overconsumption.*

Keywords: Sustainability, Sustainable clothing consumption, Theory of planned behavior, Overconsumption, Social value orientation.

Introduction

The escalating prevalence of “fast” fashion in the textile industry within middle-income countries (MICs) has favored overconsumption, aggravating excessive clothing production and waste, thus advancing with the decrease in natural resources and contributing to climate change (Armstrong et al., 2016). The middle-income countries (MICs), characterized by a gross national income (GNI) ranging from \$1,026 to \$12,475, include influential players such as China, and European countries like, Romania, Bulgaria, and Hungary.

Despite the COVID-19 pandemic, textile exports have strongly increased, reaching 16% of global manufactured goods exports in 2020 and 7.3%, showcasing resilience even amid the challenges posed by the world health crisis (World Trade, 2021, 2023). Furthermore, China and European MICs like Romania, and Bulgaria, have contributed to textile imports, with Romania alone importing approximately 188,104.2 tons in 2021, pointing out a 6.5% increase from 2020 (Eurostat, 2021a; WITS, 2021). The substantial increase in textile production has led to impulsive purchasing, hazardous rates of clothing disposal, and the diminishing of valuable resources (Nayak & Patnaik, 2021).

Romania alone disposed of over ten thousand tons of clothing in 2020 (Eurostat, 2021b). Regardless of intensified recognition, there is scant research exploring the motivating factors of sustainable clothing consumption among consumers in MICs, particularly in Romania.

Rausch and Kopplin define sustainable clothing consumption as “*pro-environmental actions at every stage of the garment’s life cycle from pre-purchase to post-purchase comprising its acquisition, storage, usage and care, as well as discard*” (Rausch & Kopplin, 2021, p.2). Although existing literature on sustainable clothing consumption mostly explores drivers and inhibitors within developed countries, there is a lack of comprehensive research framework incorporating the influence of consumers' social value orientations (altruistic, biospheric, and egoistic) on sustainable clothing consumption (Armstrong et al., 2016; Goworek et al., 2020).

Hence, designed through the lens of the Theory of Planned Behavior (TPB) (Ajzen, 1991) this study intends to 1) investigate the formerly recognized predictors, such as subjective norms, greenwashing concern, sustainable attitude, of sustainable clothing consumption in the context of Romania, 2) explore the significance of consumers’ value orientations on their purchase intention of sustainable clothing, and 3) uncover the Romanian consumers’ sustainable attitude formation process. Concretely, we advance the following research questions:

- (1) How do external factors, including subjective norms and greenwashing concerns, influence Romanian consumers’ purchase intention of sustainable clothing?
- (2) How do Romanian consumers’ social value orientations, including altruistic, biospheric, and egoistic value orientations, impact their purchase intention of sustainable clothing?
- (3) What may shape Romanian consumers’ sustainable attitude, and how do their sustainable attitudes influence their purchase intention of sustainable clothing?

We use scales adapted from Rausch & Kopplin (2021), and Schlutz (2000), embracing the Partial Least Square (PLS) path modeling method with data from 1,018 Romanian respondents.

Our findings enrich the sustainable clothing consumption literature by shedding light on the importance of social value orientations in determining the purchase intention of sustainable clothing purchase in Romania. Moreover, we emphasize the unique processes involved in forming sustainable attitudes in a MIC context, diverging from those identified in developed countries, and offer practical implications for encouraging sustainable clothing purchases and undermining overconsumption.

The paper is organized as follows: the succeeding section reviews essential literature on sustainable clothing consumption and establishes the research gaps. Here we formulate our hypotheses grounded in TPB and prior findings and introduce our integrated research framework. Afterward, we outline our methodology and discuss our results. The last section deliberates on theoretical and practical implications, along with future research opportunities.

Literature review

Sustainable clothing consumption

Sustainable clothing has been defined as a genre of garments and other fashion apparel produced, used, and disposed of in planet-friendly manner that lessens negative impacts on the environment, economy, and society. It embodies ecologically reliable practices and materials to minimize the fashion industry’s ecological footprint. Sustainable clothing consumption implicates consuming clothes that mitigate the squandering of natural resources, utilizing toxic materials, and producing environmental pollution. The three phases in sustainable clothing consumption are production, or the pre-consumption point, consumption, and disposal, or the post-consumption stage.

Previous studies on sustainable clothing consumption have mainly concentrated on post-consumption behaviors such as reusing, recycling, and donation (Goworek et al., 2020). Some have investigated consumers' consumption (e.g. purchasing recyclable, biodegradable, or second-hand clothes) (Armstrong et al., 2016).

However, there is limited attention on pre-consumption determinants influencing purchase intention towards sustainable clothes. Nonetheless, external factors, such as consumption and industrial norms, existing knowledge and environmental concerns, along with social value orientations have a prone role in consumers' decision-making process. Moreover, recent studies suggest that attitude favoring sustainable clothes significantly impacts purchase intention, while environmental knowledge and, environmental concerns have a great role in the attitude formation process (Rausch & Kopplin, 2021). Notwithstanding, existing findings are based on high-income countries, and lack evidence from MICs, particularly Romania. Furthermore, there is a gap in understanding the connection between social value orientations and sustainable clothing consumption in this context.

Therefore, the study's purpose is to validate existing behavioral constructs and explore the influence of social value orientations on purchase intentions for sustainable clothing in Romania. We present our research model and hypothesis development within this novel context, as follows.

Theory of Planned Behavior

The Theory of Planned Behavior (TPB) portrays individual behavioral intentions to be contingent upon the subjective norm, individuals' attitudes toward the behavior, and their perceived behavioral control (Ajzen, 1991). The subjective norm mirrors an individual's perception of social pressure exerted by significant others, encouraging or discouraging specific behavior. On the contrary, individual attitudes toward a behavior are internally established based on personal knowledge and perceptions, representing the individual's emotional disposition (e.g., positive or negative feelings)(Fishbein & Ajzen, 1975). Perceived behavioral control pertains to an individual's assessment of the risks and benefits associated with performing a behavior, influenced by value propositions and personalities (Cameron et al., 1998).

In the context of our research, a consumer's purchase intention of sustainable clothing products may be influenced by external consumption norms and the opinions of significant others (i.e., subjective norms). Moreover, the prevalent practice of greenwashing in the MIC's textile industry may diminish trust, leading to negative word-of-mouth (WOM) and distrust norm among consumers, thereby externally discouraging their purchase intentions (Rausch & Kopplin, 2021; Zhang et al., 2020). Furthermore, attitudes toward purchasing sustainable clothes may be formed by individuals' existing environmental knowledge and concerns. Diverse social value orientations (i.e., altruistic, biospheric, and egoistic) (Schultz, 2000; Stern, 2000) may determine purchase intentions for sustainable clothes by triggering distinct perceptions of costs associated with purchasing sustainable clothing products, such as potential exclusion from fashion trends or perceived lower quality (Lundblad & Davies, 2016).

Built upon the theoretical lens of TPB, we present our research framework in Figure 1 and develop our hypotheses in the following sections.

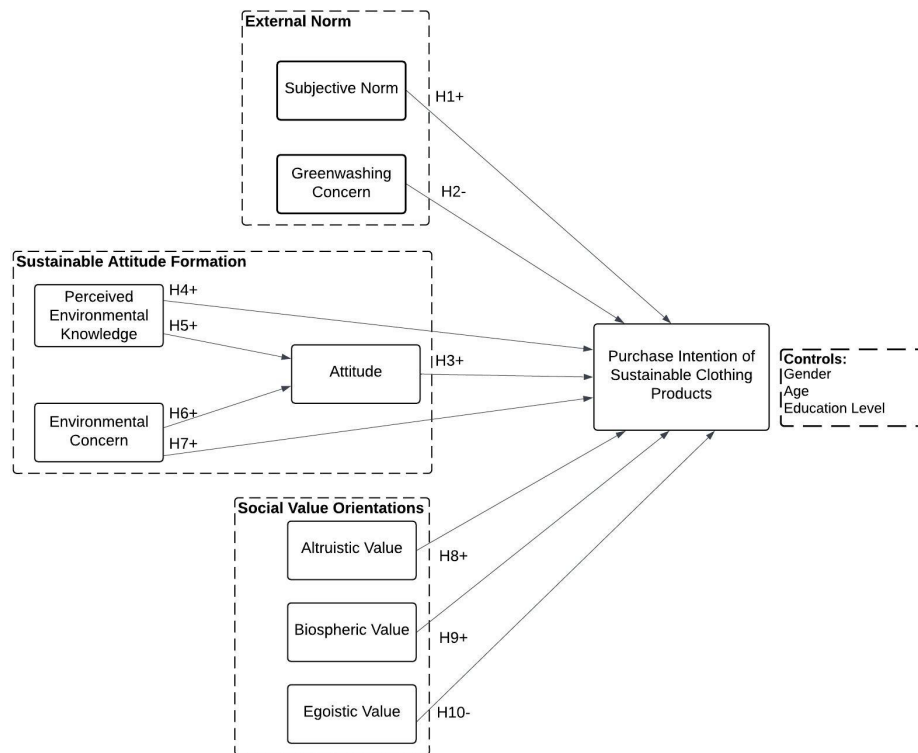


Figure 1. Research Framework of Sustainable Clothing Consumption

Source: Author's own research.

The Impacts of External Norms

Norms are external regulations and phenomena guiding individuals toward seemingly proper and acceptable behaviors or preventing them from socially inappropriate behaviors. External norms that may influence consumers to purchase sustainable clothing products include subjective norms perceived from socially meaningful others' consumption behaviors, as well as the industrial norms established through consistent production or marketing practices.

Subjective norm

Subjective norm (SN) is perceived social pressure on whether or not to perform a behavior is the main trigger of this social predictor (Ajzen, 1991). WOM is a significant contributor, especially among friends. To the same degree, environmentally conscious consumers are likely to share their views and inspire peers toward eco-friendly behaviors. Recommendations from close friends heighten trust and lower uncertainty, pointing out the social pressure (Salem & Alanadoly, 2020). The core of this norm is the behavioral contagion or herding that brings the tendency to repeat others' consumption patterns since social groups have a great influence on determining an individual's purchasing environmentally friendly products (Salazar et al., 2013). Thus, we propose that:

H1: Consumers' subjective norms towards sustainable clothing products positively impact their intention to purchase sustainable clothing products.

Greenwashing concern

Greenwashing concern (GC) covers the deceptive use of eco-friendly marketing to shape a positive public image, risking reputational and financial harm (Lyon & Montgomery, 2015). There are conflicting findings, within the TPB framework regarding its influence on consumers' intention to purchase sustainable clothes (Goh & Balaji, 2016; Zhang et al., 2020). Therefore, we propose a further investigation into consumer distrust and its impact on green purchasing intentions:

H2: Consumers' greenwashing concern towards sustainable clothing products negatively impacts their intention to purchase sustainable clothing products.

Sustainable Attitude Formation

Within the TPB framework, attitude (ATT) toward purchasing sustainable clothes to evaluate the favorable or unfavorable behavior of a person (Ajzen, 1991). Studies have found a positive impact on an individual's purchase intention towards sustainable clothing consumption (Rausch & Kopplin, 2021). Attitude, as an important predictor of behavioral intention, is internally accounted for one's own knowledge and perceived sentiments. Along these lines, we propose:

H3: Consumers' attitudes towards sustainable clothing products positively impact their intention to purchase sustainable clothing products.

Perceived environmental knowledge

Perceived environmental knowledge (PEK) is a fundamental determinant of behavioral intention, particularly of purchase intention of sustainable products (Rausch & Kopplin, 2021). PEK illustrates one's knowledge, recognition of environmental issues and, the weight of human actions on the environment (Goh & Balaji, 2016). Higher environmental knowledge is associated with greater engagement in eco-conscious clothing consumption (Harris et al., 2016), influencing both attitude and intention toward purchasing sustainable clothes. Thus, we suggest:

H4: Consumers' perceived environmental knowledge towards sustainable clothing products positively impacts their attitude to purchasing sustainable clothing products.

H5: Consumers' perceived environmental knowledge of sustainable clothing products positively impacts their intention to purchase sustainable clothing products.

Environmental concern

Environmental concern (EC) mirrors an individual's level of concern towards green issues, and engagement in environmental protection (Dagher & Itani, 2014). A higher level of concern for the environment is associated with green purchase behavior and influences one's attitudes toward sustainable products (Rausch & Kopplin, 2021). Hence, we assume:

H6: Consumers' environmental concern towards sustainable clothing products positively impacts their attitude to purchasing sustainable clothing products.

H7: Consumers' environmental concern towards sustainable clothing products positively impacts their intention to purchase sustainable clothing products.

The Differential Influences of Social Value Orientations

Altruistic, biospheric, and egoistic values influence environmental beliefs and intentions (Schultz, 2000; Stern, 2000). Altruistic values (ALTR) concentrate on the costs and benefits of others' well-being, while biospheric values (BIOS) underline caring for the natural environments

and other species (Han & Lee, 2016). Egoistic values (EGO) acknowledge the personal costs and benefits of green conduct. Altruistic and biospheric values positively engage in pro-environmental behavior and green purchasing, while egoistic values display a negative impact (Schwartz, 1992).

The literature lacks evidence on the roles of these three value orientations in consumers' intention to purchase sustainable clothes. Thus, we propose a further investigation into consumers' social values orientations and their impact on green purchasing intentions:

H8: Consumers' altruistic values towards sustainable clothing products positively impact their intention to purchase sustainable clothing products.

H9: Consumers' biospheric values towards sustainable clothing products positively impact their intention to purchase sustainable clothing products.

H10: Consumers' egoistic values towards sustainable clothing products negatively impact their intention to purchase sustainable clothing products.

Methodology

Data were collected in Romania from November to December 2020 through an online, self-administrated questionnaire disseminated on Facebook, LinkedIn, WhatsApp, and other social media networks. The sample consists of 1087 respondents who have participated voluntarily and anonymously. They provided their consent to taking part in this study and also, they have been informed of its purpose. The questionnaire embraces both convenience sampling (Baltar & Brunet, 2012) and snowball sampling (Browne, 2005; Heckathorn, 2011) techniques.

The questionnaire is designed based on Rauch and Kopplin's conceptual framework that engages the TPB predictors: ATT, SN, and PEK, alongside the environmental dimensions like, EC and GC (Rausch & Kopplin, 2021) to which we add the novelty of the social values orientations: ALTR, BIOS and EGO (Roos & Hahn, 2019). The items used were translated from English to Romanian and were measured on a seven-point Likert scale lengthen from 1 (strong disagreement) to 7 (strong agreement).

Further, we used WarpPLS 7.0 software (WarpPLS, 2020) to use a partial least square-path modeling (PLS-PM) approach for assessing contemporary relations between variables, with the use of a structural equation model (SEM) (Joreskog, 1982). This method combines an outer (measurement) with an inner (structural) model. The first one evaluates the relationship between measurement variables and their corresponding latent constructs, while the second one examines the relationship among latent variables (Haenlein & Kaplan, 2004; Hair et al., 2011).

Results and discussions

The final sample consists of 1,018 respondents (87.3% female), aged 10-80 (mean 33.75, SD = 11.88), with 84.2% of them having a monthly income higher than 1000 RON.

We structured our results in three sections: the first one approaches the measurement model, the second one presents the inner model, and the last one discusses the implications of the study. We have chosen this method for greater data summarization.

Outer model

Table 1 summarizes the performance of the measurement through the composite reliability of each latent construct. The results range between 0.852 (ATT) and 0.959 (SN), satisfying the recommended threshold of 0.7 (C.Nunnally & H.Bernstein, 1994). The Cronbach's Alpha values

are above 0.7 (Cortina, 1993), pointing out good internal consistency. Moreover, the average of variance extracted (AVE) is higher than its proposed threshold of 0.5 (Fornell & Larcker, 1981). All this evidence proves the reliability of the measurement model.

Table 1. The reliability of measurement model.

Dimension	Abbreviation	Composite reliability index (* > 0.7)	Cronbach's Alpha (* > 0.7)	Average of variance extracted (* > 0.5)
Dependent variables				
Purchase intention	PI	0.916	0.876	0.731
TPB independent variables				
Attitudes	ATT	0.852	0.736	0.658
Subjective norms	SN	0.959	0.935	0.885
Perceived Environmental knowledge	PEK	0.943	0.919	0.805
Additional predictors				
Environmental concern	EC	0.938	0.912	0.791
Greenwashing concern	GC	0.922	0.876	0.798
Altruistic Value Orientations	ALT	0.870	0.775	0.690
Biospheric Value Orientations	BIO	0.913	0.869	0.722
Egoistic Value Orientations	EGO	0.871	0.777	0.692

Source: Authors' own research results.

Furthermore, all diagonal values in Tabel 2 were higher than the corresponding off-diagonal values, that also, are surpassing the threshold of 0.8 (Kennedy, 2008).

Table 2. Correlations among latent constructs with square roots of AVE

Dimension	PI	ATT	SN	PEK	EC	GC	ALT	BIO	EGO
PI	0.855	0.650	0.421	0.412	0.529	0.490	0.341	0.356	0.068
ATT	0.659	0.811	0.526	0.449	0.519	0.456	0.299	0.364	0.003
SN	0.421	0.526	0.941	0.492	0.390	0.409	0.194	0.259	0.090
PEK	0.412	0.449	0.492	0.897	0.595	0.500	0.275	0.393	0.123
EC	0.529	0.519	0.390	0.595	0.890	0.648	0.374	0.547	0.083
GC	0.490	0.456	0.409	0.500	0.648	0.893	0.264	0.400	0.083
ALT	0.341	0.299	0.194	0.275	0.374	0.264	0.831	0.568	0.179
BIO	0.356	0.364	0.259	0.393	0.547	0.400	0.568	0.849	0.170
EGO	0.068	0.003	0.090	0.123	0.083	0.083	0.179	0.170	0.832

Source: Authors' own research results.

The combined loadings and cross-loadings of our latent variables are found in Table 2. All loadings are higher than the 0.7 threshold, ranging between 0.736 and 0.935. All things considered, both convergent and discriminant validity stands.

Table 3. Combined loadings and cross-loadings

Dimension	PI	ATT	SN	PEK	EC	GC	ALT	BIO	EGO
PI1	0.791	- 0.078	- 0.056	- 0.037	0.023	- 0.052	- 0.023	- 0.043	0.031
PI2	0.874	0.078	0.119	0.069	0.008	0.037	0.002	- 0.011	0.020
PI3	0.920	0.033	- 0.015	- 0.021	0.012	0.009	- 0.013	0.013	- 0.035
PI4	0.830	- 0.044	- 0.056	- 0.015	- 0.043	0.000	0.034	0.037	- 0.011
ATT1	0.120	0.838	- 0.077	0.035	- 0.036	0.026	0.018	0.087	0.036
ATT2	- 0.256	0.709	0.054	0.035	- 0.013	- 0.030	- 0.003	- 0.138	- 0.114
ATT3	0.093	0.878	0.029	- 0.062	0.044	- 0.001	- 0.015	0.028	0.057
SN1	- 0.026	0.022	0.922	- 0.012	0.029	0.007	- 0.006	- 0.010	0.010
SN2	0.005	- 0.020	0.948	- 0.004	- 0.014	- 0.018	- 0.011	0.002	0.025
SN3	0.020	- 0.001	0.951	0.016	- 0.014	0.010	0.017	0.008	- 0.034
PEK1	- 0.002	0.129	0.172	0.846	- 0.027	0.003	- 0.023	- 0.026	0.010
PEK2	0.015	- 0.004	- 0.036	0.916	- 0.010	0.007	0.020	- 0.054	- 0.041
PEK3	0.023	- 0.039	- 0.081	0.933	- 0.016	0.008	0.024	0.016	- 0.021
PEK4	- 0.038	- 0.079	- 0.041	0.890	0.053	- 0.018	- 0.024	0.064	0.055
EC1	- 0.007	0.045	- 0.047	0.124	0.894	- 0.106	0.019	0.024	0.003
EC2	0.046	0.063	- 0.024	0.065	0.897	- 0.020	0.005	- 0.063	- 0.028
EC3	- 0.029	- 0.089	0.056	- 0.031	0.886	0.021	- 0.039	0.009	0.002
EC4	- 0.011	- 0.020	0.016	- 0.162	0.881	0.107	0.015	0.031	0.023
GC1	- 0.043	- 0.031	0.122	0.005	0.003	0.890	- 0.013	- 0.007	0.012
GC2	0.036	- 0.048	0.023	0.025	- 0.049	0.935	- 0.013	- 0.007	0.012
GC3	0.006	0.085	- 0.152	- 0.033	0.051	0.852	0.043	0.006	- 0.004
ALT1	0.010	- 0.012	0.021	- 0.024	0.023	0.083	0.837	- 0.069	- 0.022
ALT2	- 0.024	0.053	0.035	0.048	- 0.020	- 0.059	0.831	- 0.020	- 0.025
ALT3	0.014	- 0.041	- 0.056	- 0.024	0.023	0.083	0.824	0.090	0.048
BIOS1	- 0.041	- 0.009	0.001	0.057	- 0.174	- 0.007	0.240	0.736	0.052
BIOS2	- 0.015	0.016	0.033	0.011	- 0.063	0.054	- 0.053	0.874	- 0.022
BIOS3	- 0.038	0.078	- 0.044	- 0.030	0.133	- 0.054	- 0.030	0.901	- 0.008
BIOS4	0.090	- 0.088	0.011	- 0.028	0.073	0.007	- 0.118	0.872	- 0.013
EGO1	0.021	0.016	- 0.110	0.034	- 0.065	0.017	0.177	0.114	0.796
EGO2	0.065	0.039	- 0.110	- 0.048	0.014	- 0.011	0.011	- 0.063	0.876
EGO3	- 0.089	- 0.057	0.126	0.018	0.048	- 0.005	- 0.125	- 0.043	0.822

Source: Authors' own research results.

The inner model

The results of the PLS mode are presented in Table 4. The total amount of variance in the intention of purchasing sustainable clothes explained by the model is 50.9% (adjusted $R^2 = 50.3\%$), while the attitudes towards the purchase of sustainable clothes is 30.4% (adjusted $R^2 = 30.3\%$). We have found no endogeneity, statistical suppression, or Simpson's paradox. The average block VIF (AVIF) is 1.624, below the theoretical threshold of 3.3. The Tenenhaus goodness-of-fit result is 0.575, ranked as a large value.

Table 2. Correlations among latent constructs with square roots of AVE.

Estimated coefficients	Direct effects		Direct effect sizes (f^2)		Indirect effects	Total effects (via PI)
	Purchase Intention	ATT	Purchase Intention	ATT		
PI	-	-	-	-	-	-
ATT	0.453*** (<0.001)	-	0.295	-	-	0.453*** (<0.001)

	Direct effects		Direct effect sizes (f2)		Indirect effects	Total effects (via PI)
Estimated coefficients	Purchase Intention	ATT	Purchase Intention	ATT		
SN	0.055* (0.019)	-	0.023	-	-	0.055* (0.019)
PEK	- 0.000 (0.497)	0.211*** (<0.001)	0.000	0.096	0.096*** (<0.001)	0.096** (0.004)
EC	0.146*** (<0.001)	0.396*** (<0.001)	0.078	0.208	0.180*** (<0.001)	0.326*** (<0.001)
GC	0.139*** (<0.001)	-	0.069	-	-	0.139*** (<0.001)
ALT	0.112*** (<0.001)	-	0.039	-	-	0.112*** (<0.001)
BIO	0.012 (0.329)	-	0.005	-	-	0.012 (0.329)
EGO	0.013 (0.329)	-	0.001	-	-	0.013 (0.329)
Gender	0.022 (0.170)	-	0.002	-	-	0.022 (0.170)
Age	- 0.006 (0.429)	-	0.001	-	-	- 0.006 (0.429)
Education	0.039. (0.094)	-	0.003	-	-	0.039 (0.094).
Goodness of fit measures						
R2 / R2 Adjusted	50.9% / 50.3%	30.4% / 30.3%	-	-	-	-
Tenehaus GoF	0.575 (large)	-	-	-	-	-
SRMR	0.054	-	-	-	-	-
SMAR	0.040	-	-	-	-	-

Note: ***-*p* value <0.001; **-*p* value <0.01; *-*p* value <0.05; -*p* value <0.10;

Note: Teenehaus GoF: small ≥ 0.1 , medium ≥ 0.25 , large ≥ 0.36 ;

Source: Authors' own research results.

The TPB constructs, ATT ($\beta = 0.453$, $p < 0.001$) and SN ($\beta = 0.055$, $p = 0.019$) are positively correlated with consumers' intention to buy sustainable clothes, confirming H1 and H3. We expected GC ($\beta = 0.139$, $p < 0.001$) to have a negative impact on PI, however we fail to accept H2. ATT's (0.295) effect size is considered moderated when predicting behavioral intention. While SN (0.023) and GC (0.069) have small effect sizes, Cohen (2013) considers that effect sizes above the threshold of 0.02 could be considered for practical interventions and informing policies (Cohen, 2013).

Regarding sustainable attitude formation, we accept H7 and reject H4. EC ($\beta = 0.146$, $p < 0.001$) has a positive influence on PI, while PEK is negatively correlated with an individual's intention of purchasing sustainable clothes. Perceived environmental knowledge positively impact the formation of attitude ($\beta = 0.211$, $p < 0.001$), evidence sustained by the indirect effect of the relationship (0.096), that points to a total mediation between ATT and PI. EC, also has a significant role in controlling for the mediator ($\beta = 0.180$, $p < 0.001$). Therefore, the two predictors positively participate in the formation of attitudes towards the purchase of sustainable clothes, confirming hypotheses H5 and H6.

The social value orientations, BIO ($\beta = 0.012$, $p = 0.329$) and EGO ($\beta = 0.013$, $p = 0.329$) are not statistically significant in the formation of sustainable purchase intention. Thus, we fail to accept H9 and H10. In contrast with the two predictors, ALT ($\beta = 0.112$, $p < 0.001$) positively influences the dependent variable, confirming H8. Its effect size (0.039) is considered small, but it is valid to be considered for intervening in this direction.

In our analysis we find that Gender ($\beta = 0.022$, $p = 0.170$) and Age ($\beta = -0.006$, $p = 0.429$) are not statistically significant, leaving Education ($\beta = 0.039$, $p = 0.094$) the only control variable to have an impact in determining the intention of purchasing sustainable products. The effect size of education, 0.003, is below the recommended threshold.

Implications

This research addresses the quantitative research gap in sustainable clothing consumption, particularly in MICs like Romania. We contribute to the green literature by extending the TPB framework with new determinants, thus broadening the theoretical frame. Our main results confirm the performance of the TPB in the context of green consumer behavior, within the Romanian population. Hence, we consider this to be one of the implications brought by this paper.

Our quantitative results align with previous research on green research behavior. Although several studies have found no significant impact of the subjective norms (Rausch & Kopplin, 2021), we found our predictor to have reasonable significance. Moreover, our findings on greenwashing concern's positive influence on purchase intention contradict other studies within green literature (Goh & Balaji, 2016; Zhang et al., 2020). These results address our first research question and provide valuable insight into the literature, suggesting that external factors like subjective norms and greenwashing concern positively impact the intention to purchase sustainable clothes.

Among social values, we found altruistic values to take part in the purchase process, corroborating findings from other scholars (Schultz, 2000; Schwartz, 1992; Stern, 2000). There is scarce literature exploring the effects social values have on sustainable clothing, underscoring the importance of our study in highlighting the strong significant relationship between altruistic values and the intention to purchase sustainable clothes.

Attitudes toward the intention of purchasing sustainable clothes emerge as a key determinant in this relationship. Moreover, we uncovered that environmental concerns and perceived environmental knowledge exert a substantial influence on attitude formation towards intention, (Jaiswal & Kant, 2018). While, environmental concerns align with previous literature in pointing a significant relationship toward purchase intention, perceived environmental knowledge shows a unique finding, indicating a total mediation effect on attitude formation and no direct influence on purchase intention. Thus, we introduce to the existing literature a novel approach to the attitude formation process of intending to purchase sustainable clothes

The findings of this study serve as a starting point for introducing policies that can benefit consumers, producers and stakeholders, including the government. One direction for boosting the intention to purchase sustainable clothes is through the use of nudges or informational campaigns on the dimension that was found with an effect size higher than the 0.02 threshold.

Conclusion

The increased importance of sustainability, particularly within the textile sector, underscores the urgency of exploring the predictors of sustainable clothing consumption within the context of a Middle-Income Country, like Romania. The research approaches its purpose by investigating the connection between the TPB constructs, green predictors and social values, where purchasing intention is the dependent variable and the attitudes towards this intention.

With a sample consisting of 1,087 respondents, the study employs the PLS-PM method for testing the proposed framework and, eventually, contributing to the green literature, and also, to understanding the context of Romania as a MIC representative. Our results identify attitudes as a key player in determining the intention of buying sustainable clothes, while perceived environmental knowledge plays an important role in mediating this relationship. Moreover, Romanian's altruistic value orientation positively influences intention formation, emphasizing the need for promoting a change in consumers' mindset and compassion towards sustainable clothes.

Nonetheless, the study acknowledges certain limitations, including a focus solely on intention rather than behavior, potential biases in data collection, and discrepancies in respondent demographics. Future research should adopt more practical sampling methods and consider cultural variations in environmental concerns and value orientations. Despite these limitations, this study advances behavioral approaches to promote sustainable clothing consumption, laying the groundwork for future investigations into sustainable consumption behaviors.

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