

Original Research

**GREEN PURCHASING DETERMINANTS AMONG GENERATION Z:
AN EXPLORATORY FACTOR ANALYSIS**

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Abstract

Growing environmental challenges and increasing awareness of sustainability issues have led consumers to show greater interest in environmentally friendly products and services. At the same time, Generation Z, as a generation raised in a digital environment, has increasingly become the focus of research on consumer behavior and environmentally responsible consumption. The aim of this study is to examine how members of Generation Z perceive and distinguish the constructs of environmental concern, perceived environmental knowledge, green purchase intention, and green purchasing behaviour, as well as to identify their latent structure. Exploratory Factor Analysis (EFA) was applied to analyze the data collected through a survey of 517 Generation Z respondents. The results showed that the data met the requirements for conducting factor analysis ($KMO=0.956$; $\chi^2=8014.026$; $p<0.001$). Although the theoretical model included four constructs, three factors were extracted, explaining 60% of the total variance. The findings revealed that environmental concern and green purchase intention loaded onto the same dimension, indicating that respondents did not clearly distinguish between these constructs. In contrast, green purchasing behaviour and perceived environmental knowledge emerged as separate dimensions. The results suggest that, among Generation Z respondents, environmental concern and purchase intention may represent a broader dimension of environmental orientation.

Keywords: Generation Z, green products, environmental concern, environmental knowledge, green purchase intention.

INTRODUCTION

Environmental degradation and the increasing frequency of ecological problems have led to greater public awareness and concern about environmental protection. As a result, individuals are becoming more environmentally responsible and are increasingly trying to reduce their negative impact on the environment by turning to green products and services. In line with this trend, producers are also shifting their focus toward products and services that

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meet the demands of environmentally oriented consumers. Green products satisfy consumer needs similarly to conventional products while reducing environmental impact throughout their life cycle and incorporating environmentally friendly characteristics. Their growing presence in the market reflects broader efforts toward sustainable production and consumption.

Previous research has yielded inconsistent findings regarding the relationship between environmental concern and green purchasing behavior. Joshi and Rahman (2015) identified environmental concern as an important determinant of green purchase behavior and suggested that consumers who are more concerned about environmental issues are generally more oriented toward environmentally responsible choices [1]. Previous studies have also indicated that environmental concern may strengthen purchase intentions, which can later be reflected in actual consumer behavior. However, findings by Braga Junior *et al.* (2015) showed no significant relationship between environmental concern and consumers' declared purchases of green products [2]. Such differences in findings suggest that environmental concern alone may not be sufficient to explain green purchasing behavior and that other factors may also play an important role.

Green product knowledge refers to consumers' subjective understanding and awareness of the environmental characteristics of green products, as well as their potential environmental impact [3]. It has been recognized as an important determinant of green purchase intention and consumer decision-making [4]. Empirical findings further indicate that environmental knowledge is positively and significantly associated with the intention to purchase green products [5]. Nevertheless, some studies suggest that knowledge does not always directly translate into actual behavior [6].

Generation Z includes individuals born approximately between the mid-1990s and early 2010s and is considered the first generation raised in a fully digital environment. Growing up with constant access to technology and social media has significantly shaped their attitudes, lifestyles, and consumption patterns. Members of this generation are often associated with greater awareness of social and environmental issues, including sustainability and responsible consumption [7]. Due to their increasing market influence and purchasing power, Generation Z has attracted considerable attention in research on consumer behavior and green purchasing practices.

The aim of this study is to examine the relationships between environmental concern, perceived environmental knowledge, purchase intention, and green purchasing behaviour among members of Generation Z. In addition, the study seeks to identify the latent structure of these constructs and to determine whether the theoretically defined dimensions are clearly distinguished in respondents' perceptions. Particular attention is given to understanding how Generation Z perceives environmental orientation and its connection with intentions and actual behaviour in the context of green products and services.

MATERIALS AND METHODS

Data collection

Data were collected in 2025 using an online survey administered to Generation Z respondents from the Czech Republic and Serbia. A total of 517 valid responses were obtained. The questionnaire included four groups of items corresponding to the constructs examined in this study: Environmental Concern (seven items), Perceived Environmental Knowledge (four items), Green Purchase Intention (five items), and Green Purchasing Behaviour (six items). All statements were measured using a seven-point Likert-type scale, where 1 indicated complete disagreement and 7 indicated complete agreement.

Data analysis

To examine the structure of the constructs used in the study, Exploratory Factor Analysis (EFA) was conducted. Before proceeding with factor extraction, the suitability of the data for factor analysis was assessed using the Kaiser–Meyer–Olkin (KMO) measure and Bartlett’s Test of Sphericity.

RESULTS

Exploratory Factor Analysis

Prior to conducting factor analysis, the adequacy of the data was examined. The Kaiser–Meyer–Olkin measure of sampling adequacy was 0.956, indicating that the data were highly suitable for factor analysis. In addition, Bartlett’s Test of Sphericity was statistically significant ($\chi^2(231)=8014.026$, $p<0.001$), confirming that sufficient correlations existed among the variables (Table 1).

Table 1 Measures of sampling adequacy and sphericity test results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.956
Bartlett's Test of Sphericity	Approx. Chi-Square	8014.026
	df	231
	Sig.	.000

Exploratory Factor Analysis was performed using Principal Axis Factoring with Oblimin rotation. Since the analyzed constructs were expected to be related, an oblique rotation method was considered more appropriate. Based on the eigenvalue criterion greater than one, three factors were extracted, accounting for 60.0% of the total variance (Table 2).

Although the initial framework included four constructs: Environmental Concern (EC), Perceived Environmental Knowledge (PEK), Green Purchase Intention (GPI), and Green Purchasing Behaviour (GPB), the analysis resulted in a three-factor structure.

The first factor (F1) explained the largest proportion of variance (49.38%) and consisted mainly of items related to environmental concern and green purchase intention. This result suggests that respondents did not clearly distinguish concern for environmental issues from intentions to purchase environmentally friendly products. These findings suggest that

environmental concern and purchase intention form a broader dimension of environmental orientation among Generation Z respondents.

Table 2 Pattern matrix and explained variance of extracted factors

Items	F1	F2	F3
EC_4	.730		
EC_3	.660		
EC_6	.658		
EC_1	.643		
EC_5	.594		
GPI_2	.580		
EC_7	.556		
GPI_4	.552		
GPI_1	.508		
EC_2	.418		
GPB_4		-.809	
GPB_1		-.772	
GPB_6		-.746	
GPB_3		-.640	
GPB_5		-.540	
GPI_5	.498	-.529	
GPB_2		-.479	
GPI_3	.433	-.455	
PEK_3			.859
PEK_2			.760
PEK_4			.678
PEK_1			.628
Eigenvalue	11.25	1.92	1.21
% Total variance	49.38	6.78	3.85
% Cumulative variance	49.38	56.16	60.00

* EC = Environmental Concern; GPI = Green Purchase Intention; GPB = Green Purchasing Behaviour; PEK = Perceived Environmental Knowledge. Extraction method: Principal Axis Factoring. Rotation method: Oblimin with Kaiser normalization. Only factor loadings above 0.40 are presented.

The second factor (F2) included items measuring green purchasing behaviour. High factor loadings across these items indicated a relatively clear and stable construct. The third factor (F3) represented perceived environmental knowledge. All items associated with this dimension demonstrated strong loadings and a consistent factor structure.

The Pattern Matrix also indicated overlap among two green purchase intention items. In particular, the statements “*I would be willing to influence others to purchase green products*” and “*I would pay a somewhat higher price for products and food free of chemical substances which damage the environment*” showed meaningful loadings on more than one factor.

DISCUSSION

The obtained results indicate that the proposed four-dimensional structure was not fully supported. Instead of four separate constructs, the analysis resulted in three extracted factors. The most notable result refers to Environmental Concern and Green Purchase Intention,

which loaded onto the same factor, indicating that Generation Z respondents did not clearly separate concern for environmental issues from intentions to purchase environmentally friendly products. One possible explanation for this finding is that Generation Z consumers may perceive environmental responsibility not only as an attitude but also as an expression of personal identity. Consequently, concern for environmental issues may directly translate into intentions to purchase green products. Similar findings have been reported in previous studies, which identified environmental concern as an important factor associated with green purchase behaviour suggesting that environmentally concerned consumers are generally more likely to make environmentally responsible choices [8].

At the same time, some Green Purchase Intention items showed loadings on more than one factor. In particular, statements related to willingness to influence others and willingness to pay higher prices for environmentally friendly products demonstrated overlap with other dimensions. This may indicate that such statements involve not only purchase intention but also elements of personal commitment or social influence.

Although environmental concern appeared to be closely related to purchase intention, green purchasing behaviour emerged as a separate factor. This suggests that positive attitudes and intentions do not always result in actual purchasing behaviour, which is consistent with previous findings in the field of green consumer research [9].

CONCLUSION

This study showed that environmental concern and green purchase intention were perceived as closely related dimensions among Generation Z respondents, while green purchasing behaviour and environmental knowledge emerged as separate constructs. These results contribute to a better understanding of green consumer behavior and suggest that environmental concern may play an important role in shaping purchasing intentions among younger consumers.

The limitation of this study is that data were collected through self-reported measures and focused only on respondents from Serbia and the Czech Republic. Future studies could include broader cross-cultural samples and apply confirmatory factor analysis to validate the obtained structure.

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