sustainability

MDPI

Article

Green Purchase Behavior of University Students in Hungary: An Empirical Study

Farheen Naz [1], Judit Oláh [2,*], Dinu Vasile [3] and Róbert Magda [4,5]

1 Doctoral School of Management and Business Administration, Szent Istvan University, 2100 Gödöllő, Hungary; ask2farheen@gmail.com
2 Department of Management, Faculty of Applied Sciences, 41-300 Dabrowa Górnicza, Poland
3 Department of Business, Consumer Sciences and Quality Management, Bucharest Academy of Economic Studies, 010374 Bucharest, Romania; dinu_cbz@yahoo.com
4 Faculty of Economics and Social Sciences, Szent Istvan University, 2100 Gödöllő, Hungary; Magda.Robert@szie.hu
5 Vanderbijlpark Campus, North-West University, Vanderbijlpark 1900, South Africa
* Correspondence: juditdrolah@gmail.com; Tel.: +36-20-286-9085

Received: 12 November 2020; Accepted: 30 November 2020; Published: 2 December 2020

Abstract: In this modern age of digitalization, consumers have access to an ample amount of information regarding a product's quality and benefits, which makes consumers more conscious of their consumption patterns and their impact on social and environmental development. Likewise, marketing strategies have also taken a dramatic leap forward and started focusing on social responsibility, ethics, and environmental protection. The notion of environmental sustainability has created a market niche over several decades and has captured the market of pro-environmental consumers. However, there are still many latent factors that are obstacles to shifting the behavior of consumers towards buying green products. The present study was conducted to recognize factors that affect the consumers' behavior when purchasing eco-friendly products. They were collected from 1185 university students in Hungary. To analyze the data, multiple regression and exploratory factor analysis (EFA) were used. The results showed that willingness to pay (WTP) and green purchase intention (GPI) are the chief factors that affect the green purchase behavior (GPB) of these students. Environmental knowledge (EK) also has an important and positive impact on the green purchase behavior (GPB) of consumers, although regarding demographic variables, no such influence was noted. To conclude, the study showed that there was no bias in terms of age, gender, or qualification in the behavior of young students, as they have sufficient knowledge of environmental problems and are very willing to pay for environmentally friendly products. This study will create self-awareness among young consumers about their environmentally friendly purchasing behavior. This research will further benefit policymakers and marketers of the EU and Hungary to enhance their marketing strategies to promote their green products and their benefits. Future research can be developed on this theoretical framework and will help academicians to further reduce the research gap by using different constructs and methodologies.

Keywords: green products; willingness to pay; perceived consumer effectiveness; environmental knowledge; green purchase behavior

1. Introduction

The issues related to overpopulation, increasing demands, increased production and manufacturing, global warming, and environmental degradation are well known. In addition, the increases in manufacturing activities and production processes are polluting the global environment.

These business activities are creating many environmental problems, such as deforestation, increased carbon dioxide level, greenhouse gases, polluting water bodies, damages to wildlife, etc. Such issues have created a need for more environmentally sustainable business practices. The increased emphasis on environmental problems can be regarded as a sign that environmental concern is emerging as a prospective concern for businesses and strategy makers [1]. For this reason, the concept of sustainable development came into the light to protect the environment and all stakeholders. This concept of sustainable development is associated with the activities and practices of businesses to achieve environmental sustainability. The efficient implementation of sustainable development is also linked with significant modifications in economic activity toward a more integrated and systemic interdisciplinary approach [2]. The multiple segments of sustainable development cover the environmental and socioeconomic interdependence needed for the development of an economy and for saving resources for the upcoming generation [3]. In addition, Meyer et al. [4] and Meyer and Meyer [5] believe that a healthy environment is a key factor in a region's enabling environment, which contributes positively to business development and economic growth.

The green economy concept is not a new notion, as it can be traced back to the 1970s, but it has grown in popularity since 2009. This concept gained impetus when international organizations suggested that all international businesses maintain economic policies that work towards a reduction in carbon investments and upgrade renewable energy portfolios [6]. The BRICS nations (Brazil, Russia, India, China, South Africa), like China and India, came forward in support of green growth and reducing carbon investments after this was implemented by North America and Europe. Likewise, firms and businesses are becoming more concerned about their actions or practices and their consequences, and are increasing their investments in environmental protection issues, hence becoming more environmentally oriented [2], which also means that the circular economy has gained importance [7]. The main drivers of environmental concern and green innovations are external pressure, such as strong government regulations, the desire to improve reputations by achieving competitive advantage, and the need to increase production performance with accompanying cost reductions.

The retail industry is increasingly committing towards practices of environmental sustainability, which means the occurrence and management of the environmental and economic position of an organization to fulfill the needs of the present generation without compromising the needs of future generations [8,9]. Moreover, the eco-conscious consumption habits of consumers are equally significant to businesses, as are the practices of environmental sustainability [8]. However, research related to consumer behavior is an intricate task, as it involves many perspectives from which a subject must be analyzed. Similarly, if environmentally conscious consumer behavior has to be analyzed, then it is a very problematic task to ascertain parameters that clearly describe a consumer who is actually concerned for the environment [10].

The last few decades have witnessed a positive and marked growth in pro-environmental activities, attitudes, and knowledge among consumers who are environmentally conscious [11,12]. Currently, concern for the environment has been increasing, and this directly affects the values and changes in the lifestyles of individuals [13]. In a progressively environmentally conscious scenario, it is obvious that consumers will be concerned regarding environmental sustainability. For many years, it has been realized by a majority of consumers that their buying behaviors and habits directly impact problems related to ecological balance [11]. The threats to the environment have improved the buying behavior of green consumers, as they are now showing more inclination towards paying extra for environmentally friendly substitutes for conventional products. Consumers are now considering environmental problems while shopping, such as checking the product before buying to make sure it is made out of recycled constituents and then buying products that are more eco-friendly [14].

The development of environmentally friendly products has become an extensive new field for both social improvement and business, involving both consumers and firms [15]. This green business model can help businesses and companies to transform their ways of production and marketing. The benefits of prosperity can be enjoyed by businesses if they combine an eco-friendly approach with

better safety practices [16]. Furthermore, Prinzing [16] clarified that evolving a green business will help in reducing the costs that are associated with excessive and useless waste, in providing a safe and healthy work environment for employees, and also in ensuring the sustainable and efficient operations of the business. Furthermore, some researchers believe that green products come with the advantage of giving competition to those companies in the market that do not work towards eco-friendly production and consumption [17]. In order to decrease the adverse environmental effects initiated by an increasing global population that demands more products and services, green practices are important, along with competitive technologies and competitively valued products [18] that have improved environmental performance when compared to other alternatives. However, studies reported the unwillingness of consumers to buy green products because of some other reasons; for instance, the size of the packaging or these products might not be visually pleasant. For this reason, it is clear that product preferences are necessary to comprehend a consumer's intention to buy green products [19].

In addition to this, researchers have also claimed that there are other factors that also influence consumers' behavior towards green products, such as brand names, price, belief that they are of low quality, pictures proving the ineffectiveness of the products, etc.

The EU also recognized the importance of consumer behavior and decisions. Consumers have become attentive towards corporate social responsibility and related issues, but some barriers still exist, like lack of awareness, limited access to the information to make ethical choices, and, sometimes, paying a premium price. Some firms and businesses play a pioneering role to help consumers make sustainable choices. However, more responsible consumption can be possible by revising the sustainable consumption and production action plan to implement the new measures [20].

As far as environmental awareness is concerned in Hungary, researchers have claimed that it is at its nascent stage. It is not very easy to predict when it will reach the level of its developed counterparts. However, it is a positive sign that the young population of Hungary is concerned about environmental awareness [21]. The environmental awareness of consumers poses a positive impact on their values and beliefs with respect to supporting environment-saving practices. This awareness corresponds to the behavior of a consumer aiming to reduce environmental degradation by making eco-friendly purchases, saving energy, and making a selective collection of wastes [22]. In a study conducted by Ferencz et al., it is reported that in comparison to the western European counterparts of Hungary, Hungarian consumers are less environmentally conscious. On the other hand, the researcher claimed that if the family has active participation, then students can easily be motivated to become environmentally conscious.

The main purpose of this study is to assess the green buying behavior of university students in Hungary. The study focuses on the young and educated consumers, as it is crucial to understand the purchase behavior of the young population because they are present as well as future customers. There is a lack of literature that has analyzed the green purchase behavior of consumers in Hungary. Hence, the contribution of this study is to fill the research gap by exploring the literature related to green consumption and by analyzing the factors that influence the green buying behavior of consumers in Hungary. The novelty of this study is that it is the first empirical research to analyze the green purchase behavior of Hungarian consumers by adding constructs like perceived consumer effectiveness, willingness to pay, and green purchase intention. The limited literature on the current topic from a Hungarian perspective has created a need for this study to recognize the direct influence of such constructs on the purchase behavior of young consumers.

The present study will answer the following research questions: What are the most important factors that will affect the green purchase behavior (GPB) of young consumers in Hungary? Do demographic variables such as gender, age, and qualification have any significant impact on GPB? What is the level of environmental knowledge (EK) among young and educated consumers in Hungary? Are young consumers price sensitive as far as green products are concerned?

The current study will help marketers and policymakers to bring changes in their marketing strategies by taking into account the attitude and intention of young consumers towards green products.

Environmental knowledge and purchase intention play a significant role in changing the buying behavior of consumers. Hence, businesses and firms dealing with environmental safety can work for a deliberate advertising strategy that will create environmental awareness. This study will also contribute to bridging the research gap in this particular area. The academic contribution of this study will provide an insight for future research and the development of the new model. The constructs that are used in this research, such as willingness to pay (WTP), environmental concern (EC), attitude towards green products (ATGP), perceived consumer effectiveness (PCE), environmental knowledge (EK), and green purchase intention (GPI), to understand the GPB have been proved effective in different studies conducted in different countries, such as Canada, India, Slovakia, South Africa, Malaysia, and Argentina [11,23–27]. In order to analyze the impact of the above-mentioned constructs on GPB, multiple regression analysis was applied. The advantage of this particular method is that it can cumulatively present the effects of multiple predictors or factors to predict one outcome. This method will create an easy understanding for the readers to assess the relationship between the independent variables and dependent variable.

This study will first review the literature and distinguish the present study from previous studies conducted in both developing and developed countries. Secondly, the materials and methods will be explained in detail. After that, the study will focus on the analysis of the collected data using exploratory factor analysis, multiple regression analysis, and a one-way analysis of variance (ANOVA) test. Then results will be presented and thoroughly discussed by providing a debate with previous studies. In the last section, implications and recommendations will be clarified along with the conclusion and limitations.

2. Literature Review

Since the mid-1990s, people—or, more specifically, consumers—have started becoming environmentally and socially aware [28]. Since that time, the consumption patterns of consumers related to the environment have changed. In addition, retailers want to come forward with business models that re more sustainable and through which they can retain their relevancy among those consumers who are willing to change their attitudes towards the environment [8]. The late 1980s was the period that marked the beginning point of green marketing, and at that time, this concept was announced and discussed for the first time in the business world [28,29]. Charter and Polonsky [30] defined green marketing as the marketing or promotion of products that reflect environmental safety or are based on environmental improvement or performance. This new wave of green marketing has led many marketers to become involved in several green practices and to generate a highly positive response from consumers, which leads directly to an increase in profits, market share, good value proposition, and increased sales [28,29].

Several studies have been conducted to analyze the main factors influencing the green consumption and purchase behavior of consumers, including their values and attitudes [31], perceived consumer effectiveness [32,33], environmental consciousness [32], environmental concern [34], attitudes towards green products [14,35], environmental knowledge [36,37], willingness to pay [27,38], and green purchase behavior [39]. These constructs are not easy to interpret, but are important to behavioral and cultural psychology. These constructs have been discussed and studied by many researchers in order to analyze the green buying choices of customers. Despite their environmental awareness and concerns, consumers exhibit differences between their attitudes and their actual behaviors when purchasing products. The adoption of products that are considered environmentally sustainable is at a low level, and the reason behind this is the inconsistency of the intentions and buying behaviors of consumers.

2.1. Environmental Concern

Environmental concern (EC) is defined as the awareness of an individual about environmental problems and their willingness to support the practices of environmental safety [40]. In addition, in general terms, EC perceives the person's concern towards the problems of the environment and their

acceptance that they will be a part of the solution [41]. EC is regarded as the key element in the literature on green marketing that analyzes the environmentally friendly behavior of individuals. A study reported that consumers who have environmentally concerned behavior, or those who trust that their ecological habits can enhance the quality of the environment, are more likely to implement GPB [42]. These consumers are termed as green consumers, as they are considered to have concern and awareness of environmental problems and issues. Krause [43] reported in his study that consumers are concerned about the environmental impact of their consumption habits. However, researchers show contradictory views about EC and its direct relationship with GPB. For instance, some researchers reported that EC does not have any significant or positive impact on GPB [44–47], while others support the direct and positive influence of EC on GPB [19,48]. Some studies explained that concern for the environment has an important and positive influence on attitudes towards products that are eco-friendly [36]; that, again, influences their buying decisions regarding products that are environmentally safe, which means that EC has an indirect relationship with GPB [48]. Hence, the following hypothesis has been formulated:

Hypothesis 1 (H1). *Environmental concern (EC) has a positive and significant impact on the green purchase behavior of consumers.*

2.2. Perceived Consumer Effectiveness

Kinnear et al. [49] were the first ones to explain perceived consumer effectiveness (PCE) in literature, and they described it as a factor that involves a person's belief that they themselves can contribute to making a difference in the solution and to reducing negative environmental impacts [50]. PCE is also termed as an environmental belief in an environmental study, which defined it as an internal principle of control within oneself so that their actions can protect the environment [51]. PCE has received significant attention in the past for understanding consumer behavior. One study addressed the idea that PCE is different from attitude and EC concerning the issues related to the environment; thus, PCE makes an exclusive contribution in predicting the GPB of environmentally conscious consumers [40]. However, PCE varies from person to person because of their different experiences and knowledge. In the previous literature, PCE has been identified by various researchers as a significant and important factor in understanding the environmentally friendly purchasing behavior of consumers [24,52]. For instance, Kim and Choi [40] reported that PCE directly and strongly influences GPB, while Sharma and Dayal [53] found that PCE has an effect on both GPI and GPB. In a study conducted by Lee et al. [54] on young college students in the USA, it was concluded that the role of PCE is not only limited to GPB; rather, it also affects the environmental activism of an individual in becoming a good citizen. Tan [50] explained that the degree of PCE affects the environmental behavior of an individual; consumers with a high level of PCE tend to be more environmentally concerned in comparison to those consumers with lower PCE. Furthermore, PCE has been found to be significantly related to different types of environmental behavior [40,42,55]. Therefore, the following hypothesis has been made:

Hypothesis 2 (H2). *Perceived consumer effectiveness (PCE) has a significant and positive impact on the green purchase behavior of consumers.*

2.3. Environmental Knowledge

Environmental knowledge (EK) is considered to be the ability of a person to understand issues related to the environment and sustainability. EK is also defined as the amount of information someone retains in their mind that influences their interpretation and assessment of available choices of products [50]. The term 'knowledge' related to consumer behavior is associated with a factor that impacts the decision process at all levels of buying behavior. Specifically, knowledge is a vital construct that influences the gathering and organizing of evidence by the consumer, the level of information used in making decisions, and the way in which the consumer evaluates the services and products that he/she intends to purchase [11]. Developed in the form of knowledge management

systems, knowledge can significantly shift the economic efficiency and related social results at different levels [56]; therefore, a new direction of strategic management was established and steadily developed in many organizations—customer knowledge management [57]. The concept of EK, or eco-literacy, was established by Laroche et al. [58] in order to measure or analyze respondents' capability of understanding or describing a varied number of environmentally related signs, behaviors, and concepts. A correlation has been observed between EK and environmental behavior and attitudes [11]. It was observed from the already published data that EK has a direct impact on environmentally friendly purchase intentions [23,48]. On the other hand, some studies have observed that this relationship is inconsistent and that a high level of EK does not lead to a high level of GPB [14,23,59,60]. Several studies confirmed that EK is frequently assumed as a strong predictor or motivator of GPB, and it is reported that consumers who have more knowledge of environmental problems and advantages of green products are likely to have more GPB [32,34,36,37,50,61,62]. Therefore, EK has been recognized as an essential variable for the assessment of GPB of young consumers in Hungary. Additionally, EK will help to assess the awareness of young consumers about ecological issues and their knowledge of green products. Hence, the following hypothesis is formulated for this purpose:

Hypothesis 3 (H3). *Environmental knowledge (EK) has a significant and positive impact on the green purchase behavior of consumers.*

2.4. Attitude Towards Green Products

According to Ajzen [63], a consumer's attitude is described as an unfavorable or favorable evaluation of a person of a particular behavior. Khaola et al. [35] conducted a study to evaluate the environmental concerns and behavior of people in Lesotho with respect to environmentally friendly products. He found that attitude towards green products (ATGP) significantly influenced the environmental concern of people in Lesotho, while the interaction effect of intention and environmental concern was non-significant towards environmentally friendly products. There are several factors that can influence a person's attitude. To support this, Anvar and Venter [25] carried out an experiment on people in South Africa to evaluate the impact of various factors on the attitudes and behavior of people towards environmentally friendly products. It was concluded that price, social influence, and awareness of environmental issues significantly influenced the attitudes of people towards environmentally friendly products. On the contrary, a study revealed that a change in attitude does not always lead to a positive change in purchasing behavior, and they believed that ATGP is not directly related to GPB [38]. Nonetheless, it was reported that the attitude of Asian consumers toward environmentally friendly products also changes based on various factors, such as knowledge, awareness, or belief. A study conducted on Malaysian consumers revealed that the consumers' attitudes toward these products are not of a very high degree, but ATGP and EK positively influence GPB [26]. Therefore, the thorough review of the literature provided the concept for formulating the next hypothesis:

Hypothesis 4 (H4). *Attitude towards green products (ATGP) has a positive and significant impact on the green purchase behavior of consumers.*

2.5. Willingness to Pay

Willingness to pay (WTP) is considered to be the maximum readiness of a consumer to pay more to obtain a particular green service or buy green products [64]. Several studies have been conducted to analyze the readiness of green consumers to pay additional costs in order to buy products that have a minimal negative impact on the ecosystem. Researchers reported that consumers are ready to pay an extra cost if they are promised that their changing consumption patterns can help save the environment [27,38,65]. Conversely, some studies support the fact that many consumers are not keen to pay extra for green products, as they believe that even without green products, they can save

themselves and the environment from the risks associated with foods or products [66]. Moreover, some consumers believe that they do not have to pay extra to ensure the safety of a product [35], as this should be taken into account by businesses or the government. In the studies conducted by Xu et al. [47] and Saphores et al. [67] on Chinese consumers and California households, respectively, it was reported that consumers are willing to pay extra for the safety and protection of their own benefits. Likewise, WTP is considered to be a crucial and the strongest factor for understanding GPB, as it will directly influence the buying behavior of a consumer [41]. The findings of the study conducted by Prakash and Pathak [41] on young Indian consumers revealed that although Indian consumers are price sensitive, young consumers are ready to pay extra if they can get an environmentally friendly product. If consumers are ready to pay extra for the additional benefits of the product, then they are more likely to exhibit GPB. Therefore, the following hypothesis is articulated:

Hypothesis 5 (H5). *Willingness to pay (WTP) has a positive and significant impact on the green purchase behavior of consumers.*

2.6. Green Purchase Behavior and Green Purchase Intention

A person's readiness to carry out or accomplish a particular kind of behavior of purchasing green products is categorized as a person's green purchase intention (GPI). On the other hand, green purchase behavior (GPB) refers to the purchase and consumption of a product that is advantageous for the environment, conservable and recyclable, or sensitive to environmental concerns [36]. To evaluate the effects of different factors on the intention to purchase environmentally friendly products, Mei et al. [26] conducted a study on Malaysian consumers. It was observed from the results that government initiatives to enhance the adoption of green products significantly influenced the GPI of Malaysian people to buy environmentally friendly products. It was also reported that an eco-label did not have any influence on people's purchase intentions. Moreover, it is true that consumers are not only worried about environmental quality, but they also think about their purchase decisions and their consequences for the environment. A study to evaluate the effects of some catalytic components that connect environmental friendliness and people's purchase behavior towards environmentally friendly products was conducted by Kautish et al. [68]. It was reported that people who are more environmentally conscious and intend to recycle products are more inclined to exhibit GPB. Moreover, it has been reported in several studies that GPI strongly influences GPB [23,41,69]. Levine and Strube [61] conducted a study to understand the influence of GPI on GPB of undergraduate students in Washington. The findings of the study proved that intentions strongly and significantly influence the purchase behavior of the young university students, and the promotion of a favorable attitude increases intention to act in a more eco-friendly manner; as an outcome, people exhibit more GPB. Based on these foreign studies, the following hypothesis has been formulated:

Hypothesis 6 (H6). *Green purchase intention (GPI) has a positive and significant impact on the green purchase behavior of consumers.*

The studies were conducted to assess the GPB according to sociodemographic variables [41,70]. It has been reported that demographic variables also play an important role in understanding the GPB of the consumers. Hence, the following hypothesis has been made:

Hypothesis 7 (H7). *Demographic variables (qualification, age, and gender) have a positive and significant impact on the green purchase behavior of consumers.*

3. Materials and Methods

3.1. Sample Size

Regarding factor analysis, different opinions have been presented and explained in the literature for sample size. It has been found in several studies that for factor analysis, the sample size should be

greater than 100 [71]. Hence, keeping this in mind, the survey data were collected so that they could fulfill all the requirements of conducting the factor analysis. The survey data were collected from university students in Hungary, and four major cities were selected to ensure geographical coverage of the population. The judgmental sampling technique was used to select the respondents for the study. A total of 1255 students participated in the survey, and 1185 responses were used for the final study. Some responses were eliminated because of missing values. The questionnaire was divided into two sections; the first section comprised sociodemographic variables, such as age, gender, and qualification. The second section comprised behavioral factors to understand the purchase behavior of consumers regarding green products.

The demographic profile of the respondents is given in Table 1. As indicated, 43% (n = 510) of the respondents were enrolled in master's degrees, 32% (n = 380) of the respondents were enrolled in bachelor's degrees, and 25% (n = 295) of the respondents were doing a Ph.D. (doctoral program) in Hungary. The maximum number of respondents 67% (n = 795) belonged to the age group of 22–30 years, 21.5% (n = 245) of respondents were in the age group of 31–40 years, 11.5% (n = 125) belonged to the age group of 16-21 years, and only 20 (0.02%) respondents were in the age group of more than 40 years. As far as gender is concerned, female respondents were more in number, i.e., 650 (55%), and a total of 535 (45%) male respondents participated in the survey. These respondents were chosen by keeping in account that they are decision-makers in buying and have experience of buying green products regularly or occasionally.

Table 1. Demographic profiles of respondents.

Variables	Frequency	Percentage
Qualification		
Bachelor	380	32
Master	510	43
Doctoral	295	25
Age		
16–21	125	11.4
22–30	795	67
31–40	245	21.5
More than 40	20	0.02
Gender		
Male	535	45
Female	650	55

3.2. Procedure of Data Collection and Measurement

A well-structured questionnaire was used to conduct an online survey and was distributed to the respondents using Google Forms. There were two sections in the questionnaire; the first section was used to gather data about the sociodemographic factors of the respondents. In the next section, five-point Likert-scale-based questions were used, which have values ranging from 1 to 5 for strongly disagree to strongly agree, respectively. These Likert-scale-based questions were anticipated to measure the latent variables, such as perceived consumer effectiveness, environmental concern, environmental knowledge, attitude towards green products, green purchase intention, willingness to pay, and green purchase behavior. The questionnaire items for the constructs were adapted from the study conducted by Jaiswal and Kant [23], such as EC (4 items), PCE (4 items), EK (5 items), ATGP (2 items), GPI (3 items), and GPB (4 items). The items for WTP (3 items) were adapted from Chaudhary and Bisai [44], as they have the best fit with the requirements of the study that the researchers wanted to conduct. As already explained, the objective of the study was to evaluate the GPB of young consumers in Hungary. So, GPB was considered as a dependent variable, and all other constructs were taken as independent variables through a thorough review of the literature. The respondents were asked to give responses in

regard to their buying intentions and buying behavior. The data generated were then assessed, and the responses with missing values were eliminated. The final survey data were examined and interpreted using the SPSS (version 25.0, IBM Corp., Armonk, NY, USA, 2017) computer program.

3.3. Data Analysis

To analyze the data, an exploratory factor analysis (EFA) was used to comprehend the nature and number of the factors that explain the total variance of the data. To understand and interpret the patterns and relationships of the variables, factor analysis was used. This procedure uses mathematical techniques to simplify the interrelated factors to identify the patterns in a given set of variables [72,73]. Before running the factor analysis, the reliability of the constructs was tested by analyzing the Cronbach's alpha values of all the constructs and the whole instrument. Then, the Kaiser–Meyer–Olkin (KMO) test and Bartlett's test of sphericity were performed to analyze the adequacy and suitability of the dataset for conducting factor analysis. The communalities were interpreted to eliminate the factors that would create distortion in the results.

Before conducting parametric statistical tests, it is necessary to analyze the normality of the residuals. To test the normality of the residuals, the Kolmogorov–Smirnov test was conducted, and a quantile–quantile plot (Q-Q plot) was obtained for testing the normal distribution. In addition, it is necessary to test the autocorrelation and multicollinearity of the variables. For this purpose, the Durbin–Watson test and Pearson correlation coefficient test were performed and interpreted. To further analyze the dataset, multiple regression analysis and analysis of variance (ANOVA) were used. Multiple regression analysis was used to test the hypotheses and to explain the objectives of the study. Multiple regression analysis is a suitable method for analyzing the effects of multiple predictors on one dependent variable. In this study, the researchers wanted to analyze the relationships between six independent variables—EC, PCE, EK, ATGP, WTP, and GPI—and dependent variable, GPB. This analysis allows all the potential predictors to be investigated in one model. The advantage of this method is that it provides an easy and accurate understanding of the relationship of each predicting variable with the outcome.

4. Results

4.1. Reliability Analysis

Before analyzing the results and hypotheses, the reliability test was conducted. The results (Table 2) revealed that the value of Cronbach's alpha for the whole construct is 0.942, which is accepted for an exploratory study [74]. This means that the reliability of the questionnaire is very high [19]. Some researchers suggest testing the reliabilities of all constructs separately instead of doing one reliability test on the whole instrument. Hence, reliability tests were conducted on each factor, and the results (Table 3) showed that the Cronbach's alpha values range from 0.784 to 0.893. This result suggests the high reliability of the factors, as a Cronbach's alpha ranging from 0 to 1 with $r = 0.7$ or higher is considered satisfactorily reliable [75].

Table 2. Reliability test.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
0.942	0.943	25

Table 3. Reliability analysis.

Construct	No. of Items	Cronbach's Alpha
Environmental Concern (EC)	4	0.873
Perceived Consumer Effectiveness (PCE)	4	0.784
Environmental Knowledge (EK)	5	0.857
Attitude Towards Green Products (ATGP)	2	0.852
Willingness to Pay (WTP)	3	0.893
Green Purchase Intention (GPI)	3	0.871
Green Purchase Behavior (GPB)	4	0.865

4.2. Exploratory Factor Analysis

Before factor analysis, the Kaiser–Meyer–Olkin (KMO) test and Bartlett's test of sphericity were used to test the sample adequacy and suitability of the dataset for factor analysis (Table 4). As reported by Hair et al. [74], any dataset is suitable for factor analysis if its KMO value is more than 0.6 and its BTS (Bartlett's test of sphericity) is significant ($p < 0.05$). In our study, the KMO value was found to be 0.919, and this proves the appropriateness of the data. The correlation matrix was tested by Bartlett's test of sphericity, and its p-value below 0.05 confirmed that the dataset under study is not an identity matrix, which means that the variables were related and suitable for further analysis.

Table 4. Kaiser–Meyer–Olkin (KMO) test and Bartlett's test.

Kaiser–Meyer–Olkin Measure of Sampling Adequacy		0.919
Bartlett's Test of Sphericity	Approx. Chi-square	3823.380
	Df	300
	Sig.	0.000

After finding the adequacy and significance of the sample, the factor analysis was conducted on the dataset under study to recognize the factors that statistically explain the covariance and variance among the constructs. The aim of factor analysis is to identify latent variables that make the apparent variables co-vary among themselves. In other words, factor analysis is considered a data reduction technique in which the measurable or observable variables are reduced to only a few latent variables that actually have common variance [76]. There are many factor analysis extraction methods available, and in this study, principal component analysis (PCA) was used for extracting factors that best explain the variables.

The value of communalities was examined, as it should be taken into consideration that variables with low communalities will lead to substantial distortion in results [77]. The items with low communality should be removed from the analysis, as it will not serve the purpose of factor analysis to explain the variance by common factors, which means that each item must share some common variance with other items [72]. Some researchers suggest that a communality of above 0.2 should be accepted [72,78,79], while some researchers suggest that a communality of above 0.40 should be accepted [77,80–83], as differences in results are more likely when the value of communality is below 0.40 [77]. The communalities of all the items under study are given in Table 5, and the value of each item is more than 0.40, so no items were eliminated from the analysis. The result of factor analysis showed that five significant factors explained 68.12% of the variance. These factors have eigenvalues of more than 1. The varimax rotation technique was applied to obtain the rotated solution with five extracted components.

Table 5. The values of communalities.

Items	Initial	Extraction	Items	Initial	Extraction
EC1	1.000	0.694	ATGP1	1.000	0.690
EC2	1.000	0.748	ATGP2	1.000	0.656
EC3	1.000	0.732	WTP1	1.000	0.775
EC4	1.000	0.764	WTP2	1.000	0.782
PCE1	1.000	0.608	WTP3	1.000	0.717
PCE2	1.000	0.593	GPI1	1.000	0.738
PCE3	1.000	0.520	GPI2	1.000	0.704
PCE4	1.000	0.493	GPI3	1.000	0.724
EK1	1.000	0.628	GPB1	1.000	0.636
EK2	1.000	0.690	GPB2	1.000	0.636
EK3	1.000	0.711	GPB3	1.000	0.736
EK4	1.000	0.669	GPB4	1.000	0.746
EK5	1.000	0.641			

Extraction method: principal component analysis.

In addition, correlation analysis was conducted to analyze the linear relationship between the two constructs. The Pearson correlation matrix was used to analyze the correlation between the variables. It is suggested that the variables suffer from multicollinearity issues if the correlation coefficient between the two variables is more than 0.71 [83,84]. The results of our study confirmed that the dataset is did not have the problem of multicollinearity, as Pearson's correlation coefficients ranged from 0.405 to 0.631 at the two-tailed significance level of 0.01. The values of Pearson's correlation coefficients of all the variables with the dependent variable are given in Table 6. In addition, the Durbin–Watson test was conducted to confirm that there was no autocorrelation among the variables. It is suggested that the Durbin–Watson statistic value should lie between 0 to 4, and a value close to 2 indicates no autocorrelation in the sample [85]. In our study, the value of the Durbin–Watson statistic was 2.1, which is very close to the value of 2; hence, there is no autocorrelation existing in the sample.

Table 6. Pearson's correlation matrix.

Variables	EC	PCE	EK	ATGP	WTP	GPI	GPB
EC	1						
PCE	0.631 **	1					
EK	0.482 **	0.475 **	1				
ATGP	0.480 **	0.570 **	0.427 **	1			
WTP	0.484 **	0.465 **	0.405 **	0.521 **	1		
GPI	0.454 **	0.515 **	0.430 **	0.561 **	0.509 **	1	
GPB	0.539 **	0.526 **	0.577 **	0.523 **	0.630 **	0.622 **	1

Note: ** significant at the 0.01 level.

Before conducting the multiple regression analysis, it is necessary to test the normality of the residuals. The test of normality confirms the normal distribution of the dataset. The normality analysis is required for conducting parametric statistical tests. In this study, the residuals' normality was examined by conducting the Kolmogorov–Smirnov test. The results confirmed that there is a normal distribution of residuals with the value of $p = 0.20$ at the significance level of 0.05, as value of $p > 0.05$ indicates the normality of residuals [86]. Furthermore, the quantile–quantile plot (Q-Q plot) for the residuals was obtained to examine the normal distribution of the data. The normal Q-Q plot is considered to be the most effective and commonly used tool for checking the normality of residuals. The Q-Q plot of the residuals confirmed that there is a linear distribution of the data, and the variables are considered normal (Appendix A (Figures A1 and A2)).

4.3. Multiple Regression Analysis

In this study, Multiple regression analysis was conducted to identify the relationship between the dependent variable and the independent variables and to test the framed hypotheses (Table 7). This is considered an appropriate analysis for studying a research problem with two or more independent variables influencing one dependent variable [74]. The result of the regression model is quite satisfactory. The value of R square states the explanatory strength of the model, and in this case, the result is considered to be quite satisfactory, as it explained around 60% of the total variance (R square = 0.601).

Table 7. Model summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.776	0.601	0.591	0.506

The ANOVA test results showed the significance of the model (Table 8). The results of the multiple regression analysis revealed the fitness of the model, as the F-statistics (F = 57.837) were significant at 5% level of siginificance ($p < 0.05$).

Table 8. Analysis of variance (ANOVA) (dependent variable: green purchase behavior (GPB)).

Model	Sum of Squares	df	Mean Square	F	Sig. [a]
1 Regression	88.780	6	14.797	57.837	0.000
Residua	58.841	230	0.256		
Total	147.621	236			

Notes: [a] Predictors: (constant), environmental concern (EC), perceived consumer effectiveness (PCE), environmental knowledge (EK), attitude toward green products (ATGP), willingness to pay (WTP), green purchase intention (GPI).

The variance inflation factor (VIF) value and tolerance value describe the multicollinearity of the statistics; a tolerance value of more than 2 and a VIF of 10 or more show the problem of multicollinearity [71]. The value of tolerance and the VIF value shown in Table 9 indicate that there is no problem of multicollinearity in the statistics of the data under study.

Table 9. Coefficients (dependent variable: green purchase behavior (GPB)).

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	*t*	Sig.	Tolerance	VIF
1 Constant	−0.222	0.242		−0.917	0.360		
EC	0.108	0.058	0.107	1.857	0.065	0.525	1.904
PCE	0.047	0.071	0.039	0.656	0.513	0.480	2.085
EK	0.288	0.058	0.254	5.002	0.000	0.674	1.483
ATGP	0.033	0.061	0.030	0.533	0.595	0.534	1.872
WTP	0.252	0.044	0.303	5.679	0.000	0.609	1.641
GPI	0.297	0.060	0.273	4.973	0.000	0.574	1.743

Notes: Predictors: EC, PCE, EK, ATGP, WTP, and GPI.

The results of the multiple regression analysis to test the hypotheses are presented in Table 9. The relationship between GPB and EC is insignificant ($p > 0.05$, beta = 0.107). Similarly, PCE and ATGP show an insignificant relationship with GPB, as $p > 0.05$. Hence, H1, H2, and H4 are not supported. On the other hand, environmental knowledge (EK, $p < 0.05$; beta = 0.254), willingness to pay (WTP, $p < 0.5$; beta = 0.303), and green purchase intention (GPI, $p < 0.05$; beta 0.273) show significant and positive relationships with green purchase behavior. Hence, H3, H5, and H6 are strongly supported. The value of the standardized coefficient beta shows that willingness to pay is the most influential and strongest

predictor of consumers' green purchase behavior, with a beta of 0.303, followed by green purchase intention (beta = 0.273) and environmental knowledge (beta = 0.254).

4.4. One-Way ANOVA

To evaluate the effect of demographic variables on the green purchase behavior of consumers, a one-way ANOVA test was conducted. Table 10 indicated that there is no significant influence of demographic variables on green purchase behavior ($p > 0.05$). Thus, H7 is not supported, as all p-values show an insignificant relationship between demographic variables and GPB.

Table 10. One-way ANOVA results.

Variables	Source	d.f.	SS	MS	F Value	*p*-Value
Qualification	Qualification	2	0.47	0.24	0.38	0.69
	Error	234	147.14	0.63		
	Total	236	147.62			
	Source	**d.f.**	**SS**	**MS**	**F value**	***p*-value**
Age	Age	3	1.39	0.46	0.74	0.53
	Error	233	146.22	0.63		
	Total	236	147.62			
	Source	**d.f.**	**SS**	**MS**	**F value**	***p*-value**
Gender	Gender	1	0.00069	0.00069	0.0011	0.97
	Error	235	147.62	0.63		
	Total	236	147.62			

Notes: Dependent variable: green purchase behavior (GPB).

5. Discussion

This study examines the relationship between the various latent constructs and GPB of young and educated university students. The results of the study reveal the most influential and strongest predictors of GPB and the constructs that have the least impact on GPB of young consumers in Hungary. The empirical results of the multiple regression analysis showed that environmental concern (EC) did not show any positive or significant influence on purchase behavior, and therefore, H1 is not supported. These findings support the results of several studies conducted in other developed and developing countries [44–46,87,88]. It is proved that EC is not a strong predictor for assessing GPB of the consumers, and this negates its existing evidence in the literature [87]. It was further explained by Oskamp et al. [45] that EC is not an effective predictor of GPB, but rather impacts consumers' attitudes toward the environment. These results confirm that the purchasing behavior of consumers is not affected by their level of concern towards the environment. The young university students show concern towards environmental protection, as they say that saving the environment is their major concern. However, their concern for the environment is not reflected in their behavior of purchasing green products.

Secondly, the influence of PCE on GPB was examined, and it was observed that there is no substantial impact of PCE on consumers' purchase behavior towards green products. Hence, our next hypothesis, H2, is not supported. Other studies conducted by Debevec et al. [89] and Gaudelli [55] also support the results of our study. It was explained that the belief of millennials that they can make a difference in changing the environment does not change their actual behavior towards green products. However, it was reported that PCE acts as a moderator between environmental behavior and environmental attitude [90]. In addition, the results of the studies conducted by Kinnear et al. [49] and Roberts [42] showed a direct relationship between PCE and GPB. Heo and Muralidharan [37], in their study conducted on young millennials in the USA, found that the belief of an individual that they can change the quality of the environment can lead to concern for the environment, which, in turn,

can be reflected in their behavior of purchasing eco-friendly products. Their study negates the direct relationship of PCE with GPB. The current study also proves that it does not matter how confident the younger generation is that they can solve the problems of the environment; this will not be reflected in their purchasing behavior.

Our study revealed that the impact of EK on GPB is significant, which indicates that consciousness or knowledge of environmental issues directly influences the purchase behavior of a consumer. Hence, H3 is strongly supported. About 65% of the respondents showed that they were aware of environmental issues and acted accordingly while making purchase decisions. The results of our study are in agreement with the results presented by Mostafa [36], Levine and Strube [61], and Nguyen et al. [62]. According to Levine and Strube [61], EK actually represents the habits of consumers, and that is why consumers who have more knowledge about the environment act in a more sustainable manner. On the other hand, several researchers have provided evidence that EK has a restricted impact on GPB [59,60]. Nonetheless, Heo and Muralidharan [37] explained that environmental knowledge significantly influences the GPB of young millennials. The current study suggests that young and educated consumers who are considered environmentally knowledgeable are more inclined to be influenced by EK when making purchasing decisions for green products. This result supports the positive influence of environmental education on the young generation, and this finding also implied the implementation of eco-education programs for better understanding.

Next, the results of our study confirmed that ATGP does not change the behavior of consumers towards green products. Therefore, H4 is not supported, and the direct relationship between ATGP and GPB is negated. In support of this, Moser [38] and Young et al. [91] explained the insignificant or irrelevant relationship between ATGP and GPB, while Lee [28] reported that attitude directly influences the behavior of consumers towards green products. This study suggests that the ATGP can be influenced by the concern about and knowledge of environmental problems, but it will not directly motivate the consumer to buy green products. In other words, the attitude of young and educated consumers towards eco-friendly products does not necessarily impact their green buying behavior.

The price of the goods and services is among the most important factors that influence the behavior of consumers. In our study, the findings revealed that WTP strongly and directly influences the GPB of young consumers. Thus, H5 is strongly supported. In this study, WTP is the strongest factor that influences the GPB of consumers; in addition, 73% of respondents showed a willingness to pay extra if the environmental benefits of the products are promised. Similar results were presented by Moser [38], i.e., willingness to pay is the strongest predictor of the green purchase behavior of consumers. The results of our study are in accordance with those previous studies conducted both in developing and developed nations [27,92–95]. The findings suggest that price plays an important role when buying certain goods and services. The young generation is willing to pay an additional price if the product is ensured to be environmentally safe. It is conveyed through this study that young and educated consumers are willing to make changes in their purchasing behavior and will choose green products over traditional products. These consumers are ready to pay extra for the organizations and firms that are working towards environmental sustainability. They stated that they feel proud when purchasing green products, but do not feel motivated when the price of the green product is too high in comparison to its non-green substitute.

In addition, in our study, GPI is the second strongest predictor of GPB, which indicates that the purchase intention of a consumer directly and positively impacts the consumer's buying behavior. Thus, the postulated hypothesis H6 is strongly supported. This result was confirmed by the studies conducted by Jaiswal and Kant [23] and Kaiser et al. [69], and they also reported that the green purchase intention is a fundamental and strong predictor of green buying behavior. Therefore, the intention of consumers to purchase green products is more influential than their expressed attitude. In other words, if consumers intend to show certain behavior, then their intentions truly reflect in their purchasing behavior. The direct relationship between GPI and GPB has been confirmed by several studies conducted in other nations [96–99].

To ascertain the relationship between sociodemographic variables and GPB, a one-way ANOVA test was conducted, and the results showed that sociodemographic variables do not affect consumers' GPB. The results of our study are in accordance with those of Muralidharan et al. [100], who explained that there is no difference between male and female behaviors with respect to willingness to buy green products. In addition, age and qualification do not have any significant impact. These results indicate that behavioral factors are more influential than demographic factors as far as GPB is concerned.

6. Implications

The results of our study can be used to formulate green marketing strategies. The findings of this research reveal that young university students are motivated to change their lifestyle if effective information is provided to them about companies and products that are assured to be environmentally safe. In this regard, marketers can formulate their marketing strategies by keeping in view that EK is an important predictor of GPB. Hence, they should build communication messages that will help to fulfill the purpose of background information related to environmental problems, and direct messages should be delivered to the audience about the advantages of their products in controlling these environmental problems. Young university students can become pro-environmental consumers if proper awareness and knowledge of the eco-friendly substitutes of conventional products become available to them.

The practical implications of the study suggest that businesses and firms that are working towards environmental sustainability can target young consumers, provide them with a better understanding of their products, and assure them about their easy accessibility. As discussed above, willingness to pay was found to be the strongest predictor for green buying behavior among young students. They are willing to pay extra for environmentally safe products and are willing to support those organizations or companies that promise to be environmentally sustainable. In this context, marketers or policymakers should emphasize the price of the product in order to boost green buying behavior among young consumers [41]. In addition, businesses and firms should consider the price and availability of green products so that they can be affordable and accessible to the target consumers. Green purchase intention and environmental knowledge were recognized as important predictors of green purchase behavior. Therefore, companies should make serious efforts to provide easy availability and improved distribution for consumers to buy such products. As environmental knowledge has a significant impact on green purchase behavior, marketing strategies and promotions should inculcate environmental issues and the benefits of products.

The findings of this study can provide a reference for developing a green marketing strategy in Hungary. The findings of this study can trigger environmentally conscious marketing and advertisement strategies to increase awareness in consumers. They can help in the development of programs related to marketing by policymakers to enhance the GPB. With the help of such programs, consumers will buy more green products due to their worry about the degradation of the environment. The positioning of green brands plays a significant role in GPB because it can enhance the intention of the consumer to buy green products. Governments should create awareness among consumers about environmental problems by making documentaries related to practical environmental issues and by providing guidelines for reducing environmental impacts.

This study will provide insights for researchers and academicians to further study the GPB of the consumers in Hungary. Further research can be conducted to evaluate the GPB of the elderly population because this study only focuses on young consumers. This study will provide a theoretical model that can be used in further research by using different methodologies. The findings of our study will trigger comparative studies between Hungary and other EU countries in the future.

7. Conclusions

Environmental problems have been debated for a long time, and several measures have been taken by governments and policymakers to protect the ecological system. In addition, measures such as waste reduction programs and energy-saving practices are creating awareness among people to

change their consumption patterns. This study was conducted to understand the consumption patterns and buying behavior of young and educated consumers in Hungary. The emerging constructs were measured to find out the impacts of these factors on the purchasing decisions of these consumers. The findings suggest that EK, WTP, and GPI strongly and positively influence the GPB of young consumers. These factors motivate them to buy green products, but the overall consumption behavior still needs to be changed in order to create a more sustainable environment. According to the present study, young consumers are willing to change their behavior if they have a choice of green products over conventional products. These consumers have shown significant and positive intentions towards environmentally friendly products, and a majority of consumers stated that they are willing to purchase green substitutes of a product. A majority of consumers said that they would feel proud if they act in a way that is more environmentally friendly.

Around 65% of consumers confirmed that they have significant environmental knowledge that affects their purchasing behavior regarding environmentally safe products. As confirmed in this study, EK directly influences the GPB of young consumers in Hungary. Hence, the policymakers and government should implement some measures to deliver the message of environmental issues to larger population. The WTP came out as the strongest factor that influences GPB, and 73% of the consumers are willing to pay extra for green products. This finding will help producers and manufacturers of green products to assess their pricing policies according to the behavior of young consumers. In addition, many consumers are price sensitive and do not want to pay extra for any eco-friendly substitutes; this should be taken into consideration by the marketers and businesses. Moreover, the intentions and attitude do not always resemble actual purchases, and concerning price issues, the consumers usually chose the products at a low price. This study provided an understanding of young consumer behavior towards green products and their willingness to change their consumption patterns. The study will help green businesses and companies to modify their marketing strategies when targeting young consumers in Hungary. Likewise, the study suggests that marketing strategies should be formulated in a way that will enhance the knowledge and awareness of consumers and will provide all the information about the advantages and prices of the products, as well as how they will help to become a solution for environmental problems.

This study will further support future studies in this field for construct development, behavioral application of variables, and conducting cross-country research in the EU. It will help in lessening the research gap in this area, as there are limited studies that have been conducted in Hungary. In addition, it will motivate researchers to conduct research to understand the eco-friendly behavior of consumers. The research model used in this study will provide a theoretical framework for future studies to add new behavioral constructs. In addition, it will provide better insight into young consumers' behavior by adding constructs like PCE, WTP, and GPI to understand the GPB of young consumers of Hungary. This study will create a broad understanding of these consumers among marketers and academicians.

The limitation of the study is that it targeted only young university students who were considered to have appropriate environmental understanding. Future studies can be carried out on all young consumers, including both university students and young working professionals. In addition, other social, psychological, and behavioral factors can be included in studies to obtain a broad perspective of consumer behavior. Other constructs like social norms, cultural norms, peer pressure, etc. can be added and studied to further understand the GPB of consumers. In the current study, GPB was not influenced by attitude; this might be because of certain other factors that were not considered in this study. Future studies can replicate the present research by using both the old and young generations, and differences can be assessed accordingly. The study did not add any mediating variables that could further influence the GPB. Future studies can be developed by adding mediating variables that might influence attitude and concern, and this might further influence GPB.

Author Contributions: J.O. conceptualized and investigated. F.N. wrote the methodology and original draft. D.V. performed the formal analysis and data curation. R.M. wrote the original draft. All authors have read and agreed to the published version of the manuscript.

Funding: The project was funded under the program of the Ministry of Science and Higher Education titled "Regional Initiative of Excellence" in 2019–2022, project number 018/RID/2018/19, with an amount of funding of 10 788 423.16 PLN.

Conflicts of Interest: The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A

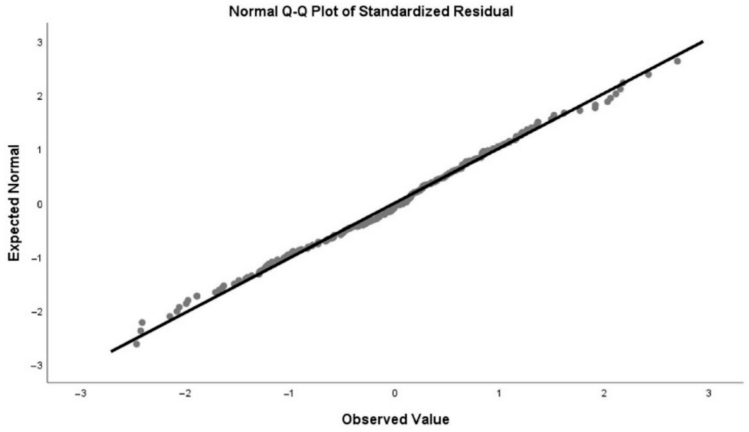

Figure A1. Normal quantile-quantile (Q-Q) plot of standardized residuals.

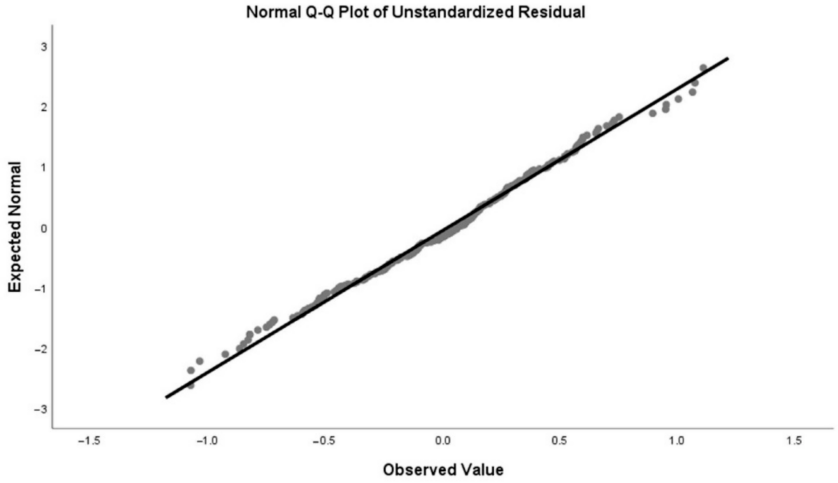

Figure A2. Normal Q-Q plot of unstandardized residuals.

References

1. Kilbourne, W.E.; Polonsky, M.J. Environmental Attitudes and their Relation to the Dominant Social Paradigm Among University Students In New Zealand and Australia. *Australas. Mark. J. (AMJ)* **2005**, *13*, 37–48. [CrossRef]
2. United Nations. *The Future We Want, Resolution Adopted by the General Assembly on July 27, 2012*; no. A/RES/66/288; United Nations: New York, NY, USA, 2012; pp. 1–53.
3. Antošová, G.; Gomez, J.E.A.; Gomez, H.Y.A. Design tourist planning in Colombian lagged destination: Case study Bahía Solano. *J. Tour. Serv.* **2019**, *10*, 128–152. [CrossRef]
4. Meyer, D.; Meyer, N.; Neethling, J. Perceptions of business owners on service delivery and the creation of an enabling environment by local government. *Adm. Publica* **2016**, *24*, 52–73.

5. Meyer, N.; Meyer, D.F. The relationship between the creation of an enabling environment and economic development: A comparative analysis of management at local government sphere. *Pol. J. Manag. Stud.* **2016**, *14*, 150–160. [CrossRef]
6. Majerova, J. Analysis of Slovak Consumer's Perception of the Green Marketing Activities. *Procedia Econ. Financ.* **2015**, *26*, 553–560. [CrossRef]
7. Shpak, N.; Kuzmin, O.; Melnyk, O.; Ruda, M.; Sroka, W. Implementation of a Circular Economy in Ukraine: The Context of European Integration. *Resources* **2020**, *9*, 96. [CrossRef]
8. Tsarenko, Y.; Ferraro, C.R.; Sands, S.; McLeod, C.S. Environmentally conscious consumption: The role of retailers and peers as external influences. *J. Retail. Consum. Serv.* **2013**, *20*, 302–310. [CrossRef]
9. WCED (World Commission on Environment and Development). *Our Common Future*; Oxford University Press: Oxford, UK, 1987; pp. 1–91.
10. Kelić, I.; Erceg, A.; Čandrlić-Dankoš, I. Increasing tourism competitiveness: Connecting Blue and Green Croatia. *J. Tour. Serv.* **2020**, *11*, 132–149. [CrossRef]
11. Laroche, M.; Bergeron, J.; Barbaro-Forleo, G. Targeting consumers who are willing to pay more for environmentally friendly products. *J. Consum. Mark.* **2001**, *18*, 503–520. [CrossRef]
12. Haque, A.U.; Yamoah, F.A.; Sroka, W. *Willingness to Reduce Food Choice in Favour of Sustainable Alternatives: The Role of Government and Consumer Behaviour, Perspectives on Consumer Behaviour*; Springer: Cham, Switzerland, 2020; pp. 31–51.
13. Križanová, A.; Majerova, J.; Zvarikova, K. Green marketing as a tool of achieving competitive advantage in automotive transport. In Proceedings of the 17th International Conference Transport Means, Kaunas, Lithuania, 24–25 October 2013; pp. 45–48.
14. Pagliacci, M.; Manolică, A.; Roman, T.; Boldureanu, G. The Consumers of Green Products. The Case of Romanian Moldavia Counties. *Amfiteatru Econ.* **2019**, *21*, 830–844.
15. Bazan, C.; Datta, A.; Gaultois, H.; Shaikh, A.; Gillespie, K.; Jones, J. Effect of the University in the Entrepreneurial Intention of Female Students. *Int. J. Entrep. Knowl.* **2019**, *7*, 73–97. [CrossRef]
16. Prinzing, T. Eco-options going green is getting easier. *Ind. Saf. Hyg. News* **2013**, *47*, 46.
17. Chen, Y.-S.; Chang, C.-H. The Determinants of Green Product Development Performance: Green Dynamic Capabilities, Green Transformational Leadership, and Green Creativity. *J. Bus. Ethic* **2013**, *116*, 107–119. [CrossRef]
18. Dusan, S.; Ladislav, M.; Jan, B. Assessment of milk production competitiveness of the Slovak Republic within the EU-27 countries. *Agric. Econ.* **2016**, *62*, 482–492. [CrossRef]
19. Lin, P.-C.; Huang, Y.-H. The influence factors on choice behavior regarding green products based on the theory of consumption values. *J. Clean. Prod.* **2012**, *22*, 11–18. [CrossRef]
20. Kovács, I.; Valkó, G. Sustainable consumption—Consumers' reactions to CSR activities in Hungary. *Reg. Stat.* **2013**, *3*, 141–154. [CrossRef]
21. Ferencz, Á.; Deák, Z.; Nótári, M. Environmentally conscious consumption in hungary. *Ann. Pol. Assoc. Agric. Agribus. Econ.* **2017**, *2017*, 34–39. [CrossRef]
22. Nagy, S.; Piskóti, I.; Molnar, L. Environmentally conscious behaviour in Hungary. In Proceedings of the 41th EMAC Conference: Marketing to Citizens Going Beyond Customers and Consumers, Lisbon, Portugal, 23–26 May 2012; Volume 45.
23. Jaiswal, D.; Kant, R. Green purchasing behaviour: A conceptual framework and empirical investigation of Indian consumers. *J. Retail. Consum. Serv.* **2018**, *41*, 60–69. [CrossRef]
24. Benda-Prokeinová, R.; Dobeš, K.; Mura, L.; Buleca, J. Engel's approach as a tool for estimating consumer behaviour. *E M Èkon. Manag.* **2017**, *20*, 15–29. [CrossRef]
25. Anvar, M. Attitudes and Purchase Behaviour of Green Products among Generation Y Consumers in South Africa. *Mediterr. J. Soc. Sci.* **2014**, *5*, 183–194. [CrossRef]
26. Mei, O.J.; Ling, K.C.; Piew, T.H. The antecedents of green purchase intention among Malaysian consumers. *Asian Soc. Sci.* **2012**, *8*, 248–263. [CrossRef]
27. Rodríguez, E.; Lacaze, V.; Lupín, B. Willingness to pay for organic food in Argentina: Evidence from a consumer survey. *Int. Mark. Trade Qual. Food Prod.* **2007**, *297*, 297–348.
28. Lee, K. Opportunities for green marketing: Young consumers. *Mark. Intell. Plan.* **2008**, *26*, 573–586. [CrossRef]
29. Andronie, M.; Gărdan, D.A.; Dumitru, I.; Gărdan, I.P.; Andronie, I.E.; Uță, C. Integrating the Principles of Green Marketing by Using Big Data. Good Practices. *Amfiteatru Econ.* **2019**, *21*, 258–269. [CrossRef]

30. Mayer, R.N.; Iyer, E. *Book Review: Greener Marketing: A Global Perspective on Greening Marketing Practice*; Routledge: London, UK, 2017.
31. Pakurár, M.; Khan, M.A.; Benedek, A.; Oláh, J. The impact of green practices, cooperation and innovation on the performance of supply chains using statistical method of meta-analysis. *J. Int. Stud.* **2020**, *13*, 111–128. [CrossRef]
32. Liobikienė, G.; Grinceviciene, S.; Bernatonienė, J. Environmentally friendly behaviour and green purchase in Austria and Lithuania. *J. Clean. Prod.* **2017**, *142*, 3789–3797. [CrossRef]
33. Shaqiri, F.; Musliu, A.; Ymeri, P.; Vasa, L. Evaluating consumer behavior for consumption of milk and cheese in Gjilan Region, Kosovo. *Ann. Agrar. Sci.* **2019**, *17*, 375–382.
34. Kanchanapibul, M.; Lacka, E.; Wang, X.; Chan, H.K. An empirical investigation of green purchase behaviour among the young generation. *J. Clean. Prod.* **2014**, *66*, 528–536. [CrossRef]
35. Khaola, P.; Potiane, B.; Mokhethi, M. Environmental concern, attitude towards green products and green purchase intentions of consumers in Lesotho. *Ethiop. J. Environ. Stud. Manag.* **2014**, *7*, 361–370. [CrossRef]
36. Mostafa, M.M. Gender differences in Egyptian consumers? green purchase behaviour: The effects of environmental knowledge, concern and attitude. *Int. J. Consum. Stud.* **2007**, *31*, 220–229. [CrossRef]
37. Heo, J.; Muralidharan, S. What triggers young Millennials to purchase eco-friendly products?: The interrelationships among knowledge, perceived consumer effectiveness, and environmental concern. *J. Mark. Commun.* **2017**, *25*, 421–437. [CrossRef]
38. Moser, A.K. Thinking green, buying green? Drivers of pro-environmental purchasing behavior. *J. Consum. Mark.* **2015**, *32*, 167–175. [CrossRef]
39. Ik, M.; Azeez, A.A. Organisational green behavioural change: The role of change management. *Int. J. Entrep. Knowl.* **2020**, *8*, 34–48. [CrossRef]
40. Kim, Y.; Choi, S.M. *Antecedents of Green Purchase Behavior: An Examination of Collectivism, Environmental Concern, and PCE*; NA—Advances in Consumer Research; Association for Consumer Research: Chicago, IL, USA, 2005; Volume 32, pp. 592–599.
41. Prakash, G.; Pathak, P. Intention to buy eco-friendly packaged products among young consumers of India: A study on developing nation. *J. Clean. Prod.* **2017**, *141*, 385–393. [CrossRef]
42. Roberts, J.A. Implications for Advertising. *J. Bus. Res.* **1996**, *36*, 217–231. [CrossRef]
43. Krause, D. Environmental Consciousness. *Environ. Behav.* **1993**, *25*, 126–142. [CrossRef]
44. Chaudhary, R.; Bisai, S. Factors influencing green purchase behavior of millennials in India. *Manag. Environ. Qual. Int. J.* **2018**, *29*, 798–812. [CrossRef]
45. Oskamp, S.; Harrington, M.J.; Edwards, T.C.; Sherwood, D.L.; Okuda, S.M.; Swanson, D.C. Factors Influencing Household Recycling Behavior. *Environ. Behav.* **1991**, *23*, 494–519. [CrossRef]
46. Pham, T.H.; Nguyen, T.N.; Phan, T.T.H.; Nguyen, N.T. Evaluating the purchase behaviour of organic food by young consumers in an emerging market economy. *J. Strat. Mark.* **2019**, *27*, 540–556. [CrossRef]
47. Xu, X.; Hua, Y.; Wang, S.; Xu, G. Determinants of consumer's intention to purchase authentic green furniture. *Resour. Conserv. Recycl.* **2020**, *156*, 104721. [CrossRef]
48. Yadav, R.; Pathak, G.S. Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *J. Clean. Prod.* **2016**, *135*, 732–739. [CrossRef]
49. Kinnear, T.C.; Taylor, J.R.; Ahmed, S.A. Ecologically Concerned Consumers: Who are They? Ecologically concerned consumers can be identified. *J. Mark.* **1974**, *38*, 20–24. [CrossRef]
50. Tan, B.C. The role of perceived consumer effectiveness on value-attitude-behaviour model in green buying behaviour context. *Aust. J. Basic Appl. Sci.* **2011**, *5*, 1766–1771.
51. Cleveland, M.; Kalamas, M.; Laroche, M. "It's not Easy Being Green": Exploring Green Creeds, Green Deeds, and Internal Environmental Locus of Control. *Psychol. Mark.* **2012**, *29*, 293–305. [CrossRef]
52. Dagher, G.K.; Itani, O.S. Factors influencing green purchasing behaviour: Empirical evidence from the Lebanese consumers. *J. Consum. Behav.* **2014**, *13*, 188–195. [CrossRef]
53. Sharma, N.; Dayal, R. Drivers of Green Purchase Intentions: Green Self-Efficacy and Perceived Consumer Effectiveness. *Glob. J. Enterp. Inf. Syst.* **2017**, *8*, 27–32. [CrossRef]
54. Lee, Y.-J.; Haley, E.; Yang, K. The Role of Organizational Perception, Perceived Consumer Effectiveness and Self-efficacy in Recycling Advocacy Advertising Effectiveness. *Environ. Commun.* **2017**, *13*, 239–254. [CrossRef]
55. Gaudelli, J. *The Greenest Generation: The Truth Behind Millennials and the Green Movement*; Ad Age: New York, NY, USA, 2009.

56. Mishchuk, H.; Bilan, Y.; Pavlushenko, L. Knowledge management systems: Issues in enterprise human capital management implementation in transition economy. *Pol. J. Manag. Stud.* **2016**, *14*, 163–173. [CrossRef]
57. Alani, E.; Kamarudin, S.; Alrubaiee, L.S.; Tavakoli, R. A model of the relationship between strategic orientation and product innovation under the mediating effect of customer knowledge management. *J. Int. Stud.* **2019**, *12*, 232–242. [CrossRef]
58. Laroche, M.; Kim, C.; Zhou, L. Brand familiarity and confidence as determinants of purchase intention: An empirical test in a multiple brand context. *J. Bus. Res.* **1996**, *37*, 115–120. [CrossRef]
59. Hwang, Y.-H.; Kim, S.-I.; Jeng, J.-M. Examining the Causal Relationships Among Selected Antecedents of Responsible Environmental Behavior. *J. Environ. Educ.* **2000**, *31*, 19–25. [CrossRef]
60. Kaiser, F.G.; Fuhrer, U. Ecological Behavior's Dependency on Different Forms of Knowledge. *Appl. Psychol.* **2003**, *52*, 598–613. [CrossRef]
61. Levine, D.S.; Strube, M.J. Environmental Attitudes, Knowledge, Intentions and Behaviors Among College Students. *J. Soc. Psychol.* **2012**, *152*, 308–326. [CrossRef]
62. Nguyen, T.N.; Lobo, A.; Nguyen, B.K. Young consumers' green purchase behaviour in an emerging market. *J. Strat. Mark.* **2018**, *26*, 583–600. [CrossRef]
63. Ajzen, I. The theory of planned behaviour: Reactions and reflections. *Psychol. Health* **2011**, *26*, 1113–1127. [CrossRef]
64. Li, T.; Meshkova, Z. Examining the impact of rich media on consumer willingness to pay in online stores. *Electron. Commer. Res. Appl.* **2013**, *12*, 449–461. [CrossRef]
65. Hinnen, G.; Hille, S.L.; Wittmer, A. Willingness to Pay for Green Products in Air Travel: Ready for Take-Off? *Bus. Strat. Environ.* **2017**, *26*, 197–208. [CrossRef]
66. Van Ravenswaay, E.O.; Wohl, J. *Using Contingent Valuation Methods to Value the Health Risks From Pesticide Residues When Risks are Ambiguous*; No. 1295-2016-102399; Westview Press: Boulder, Colorado, 1995; pp. 287–317.
67. Saphores, J.-D.M.; Nixon, H.; Ogunseitan, O.A.; Shapiro, A.A. California households' willingness to pay for 'green' electronics. *J. Environ. Plan. Manag.* **2007**, *50*, 113–133. [CrossRef]
68. Kautish, P.; Paul, J.; Sharma, R. The moderating influence of environmental consciousness and recycling intentions on green purchase behavior. *J. Clean. Prod.* **2019**, *228*, 1425–1436. [CrossRef]
69. Kaiser, F.G.; Hübner, G.G.; Bogner, F.X. Contrasting the Theory of Planned Behavior With the Value-Belief-Norm Model in Explaining Conservation Behavior 1. *J. Appl. Soc. Psychol.* **2005**, *35*, 2150–2170. [CrossRef]
70. Chekima, B.; Wafa, S.A.W.S.K.; Igau, O.A.; Chekima, S.; Sondoh, S.L. Examining green consumerism motivational drivers: Does premium price and demographics matter to green purchasing? *J. Clean. Prod.* **2016**, *112*, 3436–3450. [CrossRef]
71. Solomon, H. *Multivariate Data Analysis*; Prentice Hall: Upper Saddle River, NJ, USA, 1995; pp. 207–219.
72. Child, D. *The Essentials of Factor Analysis*; A&C Black, Cassell Educational: London, UK, 2006.
73. Yong, A.G.; Pearce, S. A Beginner's Guide to Factor Analysis: Focusing on Exploratory Factor Analysis. *Tutorials Quant. Methods Psychol.* **2013**, *9*, 79–94. [CrossRef]
74. Hair, J.; Anderson, R.; Tatham, R.; Black, W. *Multivariate Data Analysis with Readings. Englewood Cliff. 1*, 4th ed.; Prentice Hall: Englewood Cliffs, NJ, USA, 1998.
75. Nunnally, J.C. *Psychometric Theory, 3E*; McGraw-Hill: New York, NY, USA, 1994.
76. Bartholomew, D.J.; Knott, M.; Moustaki, I. *Latent Variable Models and Factor Analysis: A Unified Approach*; John Wiley & Sons: West Success, UK, 2011.
77. Fabrigar, L.R.; Wegener, D.T.; Maccallum, R.C.; Strahan, E.J. Evaluating the use of exploratory factor analysis in psychological research. *Psychol. Methods* **1999**, *4*, 272–299. [CrossRef]
78. Deumier, L.; Alliot-Licht, B.; Bouton-Kelly, L.; Bonnaud-Antignac, A.; Michaut, C.; Quilliot, F.; Guihard, G. Factor analysis of a motivation questionnaire adapted to predoctoral French dental students. *J. Dent. Sci.* **2016**, *11*, 123–129. [CrossRef]
79. Boran, P.; Waqas, A.; Askan, Ö.O.; Topçu, İ.; Dogan, T.; Rahman, A. Screening of postpartum depression among new mothers in Istanbul: A psychometric evaluation of the Turkish Edinburgh Postnatal Depression Scale. *BMC Res. Notes* **2020**. [CrossRef]
80. Williams, B.; Onsman, A.; Brown, T. Exploratory factor analysis: A five-step guide for novices. *Australas. J. Paramed.* **2010**, *8*, 3. [CrossRef]
81. Costello, A.B.; Osborne, J. Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Pract. Assess. Res. Eval.* **2005**, *10*, 7.

82. Leimeister, S. *IT Outsourcing Governance: Client Types and Their Management Strategies*; Springer: Berlin, Germany, 2010.
83. Ahamat, A.; Ahmad, S.Z.; Mohd, R.B.K. An empirical investigation on Malaysians' green purchasing behaviour. *Int. J. Manuf. Technol. Manag.* **2018**, *32*, 237. [CrossRef]
84. Pallant, J. A step by Step Guide to Data Analysis Using SPSS for Windows (Version15). In *SPSS Survival Manual*; Open University Press: Maidenhead, UK, 2007.
85. Durbin, J.; Watson, G.S. Testing for Serial Correlation in Least Squares Regression: I. *Biometrika* **1950**, *37*, 409. [CrossRef]
86. Da Silva Tamashiro, H.R.; da Silveira, J.A.G.; Merlo, E.M.; Ghisi, M. The relationship between ecological knowledge, ecological concern, ecological affection, subjective norms and the green purchase behavior in Brazil. *Afr. J. Bus. Manag.* **2013**, *7*, 3297–3314. [CrossRef]
87. Malik, M.I.; Mir, F.N.; Hussain, S.; Hyder, S.; Anwar, A.; Khan, Z.U.; Nawab, N.; Shah, S.F.A.; Waseem, M. Contradictory results on environmental concern while re-visiting green purchase awareness and behavior. *Asia Pac. J. Innov. Entrep.* **2019**, *13*, 17–28. [CrossRef]
88. Vafaei, S.A.; Azmoon, I.; Fekete-Farkas, M. The Impact of Perceived Sustainable Marketing Policies on Green Customer Satisfaction. *Pol. J. Manag. Stud.* **2019**, *19*, 475–491. [CrossRef]
89. Debevec, K.; Schewe, C.D.; Madden, T.J.; Diamond, W.D. Are today's Millennials splintering into a new generational cohort? Maybe! *J. Consum. Behav.* **2013**, *12*, 20–31. [CrossRef]
90. Laskova, A. Perceived consumer effectiveness and environmental concerns. In Proceedings of the 13th Asia Pacific Management Conference, Melbourne, Australia, 18–20 November 2007; pp. 206–209.
91. Young, C.W.; Hwang, K.; McDonald, S.; Oates, C.J. Sustainable consumption: Green consumer behaviour when purchasing products. *Sustain. Dev.* **2009**, *18*, 20–31. [CrossRef]
92. Nekmahmud, M.; Fekete-Farkas, M. Why Not Green Marketing? Determinates of Consumers' Intention to Green Purchase Decision in a New Developing Nation. *Sustainability* **2020**, *12*, 7880. [CrossRef]
93. Ghosh, S.; Datta, B.; Barai, P. Modeling and Promoting Organic Food Purchase. *J. Food Prod. Mark.* **2016**, *22*, 623–642. [CrossRef]
94. Loureiro, M.L.; Lotade, J. Do fair trade and eco-labels in coffee wake up the consumer conscience? *Ecol. Econ.* **2005**, *53*, 129–138. [CrossRef]
95. Bilan, Y.; Hussain, H.I.; Haseeb, M.; Kot, S. Sustainability and Economic Performance: Role of Organizational Learning and Innovation. *Eng. Econ.* **2020**, *31*, 93–103. [CrossRef]
96. Wei, C.; Chiang, C.; Kou, T.; Lee, B.C.Y. Toward Sustainable Livelihoods: Investigating the Drivers of Purchase Behavior for Green Products. *Bus. Strat. Environ.* **2017**, *26*, 626–639. [CrossRef]
97. Lai, C.K.; Cheng, E.W. Green purchase behavior of undergraduate students in Hong Kong. *Soc. Sci. J.* **2016**, *53*, 67–76. [CrossRef]
98. Kumar, B.; Manrai, A.K.; Manrai, L.A. Purchasing behaviour for environmentally sustainable products: A conceptual framework and empirical study. *J. Retail. Consum. Serv.* **2017**, *34*, 1–9. [CrossRef]
99. Oláh, J.; Aburumman, N.; Popp, J.; Khan, M.A.; Haddad, H.; Kitukutha, N. Impact of Industry 4.0 on Environmental Sustainability. *Sustainability* **2020**, *12*, 4674. [CrossRef]
100. Muralidharan, S.; Rejón-Guardia, F.; Xue, F. Understanding the green buying behavior of younger Millennials from India and the United States: A structural equation modeling approach. *J. Int. Consum. Mark.* **2015**, *28*, 54–72. [CrossRef]