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Transition towards Sustainability: Adoption of Eco-Products among Consumers

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Abstract: Transition to sustainability is a long-term challenge which should also actively engage consumers, as consumption causes environmental stress. In order to understand how consumers adopt eco-products, we conducted an extensive literature review of green consumerism and presented findings of 47 previous research works. In addition, this study's aim was to explore whether consumers remain only concerned about the environment or whether they actually make a difference. Moreover, we examined gender differences. Because the relationship between consumers' environmental concern and purchase intention is not straightforward, we aimed to explore the effect of consumers' environmental concern on their purchase intention. The purpose of this paper was to explore how consumers' familiarity with and consciousness of eco-products and their perceived sense of environmental responsibility mediate the relationship between consumers' environmental concern and their purchase intention. We used structural equation modeling to test the proposed conceptual model based on a sample of 705 Slovenian consumers. Our findings suggest that all the above-mentioned constructs mediate the relationship between consumers' environmental concern and their purchase intention in relation to eco-products. However, consumers' consciousness of eco-products has the greatest effect in channeling environmental concern into purchase intention of eco-products. In addition, the findings indicate that female consumers express greater environmental concern, consciousness of eco-products, and perceived environmental responsibility than male consumers. The paper concludes with policy and managerial implications, theoretical implications, limitations of the study, and future research directions based on the findings of consumers' perspectives.

Keywords: literature review; environmental concern; consumer's familiarity with eco-products; consumer's consciousness of eco-products; consumer's perceived sense of environmental responsibility; purchase intention; green consumerism

1. Introduction

Transformation towards sustainability has taken an increasingly central position in global sustainability research and policy discourse in recent years [1]. According to researchers [1], governance and politics are central to understanding, analyzing, and shaping transformations towards sustainability. However, ways of understanding and analyzing transition towards sustainability should place more emphasis on consumers as well, because, in developed countries, consumption directly or indirectly drives much of the environmental stress, waste, degradation, and resource exhaustion being produced by the goods and services demanded [2]. Being green and behaving in an environmentally friendly way is thus today more a necessity than a lifestyle [3], as people have become increasingly aware of the fact that the more conventional energy resources on the planet are finite [4]. A lifestyle that is oriented towards care for the environment is becoming a trend worldwide, as well as a salient issue with which we need to cope quickly and effectively, because we are running out of certain resources.

Environmental awareness is increasing worldwide [5]. Many companies have started to brand themselves as environmentally friendly and to offer products that have a smaller adverse effect on the environment while also offering benefits to the end-user (such as being made from less harmful ingredients, resulting in energy or material savings, etc.). Many companies have thus adopted the concept of cleaner production in order to cater accordingly to consumers' needs and demands and to operate in an environmentally friendly way by reducing pollutants and conserving finite resources. Cleaner production is a relatively new preventive environmental strategy which tries to increase resource efficiency of products, processes, and services, and reduce risk to people and the environment [6]. Therefore, cleaner production delivers several benefits, such as pollution reduction, resource saving, and economic-efficiency improvements [7]. The previously mentioned benefits do not pertain only to the environment and companies that act in an environmentally friendly way, but also regard consumers, who can enjoy environmentally friendly products (i.e., eco-products), which are energy efficient, less harmful for the environment and their health, and more frugal when it comes to consumption of resources.

In addition, many sustainable labels addressing different aspects of sustainability have emerged in recent years [8]. Thus, awareness of environmental issues, as well as solutions and eco-products, has been increasing steadily. Perhaps as a result, some companies have been observed to be "green" in their words but not in their actions. As stated above, there are many reasons why companies adopt eco-innovations, and many literature reviews have been conducted on this topic [9,10].

As stated above, protecting the environment has become a salient issue during recent decades. Companies need to adhere to certain environmental regulations if they want to operate and remain active players in the market. On the other hand, an increasing number of studies stressed the relevance of the consumer experience in research about new trajectories towards sustainability, suggesting that consumers should not be viewed solely as passive agents who select between different commercial options [11]. On the contrary, consumers are active players, which can heavily affect and participate in transitioning to sustainability by changing their purchasing habits, behaviors, and mindset. Nowadays, consumers demand eco-products, and companies need to cater to this demand accordingly. It is essential to consider environmental issues in product development to explore and comprehend why consumers adopt eco-innovations [12]. Given the current market situation, consumers have many choices among various brands of products, including many eco-products. As we live in a capitalist economy, the principles, values, and behaviors of a great part of the population are centered on buying things and possessing goods [13]. Thus, in order to achieve sustainable development, we should place more emphasis not only on the creation and the promotion of environmentally sustainable products, but also on green consumerism, which presents one of the paths to sustainability.

As past research has focused primarily on companies and their behavior towards the environment (the drivers of companies' eco-innovation adoption and their consequences at the firm level), we aim to explore what drives customers to green purchase intentions and, furthermore, what mediates the relationship between customers' environmental concern and purchase intention. Within our study, we define green consumerism as a concept that includes a broader social awareness of green consumer behaviors, where green consumers are the main drivers of green consumerism [14]. Three typical statements of green consumers are as follows: (1) "I identify myself as someone who is concerned with 'green/environmental issues'", (2) "I perceive my lifestyle as 'green'", and (3) "I purchase and consume green products" [14]. We have conducted an extensive literature review of green consumerism from the point of view of consumers. In the literature review, we searched papers that contained one of the two key phrases, "green consumerism" and "environmentally responsible consumption". We have used the Science Direct database and enriched our search with Google Scholar. Our search for the above-mentioned key phrases in Science Direct yielded a total of 1237 results. We have reviewed all the papers and finally presented the main findings of 47 papers, which can be found in Table 1.

Pertaining to green consumerism, past research implies that the relationship between consumers' environmental concern and their purchase intention is not straightforward. Being concerned about the

environment does not necessarily lead to purchasing of eco-products, although it leads to other behaviors related to green consumerism. Some researchers [15] posited that consumers' environmental concern works as an antecedent of environmental knowledge, whereas others [16] found that environmental concern positively relates to consumers' sense of responsibility and to consumers' consciousness of eco-products [17]. On the other hand, environmental knowledge affects green purchasing behavior [17], as does consumers' environmental consciousness [18] and consumers' perceived sense of environmental responsibility [15]. This fragmented empirical evidence collected from different research works and assumptions based on literature reviews clearly shows that there is a gap between consumers' environmental concern and their green purchase intention and thus calls for further empirical evidence.

The availability of and preference for eco-products have increased; however, the understanding of consumers' choice for eco-products is still insufficient [19]. Therefore, we aimed to explore the role of consumers as a small fragment in transition to sustainability. In more detail, we examined what motivates consumers to act in an environmentally responsible way and purchase eco-products. Our research question is how consumers' familiarity with and consciousness of eco-products and perceived sense of environmental responsibility translate environmental concern into purchase intention. The main aim of this study is to explore what channels the effect of environmental concern on purchase intention and what gender differences occur in the examined constructs. As such, this study makes a major contribution to the body of research on green consumerism and tries to clarify why consumers decide to purchase eco-products. By conducting an extensive literature review and reporting the main findings of prior research works (47 in total), moreover by exploring and presenting both the prior research findings and empirical findings based on our research regarding the consumers' perspective, the findings of the literature review and empirical study ease companies' understanding of consumers' actions. This study offers companies an answer to the question of what persuades consumers to purchase eco-products. We test a unique model to explore how consumers' perceived sense of environmental responsibility, familiarity with eco-products, and consciousness of eco-products mediate the relationship between environmental concern and purchase intention. In addition, we have tested for the differences between female and male consumers related to the above-mentioned constructs.

2. Literature Review

We conducted a literature review in order to explore what has already been done with regard to green consumerism from the viewpoint of consumers. In the literature review, we searched for papers which contained one of the two key phrases, "green consumerism" and/or "environmentally responsible consumption". The literature review used the Science Direct database, to which researchers had full access, and it was most relevant to this topic. We enriched our search with Google Scholar and added a few papers that were not included in the literature review conducted using the Science Direct database. In total, our search for the above-mentioned key words using Science Direct yielded 1237 results for papers containing either "green consumerism" or "environmentally responsible consumption". We have focused only on research papers and papers that were focused on consumers, not companies, on green products and green consumption, but not energy-saving behavior, services (e.g., adoption of renewable energy, tourism), or selection of environmentally friendly hotels. The final sample of papers fitting all the above-mentioned criteria results in 47 papers, which are presented in Table 1. Table 1 contains the selected papers, providing authors and year of publication, the journal in which paper was published, details of the sample, determinants that were examined, and main findings.

Table 1. Literature review of "green consumerism" or "environmentally responsible consumption".

Authors and Year of Publication	Journal	Sample	Determinants	Main Findings
[20] Al Mamun et al. (2018)	Journal of Environmental Management	380 low-income household respondents who lived in coastal areas of Peninsular Malaysia	Eco-literacy, Self-efficacy, Attitude towards environmentally friendly products, Subjective norms, Perceived behavioral control	The findings revealed a positive effect of eco-literacy and self-efficacy on attitude towards green products. Subsequently, the findings also showed a positive effect of attitude and perceived behavioral control on intention and consumption of green products.
[21] Biswas and Roy (2015)	Journal of Cleaner Production	42 students and 59 faculties (India)	Consumer innovativeness, Contextual factor, Environmental attitude, Value-for-money, Social value, Conditional value, Epistemic value	Results confirmed consumers' price and knowledge perceptions to be the major determinants of the behavioral outcome of sustained green consumption, and behavioral intention to pay the green price premium is the outcome of sustained green consumption.
[22] Bittar (2018)	Journal of Cleaner Production	255 respondents from United States	Environmental consciousness, Price perception, Brand equity	This research showed that consumers' environmental consciousness does not affect their purchase decision, demonstrating that consumers' decision is based on brand and price. The study concludes that brand equity is an important factor in leveraging remanufactured sales, but it is intrinsically associated with price setting. Consumer environmental consciousness has no impact on remanufactured sales, highlighting the importance of the economic side to consumer purchasing decisions.
[23] Carfora et al. (2017)	Journal of Environmental Psychology	220 respondents from southern Italy	Attitude towards each proenvironmental behavior, Subjective norm, Perceived Behavioral Control, Proenvironmental self-identity	The findings showed that proenvironmental self-identity significantly moderated the impact of perceived behavioral control on intentions and the effect of past behavior on both intentions and behaviors.
[24] Cerri et al. (2018)	Journal of Cleaner Production	7627 questionnaires from Italy	Environmental concern, Importance given to ecological labels and certifications, Importance assigned to communication campaigns, Product quality, Perceived availability of sustainable products	Attitudes towards the products were the main predictors of green product purchasing and were influenced by consumer's attitudes towards eco labels, whose marginal effect decreased as environmental concern increased.

Table 1. *Cont.*

Authors and Year of Publication	Journal	Sample	Determinants	Main Findings
[25] Chekima et al. (2016)	Journal of Cleaner Production	405 consumers from Malaysia	Environmental attitude, Eco-label, Man–nature orientation	Results indicate that environmental attitude, eco-label, and cultural value (man–nature orientation) significantly influence green purchase intention. The result also indicates that the premium price has no moderating effect, denying its role as one of the main barriers for consumers to "walk their talk", as previously reported by studies and opinion polls. In addition, the findings revealed that education level and gender have a significant positive moderation effect. This suggests that green purchase intentions' motivational factors are greater among highly educated individuals, especially with female consumers.
[26] Chen and Hung (2016)	Technological Forecasting and Social Change	406 respondents (Taiwan)	Attitude, Subjective norm, Perceived behavioral control, Social impression, Environmental ethics and beliefs, Environmental consciousness	This study found that the attitude, perceived behavioral control, environmental consciousness of consumers and their environmental ethics and beliefs have a significant positive association with their intention to use green products, whereas the subjective norms of consumers and the social impression of consumers are positively but not significantly correlated to their intentions towards using green products.
[27] Choi and Johnson (2019)	Sustainable Production and Consumption	284 adults (USA)	Environmental concern, Environmental knowledge, Perceived environmental effectiveness, Novelty seeking, Adventurous spirit, Attitude, Subjective norm, Perceived behavioral control	Findings support the claim that it is situation and issue-specific motivations that are direct constructs of a specific behavior rather than general motivations. Environmental knowledge had an appreciable effect in explaining purchase intention but environmental concern did not. When novelty seeking was controlled, adventurous spirit accounted for no additional variance in purchase intention.
[28] Do Paço et al. (2019)	Journal of Cleaner Production	471 individuals from the UK and Portugal	General prosocial attitudes, Green consumption values, Receptivity to green communication	The results convey how general prosocial attitudes have a direct influence on green consumption values and show that green values positively influence green buying behavior and receptivity to green advertising. However, green advertising generates only a weak influence on green buying behaviors.

Table 1. *Cont.*

Authors and Year of Publication	Journal	Sample	Determinants	Main Findings
[29] Follows and Jobber (2000)	European Journal of Marketing	160 women, following the birth of their baby in a maternity hospital in Nova Scotia, Canada	Self-transcendence, Conservation, Self-enhancement, Environmental consequences, Individual consequences	The hierarchical structure proposed in the model, from abstract values to product specific attitudes, to intention, to purchase behavior, was confirmed. Both environmental and individual consequences of purchasing diapers were linked to behavior through intention.
[30] Foukaras and Toma (2014)	Procedia Economics and Finance	Eurobarometer data: 479 Cypriot citizens and 967 Swedish citizens	Gender, Education, Occupation, Eco-labelling in products, Trust political parties, Information related to general environmental issues, Worries about climate change, Perceived ability to play a role in protecting the environment, Consider environmental aspects in large expenditures	Results show that policy measures could be targeted to deal with situational factors (e.g., availability of recycling services) (more so in Cyprus than in Sweden); improving access to trusted information sources and better targeting information (especially on environmental impacts of specific behaviors) to different population groups, e.g., by income and gender (in both Cyprus and Sweden); and improving labelling for ecological products (more so in Cyprus than in Sweden).
[31] Gonçalves et al. (2016)	Journal of Business Research	197 responses from students in executive courses at Portuguese University and on the Facebook page of a supermarket chain that sells biological products	Functional value, Social value, Emotional value, Conditional value, Epistemic value	The results show that the functional value is almost always necessary but is not sufficient by itself for predicting green buying. However, three "causal recipes" formed with the functional value are sufficient. These recipes use the emotional, conditional, and social values combined individually with the functional value. Three other combinations of consumption values are also sufficient for predicting green buying. In contrast, the absence of the functional value is a sufficient condition for not green buying, as well as three other "causal recipes".

Table 1. *Cont.*

Authors and Year of Publication	Journal	Sample	Determinants	Main Findings
[32] Grimmer and Bingham (2013)	Journal of Business Research	698 residents in Hobart, the capital of Tasmania, Australia	Perceived environmental performance of a company, Environmental involvement	Participants report higher purchase intention for products from high versus low perceived environmental performance (PEP) companies, and that participants' environmental involvement (EI) and product price moderate this relationship. Those with high EI report greater purchase intention for high PEP companies and the reverse for low PEP companies, indicating that participants with high EI are more positively influenced by their perceptions of a company's environmental performance. However, participants are more likely to favor a high PEP company when the relative price of a product is low versus high, irrespective of their level of EI.
[33] Huang et al. (2014)	International Journal of Hospitality Management	458 hotel guests (Shanghai, China)	Environmental consciousness, Cash discount incentives, Environmental protective alternatives	The results show that environmental protection consciousness positively affects green consumer behavior. Cash discount incentives have no effect on the choice of hotel guests to reuse their bed sheet or towels; on the contrary, environmental protective alternatives are great incentives for hotel guests to maintain environmentally friendly behavior. Regarding the demographics of hotels guests, female and younger guests are more inclined to be environmentally friendly.
[34] Jaiswal and Kant (2018)	Journal of Retailing and Consumer Services	351 Indian consumers	Attitude towards green products, Environmental concern, Perceived consumer effectiveness, Perceived environmental knowledge	Green purchase intention (GPI) was significantly and directly driven by Attitude towards green products (AGP), Environmental concern (EC), and Perceived consumer effectiveness (PCE) directly and indirectly via the mediating role of AGP; however, perceived environmental knowledge (PEK) was found to have an insignificant effect on both AGP and GPI in this study. Moreover, the measure of GPI was found to be the fundamental predictor of green purchase behavior (GPB) in the model.
[17] Joshi and Rahman (2015)	International Strategic Management Review	Review of 53 empirical articles on green purchase behavior from 2000 to 2014	N/A	Environmental concerns, product attributes, environmental knowledge and subjective norms emerged as major drivers, whereas high price, low availability, and lack of consumer trust in green products emerged as major barriers to purchase of green products.

Table 1. *Cont.*

Authors and Year of Publication	Journal	Sample	Determinants	Main Findings
[35] Joshi and Rahman (2019)	Ecological Economics	425 young consumers from India	Drive for environmental responsibility, Spirituality, Perceived consumer effectiveness, Attitude towards sustainable purchasing, Perceived marketplace influence, Consumers' knowledge regarding sustainability-related issues	Results indicate that the drive for environmental responsibility, spirituality, and perceived consumer effectiveness are the key psychological determinants of consumers' sustainable purchase decisions.
[36] Judge et al. (2019)	Journal of Cleaner Production	330 Australian residents who had recently purchased property were recruited via an online panel provider	Attitudes, Subjective norms, Perceived behavioral control	Attitudes, subjective norms, perceived behavioral control, and green consumer identity each independently predicted higher intentions to purchase a sustainability-certified dwelling, and altogether accounted for 65% of the variance in intentions. Green consumer identity also significantly moderated the effect of subjective norms on intentions. In a separate analysis, the two strongest predictors of willingness to pay for a sustainability certification were familiarity with current sustainability certifications and subjective norms.
[37] Kabadayı et al. (2015)	Procedia—Social and Behavioral Sciences	172 university students (Turkey)	Consumer's guilt, Self-monitoring, Perceived consumer effectiveness	The study revealed that perceived consumer effectiveness is the most influential construct on green purchase intention. Consumer guilt has been found to have both direct and indirect enhancing effects on green purchase intention of young consumers.
[38] Kanchanapibul et al. (2014)	Journal of Cleaner Production	110 responses from young generation (less than 30 years old; UK)	Person's effect, Knowledge	The analysis result confirms that the ecological effect and knowledge are significant in determining young consumers' green involvement as well as their actual purchase.
[39] Khan and Mohsin (2017)	Journal of Cleaner Production	260 respondents (customers who frequent a monthly organic produce market in Lahore, Pakistan)	Functional value (price, quality) Social value, Conditional value, Epistemic value, Environmental value, Emotional value	The results indicate that functional value (price), social value, and environmental value have a positive impact on green product consumer choice behavior, whereas conditional value and epistemic value have a negative effect. Functional value (quality) and emotional value do not influence green product consumer choice behavior. As a moderator, emotional value has a significant effect on the role of functional value, social value, conditional value, epistemic value, and environmental value.

Table 1. *Cont.*

Authors and Year of Publication	Journal	Sample	Determinants	Main Findings
[40] Kilbourne and Pickett (2008)	Journal of Business Research	A random telephone survey of 337 US adults	Materialistic values, Environmental beliefs, Environmental concern	The study demonstrates that materialism has a negative effect on environmental beliefs, and these beliefs positively affect environmental concern and environmentally responsible behaviors.
[41] Kumar et al. (2017)	Journal of Retailing and Consumer Services	235 students pursuing postgraduate and doctoral studies in a leading management school in India	Environmental knowledge, Attitude, Subjective norm	The attitude towards environmentally sustainable products mediates the relationship between environmental knowledge and purchase intention. Next, this mediated relationship is moderated by environmental knowledge. Third, the subjective norm is not significantly related to the purchase intention—contrary to established findings—in a collectivistic culture considered in this study. Last but not least, the direction of subjective norm as a moderator on relationship between environmental knowledge and attitude is not supported.
[42] Lai and Cheng (2016)	The Social Science Journal	266 responses from local undergraduate students (Hong Kong)	Green marketing practice, Consumers' attitudes towards the environment, Perceived seriousness of environmental problems, Perceived environmental responsibility	This study finds that undergraduate students' views of the importance of green marketing practices are primarily related to their environmental attitudes and their perceived environmental responsibility and the perceived seriousness of environmental problems, whereas their attitudes and perceived responsibility are in turn related to their willingness to purchase green products.
[43] Liobikienė et al. (2016)	Ecological Economics	Eurobarometer survey conducted in 2012 (covering all the EU countries; due to lack of data, only Luxemburg is excluded)	Knowledge of green products, Confidence in green products, Subjective norms, Perceived behavioral control	The subjective norms and interaction of knowledge and confidence in green products significantly determined the green purchase behavior in all countries. According to the cross-culture studies, all cultural dimensions did not have significant influence on green purchase behavior. However, cultural dimensions are related to factors which directly influence green purchase behavior.

Table 1. *Cont.*

Authors and Year of Publication	Journal	Sample	Determinants	Main Findings
[44] Liobikienė et al. (2017)	Journal of Cleaner Production	2012 Eurobarometer's survey (868 respondents from Lithuania and 857 respondents from Austria)	Gender, Environmentally friendly behavior, Environmentally friendly social norm, Importance of product price	The results showed that green purchase behavior was significantly related to environmentally friendly behavior; however, the determinants were different. The environmentally friendly social norms and gender had a significant impact on both green purchase and environmentally friendly behavior. Meanwhile, the importance of product prices negatively influenced only purchase behavior.
[45] Mobrezi and Khoshtinat (2016)	Procedia Economics and Finance	279 women consumers living in western Tehran (Iran)	Subjective norms, Personal naturalism, Social impacts, Positive attitude towards green product, Environmental concern, Personal self-image	The results show that positive attitude towards green products affects personal self-image, social impacts, and willingness to buy green products. The willingness to buy green products does not affect environmental concerns and subjective norms; therefore, consumers' willingness to buy green products increases with increasing environmental concerns. However, positive attitude towards green products does not affect environmental concerns, subjective norms, and personal naturalism. Willingness to buy green products also does not affect the social impact or personal self-image.
[46] Moser (2016)	Journal of Retailing and Consumer Services	German nationwide panel (N = 1760)	Attitude, Personal norms, Willingness to pay	Results show that consumers care for the environment and mirror environmental attitudes in their purchasing behavior (self-reported). In particular, norms and willingness to pay are strong predictors of self-reported purchasing behavior (SRB). However, SRB is not transferred to actual purchasing behavior.
[47] Mostafa (2009)	Expert Systems with Applications	418 responses from citizens in Kuwait	Perceived environmental knowledge, Environmental concern, Skepticism towards environmental claims	The results show that major variables affecting green consumption are related to altruistic values, environmental concern, environmental knowledge, skepticism towards environmental claims, attitudes towards green consumption, and intention to buy green products.

Table 1. *Cont.*

Authors and Year of Publication	Journal	Sample	Determinants	Main Findings
[48] Nguyen et al. (2016)	Journal of Retailing and Consumer Services	682 shoppers in large electronic appliance stores (Vietnam)	Biospheric values, Environmental protection, Subjective norm, Perceived inconvenience, Environmental self-identity	The findings reveal that biospheric values encourage active engagement in proenvironmental purchasing behavior by enhancing consumers' attitudes towards environmental protection, their subjective norms and environmental self-identity, and by mitigating their perceived inconvenience associated with eco-friendly products. Additionally, these findings were moderated by consumers' past purchasing behavior.
[49] Paul et al. (2016)	Journal of Retailing and Consumer Services	521 Indian consumers	Environmental concern, Attitude, Subjective norm, Perceived behavioral control	Consumer attitude and perceived behavioral control significantly predicts purchase intention, whereas subjective norm does not. Findings also suggest that TPB mediates the relationship between environmental concern and green products purchase intention. An additional construct in the new model considerably contributes to improving the understanding of green products purchase intention formation and could become a sustainable mainstream variable.
[50] Ritter et al. (2015)	Journal of Cleaner Production	337 respondents from Porto Alegre, the fourth most populated region in Brazil	Quality of life, Environmental consciousness, Quality and price, Information and knowledge, Social context	The elements of information and knowledge, environmental attitude, social context, and environmental consciousness were strongly correlated with green consumption. However, the quality and price of green products has shown a weaker relationship with consumption.
[51] Roberts (1996)	Journal of Business Research	582 adult consumers from a nationwide survey	Perceived consumer effectiveness, Environmental concern	Perceived consumer effectiveness was found to be the best predictor of ecologically conscious consumer behavior.
[52] Sreen et al. (2018)	Journal of Retailing and Consumer Services	452 educated Indian consumers who are at least graduates	Attitude towards green products, Subjective norms, Perceived behavioral control	The findings of the study suggest that collectivism is significantly related to all three predictors (attitude, subjective norms, and internal perceived behavioral control) of green purchase intention, whereas long-term orientation is insignificantly related to attitude towards green products while examining the direct effects. Green purchase intention is also significantly related to man–nature orientation.

Table 1. *Cont.*

Authors and Year of Publication	Journal	Sample	Determinants	Main Findings
[53] Suki (2016)	Journal of Cleaner Production	200 members of the public in the Federal Territory of Labuan, Malaysia	Functional value (price, quality), Social value, Emotional value, Conditional value, Epistemic value, Environmental concern	Empirical results disclosed that social value has the greatest impact on consumer environmental concern, as shown in the purchase of green products, and that epistemic value and functional value quality come next. However, functional value price, emotional value, and conditional value make no contribution to the purchase of green products as a result of consumers' environmental concern.
[54] Sun et al. (2019)	Journal of Cleaner Production	3356 observations in China (30 provinces, not including Tibet)	Environmental knowledge, Environmental concern, Environmental attitude, Environmental stress, Environmental perceived validity	At the individual level, population factors and the external environment have a greater impact on green consumer behavior, because psychological factors, environmental attitudes, and environmental awareness promote green consumption. Environmental issues affect green consumption indirectly by affecting environmental knowledge in the external environment. In the external environment, environmental pressure and environmental knowledge have a positive impact on green consumption behavior. Media preferences influence green consumption through environmental perception. Among demographic factors, education affects green consumption through environmental perception; age and urban or rural household registration also affect green consumption behavior. At the level of environmental pollution, environmental tendencies positively influence green consumption. Of these, urbanization has the strongest impact on green consumption. Consumption levels and the rates of greening and Internet penetration have no significant impact on green consumption.
[55] Tan et al. (2016)	Australasian Marketing Journal	5210 usable responses from Australia and 304 from New Zealand	Consumers' green perception	Researchers identified five dimensions underpinning consumers' green perceptions. These include "product perception", "hard to be green", "green stigma", "perceived sense of responsibility", and "readiness to be green". This paper demonstrates the explanatory power of consumers' green perceptions in predicting green consumption behavior, in particular their likelihood to purchase green household products.

Table 1. *Cont.*

Authors and Year of Publication	Journal	Sample	Determinants	Main Findings
[56] Taufique and Vaithianathan (2018)	Journal of Cleaner Production	175 responses from India (Hyderabad, New Delhi, and Kolkata)	Attitude towards environment, Subjective norm, Perceived consumer effectiveness	The results show that attitudes and perceived consumer effectiveness both have a significant direct and indirect positive influence on ecologically conscious consumer behavior. However, the subjective norm seems not to have any significant influence on behavioral intention leading to ecologically conscious consumer behavior.
[57] Thøgersen and Noblet (2012)	Energy Policy	Randomly selected residents of Maine, USA, 18 years or older	Environmental concern	Findings demonstrate that both everyday "green" behavior and the acceptance of an expansion of wind power are rooted in environmental concern and that everyday "green" behavior gives a significant contribution to predicting acceptance of wind power when controlling for environmental concern.
[58] Trivedi et al. (2018)	Journal of Cleaner Production	308 usable responses from Indian consumers	Media influence, Ecological concern, Inward environmental attitude, Outward environmental attitude, Perceived consumer effectiveness, Attitude towards green packaging	The results show that inward environmental attitude and attitude towards green packaging play a pivotal role in shaping green purchase intention. Surprisingly, outward environmental attitude was found to be nonsignificant.
[59] Turkyilmaz et al. (2015)	Procedia—Social and Behavioral Sciences	416 respondents (Turkey)	Inward environmental attitude, Outward environmental attitude	One's inward environmental attitude positively affects his/her green purchasing behavior, and green purchasing behavior positively affects product satisfaction. Also, one's outward environmental attitude positively affects his/her general environmental behavior, and general environmental behavior positively affects life satisfaction.
[60] Vantamay (2018)	Kasetsart Journal of Social Sciences	1000 university students in Thailand	Attitude towards the behavior, Subjective norm, Perceived behavioral control	The results showed that all three independent variables derived from TPB (Attitude towards the behavior, Subjective norm, and Perceived behavioral control) can copredict the intention to perform sustainable consumption behavior.
[61] Yadav and Pathak (2016)	Journal of Cleaner Production	360 young consumers, mostly university and college students from India	Environmental concern, Environmental knowledge, Attitude, Subjective norm, Perceived behavioral control	Environmental concern among individuals and attitude towards green products were identified as the main determinants of purchase intention towards green products among young consumers. Overall, it can be inferred that young Indian consumers are concerned about the current environmental problems and have a positive attitude towards purchasing green products for their future use.

Table 1. *Cont.*

Authors and Year of Publication	Journal	Sample	Determinants	Main Findings
[62] Yadav and Pathak (2017)	Ecological Economics	620 respondents from India	Attitude, Subjective norm, Perceived behavioral control, Perceived value, Willingness to pay premium	The findings reported that TPB fully supported the consumers' intention to buy green products, which in turn influences their green purchase behavior. Inclusion of additional constructs was supported in the TPB as it improved the predicted power of the TPB framework in predicting consumer green purchase intention and behavior.
[63] Yu et al. (2017)	Journal of Cleaner Production	1586 Taiwanese university undergraduate students	Psychological distance, Social responsibility, Environmental ethics, Self-responsibility, Consumer loyalty	Self-responsibility fully mediates the relationships between environmental ethics and purchase intentions and consumer loyalty, which demonstrates the importance of using more environmentally responsible strategies to promote proenvironmental behavior.
[64] Zainudin et al. (2014)	APCBEE Procedia	117 samples from Malaysia	Environmental knowledge, Environmental awareness, Attitude towards behavior, Peer pressure, Energy labels	Results show mean correlations between consumers' awareness, knowledge, attitude, social norms, and energy efficiency labels with purchase intention. Energy labeling shows a negative correlation with green purchasing behavior. This finding demonstrates that energy labeling was fruitless in delivering a good message in encouraging consumer buying decision.
[65] Zhao et al. (2014)	Journal of Cleaner Production	500 valid responses from four urban districts, including Shinan, Shibei, Sifang, and Licang	Personal influence (demographics, knowledge), Attitudes towards green consumption (cognition, affection)	The results indicate that attitudes are the most significant predictor of purchasing behavior. Using behavior is mainly determined by income, perceived consumer effectiveness, and age, while recycling behavior is strongly influenced by using behavior.

3. Hypotheses Development

Looking at the past decades, we can observe rapid economic growth and patterns of rising consumer consumption worldwide, which are the main causes of environmental deterioration, derived from overconsumption and overutilization of limited natural resources [66]. On one hand, sustainable production emerged as a concept at the United Nations Conference on Environment and Development in 1992 and is closely related to the concept of sustainable development [67]. On the other hand, we can talk about sustainable consumption. However, unsustainable patterns of production and consumption, which result in irrational production and consumption of products made from scarce and finite natural resources, lead to continuous environmental deterioration. Sustainable production thus involves companies and organizations that offer sustainable services and make sustainable products, whereas sustainable consumption targets consumers [67]. It is clear and obvious that the development of more environmentally sustainable consumption and production systems depends upon consumers'

willingness to engage in "greener" consumption behaviors [68]. Thus, to pursue sustainability and sustainable development, we should try to find an equilibrium between production and consumption. Eco-innovations, which focus on incorporating environmental sustainability practices at every stage of creation of goods and services and green consumption, should thus be encouraged in order to pursue sustainable development [67]. For almost two decades, researchers have focused on companies' motives for adopting and investing in eco-innovation; however, less research has been done on the subject of green consumerism. The reasons and objectives which explain the actions and practices of ecologically oriented consumers (e.g., selecting, purchasing, and using eco-products) are myriad [69] and thus require further research. A conceptual framework grounded in this study is based on The Theory of Planned Behavior [70], which considers human beings as rational and postulates that attitudes, subjective norms, and perceived behavioral control determine intentions. Based on the literature review, we have noticed that prior research works anchored their model in TPB. However, considering prior research works, we extended the model to better fit the topic of green consumerism, which differs from consumerism in general, in that it engages the environmental dimension as well and thus puts environmental concern ahead of consumers' familiarity with and consciousness of eco-products and perceived sense of environmental responsibility, as it has been found that consumers' environmental concern does not necessarily lead to purchase of eco-products, although it leads to other behaviors related to green consumerism.

Many researchers [15] have, based on existing literature, deemed consumers' environmental concern to be a predecessor of environmental knowledge. In theory, environmental concern should be positively associated with environmental knowledge, but prior research on this subject offers inconclusive findings [15]. As researchers in their work use familiarity interchangeably with knowledge, we refer to the construct related to knowledge of eco-products as familiarity with eco-products. In addition, other researchers [16] have found environmental concern to be positively related to individuals' moral or ethical obligations and/or personal norms and sense of responsibility. It seems that consumers who feel and exhibit a strong sense of responsibility towards green products will be more likely to select green products [16]. True moral obligation, or a personal sense of responsibility, thus enhances the attitude–behavior relationship, meaning that environmental concern translates into green purchases if it is mediated by consumers' sense of responsibility. In addition, environmental concern exerts an influence not only on consumers' familiarity with eco-products and their sense of responsibility, but also on consumers' consciousness of eco-products. Consumers that pay more attention and importance to environmental and social consequences and thus express greater environmental concern are also more conscious of eco-products and their features [17]. Based on the above discussion, we formulate the following hypotheses:

Hypothesis 1. *Consumers' environmental concern positively affects their familiarity with eco-products.*

Hypothesis 2. *Consumers' environmental concern positively affects their consciousness of eco-products.*

Hypothesis 3. *Consumers' environmental concern positively affects their perceived sense of environmental responsibility.*

Peattie [68] stressed that environmental knowledge is frequently assumed to drive green consumption behavior. Based on a literature review of 53 empirical articles on green purchase behavior conducted by Joshi and Rahman [17], we can observe that knowledge, or familiarity in our case, was the most studied variable when exploring the factors that influence green purchase behavior. Joshi and Rahman [17] found that out of 18 studies, 15 found knowledge of environmental issues to exert a positive effect on consumers' purchase intention and actual purchase of eco-products. Three studies found no connection between the previously mentioned constructs, while two other studies found a negative effect of lack of information on green purchase behavior [17]. Furthermore, a study conducted on a sample of Kazakhstani consumers found that consumers' environmental concern,

knowledge, belief, and attitude towards renewable power positively affected their willingness to pay a premium price for renewable energy [15]. Moreover, other researchers [15] found that consumers' knowledge of renewable energy drives the connection between consumers' sense of social responsibility and attitude towards renewable energy, and this relationship enhanced the consumers' willingness to pay more for such energy. Also, sense of responsibility has been found to have a positive effect on green purchase behavior [71]. Based on previous findings, the following hypothesis is deduced:

Hypothesis 4. *Consumers' familiarity with eco-products positively affects their purchase intention.*

Researchers [18] found that consumers' environmental consciousness may influence their purchasing decisions. They stress that consumers' environmental consciousness often explains more than 20% of the variation in the purchasing measures. Consumers' consciousness also involves favorable functional and ethical attributes and high quality, which act as strong motives for actual purchase of eco-products [17]. Researchers [17] stress that consumers generally make a trade-off between environmental concern and product attributes when purchasing eco-products. Consumers tend to evaluate various environmental, social, and individual consequences of an eco-product purchase. Consumers that deem environmental and social consequences as more important than individual consequences will look for green attributes of products (i.e., will exert greater consciousness of eco-products), whereas those that deem them less important will seek functional attributes [17]. That means that consumers that do not express consciousness of eco-products and seek mostly functional attributes will likely not purchase eco-products, despite having high environmental concern. In sum, consciousness of eco-products channels the effect of environmental concern into purchase intention of eco-products.

Hypothesis 5. *Consumers' consciousness of eco-products positively affects their purchase intention.*

According to Lin and Syrgabayeva [15], consumers who consider themselves environmentalists and feel responsible for protecting the environment are more inclined to use renewable energy. Moral obligation or personal sense of responsibility thus affects consumers' environmental behavior and works as an important factor in the environmental behavior of consumers [66,72]. Likewise, Prakash and Pathak [73] stressed that strong personal norms have the strength and ability to affect/change the consumption patterns of consumers and thus facilitate eco-friendly behavior (i.e., intention to buy eco-products). The results of prior research conducted by Prakash and Pathak [73] demonstrate that personal responsibility emerged as the strongest predictor of the purchase intention of eco-friendly packaged products among other important predictors of the purchase intention of eco-friendly packaged products. Their results thus suggest that young consumers possess strong ethical motives and high moral values which favor protection of the environment. As personal responsibility is significantly and positively related to purchase intention, researchers [73] conclude that individual and social consequences are in association with green product purchase. Consumers thus seek to fulfill their personal satisfaction and act in compliance with their personal responsibility towards the environment, which ultimately affects their purchasing decisions. In conclusion, a personal sense of responsibility (consumers' personal norm or moral obligation) was found to be the most important determinant of consumers' attitudes towards green products [66].

Hypothesis 6. *Consumers' perceived sense of environmental responsibility positively affects their purchase intention.*

Figure 1 depicts all the hypotheses and thus illustrates the conceptual model, which has also been empirically tested.

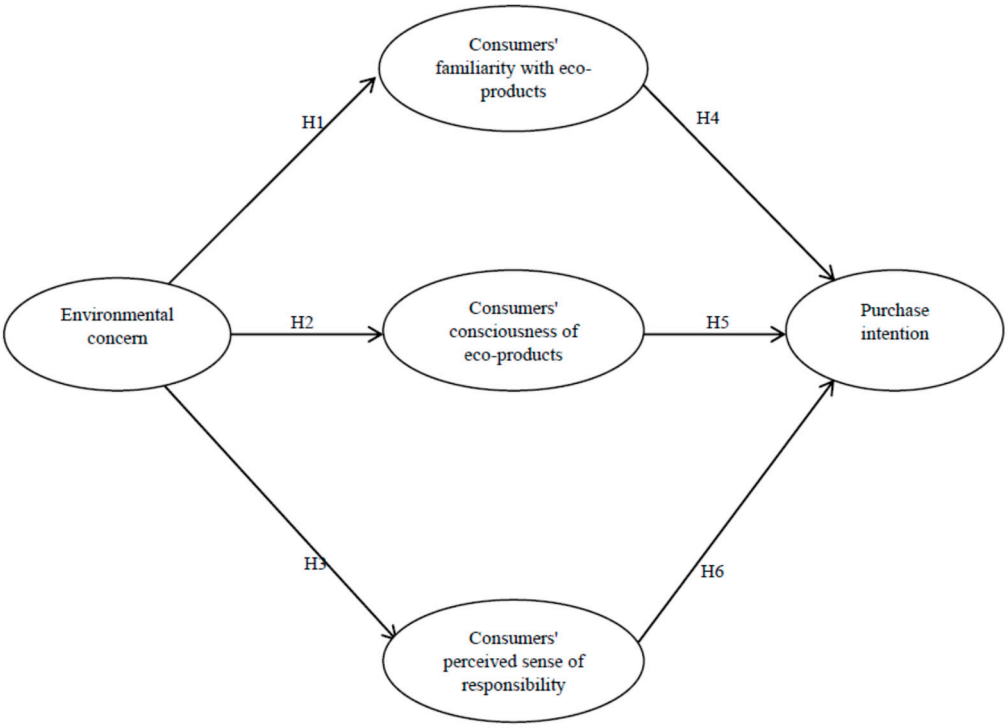

Figure 1. Conceptual model. H—Hypothesis.

4. Materials and Methods

This section consists of research context description (Section 4.1), questionnaire development for data collection (Section 4.2), and data collection and presentation of sample characteristics (Section 4.3).

4.1. Research Context Description

We often hear Slovenia referred to as a "green" country. This characterization is one way that Slovenia brands itself as a country. With the development of the national brand "I feel Slovenia" in 2007, Slovenia established a foundation for its green orientation and its implementation in everyday life [74]. The community-based branding approach [75] was used in brand development, as several influential stakeholders were invited to be part of the country branding. A community-based branding approach should encourage greater commitment of people to be part of the branding process and to truly live the brand in daily life. The "I feel Slovenia" brand focuses on the theme of nature and natural concepts [74,76].

There are various aspects of being green. Slovenia has many green areas and is quite active in environmental activities pertaining to companies' environmental performance. The country ranks 5th out of 123 countries in environmental performance, and 19th out of 126 in the number of ISO14001 environmental certificates issued [77]. The latter aspect, which regards good environmental performance, is also supported by the results gathered by Eco-Innovation Observatory [78], which show that in 2016, Slovenia took the 8th place out of 25 (and ranks above the EU average) in reference to the Eco-Innovation Index. The Eco-Innovation Index covers eco-innovation performance of the EU Member States and thus demonstrates how well individual Member States perform in different dimensions related to eco-innovation compared to the EU average. It encompasses various aspects of eco-innovation, represented by 16 indicators grouped in the following five dimensions: eco-innovation inputs, eco-innovation activities, eco-innovation outputs, resource efficiency, and socio-economic outcomes [78]. Moreover, in 2016, Slovenia became the world's first country to be declared a green destination, based on an assessment by Green Destinations; in the same year, its capital, Ljubljana, was chosen as the European green capital of 2016. In 2017, additional important recognition was announced

by the National Geographic, which recognized the efforts of Slovenia and rewarded it with the World Legacy Award in the Destination Leadership category. The World Legacy Award is given to countries that demonstrate the following efforts/practices: environmental best practices, protection of cultural and natural heritage, benefits to local communities, and educating travelers.

Because this green aspect of Slovenia is closely related to "I feel Slovenia" [79], it is also reflected in the mind and consciousness of Slovenians. In recent years, much has been done in the country with regard to the environment, above and beyond the government's regulations and companies' reactions to them. Many startups have begun their entrepreneurial path in the field of environmental protection or building/creating products or services that are environmentally friendly. Thus, we can see that companies do not only react to the regulations imposed by the government, but also strive to find ways to protect the environment with their activities or new businesses. However, when we discuss the pathway to sustainability, we cannot leave out the mindset of consumers, which has been affected heavily by the media exposure of natural disasters all over the world and products that are safer for the environment and the end-user. Consumers thus prefer products that are environmentally friendly and are more environmentally responsible.

4.2. Questionnaire Development for Data Collection

We collected data using an online survey. We designed the questions based on already-existing measures, which we have adapted to some extent. All scales were measured with several items, by adopting a seven-point Likert scale ranging from 1—strongly disagree to 7—strongly agree. Certain scales (such as consumers' perceived sense of environmental responsibility) contained items that were reverse scored during the data analysis. We measured five constructs in total, which are as follows: environmental concern, consumers' familiarity with eco-products, consumers' consciousness of eco-products, consumers' perceived sense of environmental responsibility, and consumers' purchase intention. The construct of environmental concern was measured with five items adopted and adapted from Thøgersen and Noblet [57], whereas consumers' familiarity with eco-products was measured with five items adopted from Maniatis [80]. Furthermore, we used six items adapted from Maniatis [80] to measure consumers' consciousness of eco-products, and consumers' perceived sense of environmental responsibility was adapted from Tan et al. [55] (three items). Lastly, we used three items adapted from Prakash and Pathak [73] to measure consumers' purchase intention. We modified items of only two constructs, namely, Environmental concern and Consumers' perceived sense of environmental responsibility. In each one, we removed one item (item "The so-called 'Ecological Crisis' facing humankind has been greatly exaggerated" for the construct Environmental concern and item "Environmental issues need immediate attention" for the construct Consumers' perceived sense of environmental responsibility). The items were removed, because in each construct, one item was lowering the KMO value of the construct and demonstrated low communality value. The exact measures (names and items of all scales) used in the questionnaire with their measurement characteristics are presented in Table 2.

4.3. Data Collection and Sample Characteristics

In order to collect the data, we sent out the questionnaire to 9927 random e-mail addresses of people aged 18 or older. We addressed only consumers living in Slovenia, and the questionnaire was sent out in the Slovenian language. The data collection took place between 14 July and 20 July, 2017, during which period 705 questionnaires were completed. Therefore, a total of 705 usable responses were considered/used in further analysis for testing the proposed conceptual model.

Despite engaging a large sample of Slovenian consumers, the consumer group involved in this study is unique due to country-specific factors, which are explained in more detail in Section 4.1. Deriving from this, we may infer that Slovenian consumers are keener on eco-products and more likely to demonstrate environmentally friendly attitude and behavior.

With regard to demographic characteristics (see Table 3), the respondents included 351 males (49.8%) and 354 females (50.2%). Concerning the age of respondents, 109 respondents (15.5%) were between 18 and 34 years old, 118 (16.7%) were between 35 and 44, 145 (20.6%) were between 45 and 54, 147 (20.9%) were between 55 and 64, and 179 respondents (25.4%) were 65 or older. Regarding the respondents' education, 481 had completed elementary high school, seven only elementary school, 190 had received a bachelor's degree, and 26 respondents had a higher educational degree (e.g., specialization, MBA, master's degree, or PhD).

Table 2. Measurement model.

Latent Variables and Their Measurement Items	Completely Standardized Loading	*p*	Composite Reliability	AVE	Cronbach's Alpha
Consumers' environmental concern					
We are approaching the limit of the number of people the earth can support.	0.55				
If things continue on their present course, we will soon experience an ecological catastrophe.	0.79	*	0.845	0.525	0.842
The earth is like a spaceship with very limited room and resources.	0.65	*			
I am concerned about the effect of global warming.	0.81	*			
I am concerned about air quality.	0.79	*			
Consumers' consciousness of eco-products					
Please rate your consciousness about presence of:					
ecological labels in the eco-products	0.86				
environmental certification of the eco-products	0.87	*			
nonpolluting ingredients in the eco-products	0.85	*	0.928	0.682	0.925
recyclable packaging of the eco-products	0.80	*			
opportunity for cost reduction using the eco-products	0.76	*			
nice and clean appearance of the eco-products	0.81	*			
Consumers' familiarity with eco-products					
Please rate your familiarity of:					
environmental issues	0.80				
environmental solutions	0.89	*	0.929	0.724	0.923
ecological (green) labeling/standards	0.81	*			
environmental benefits of eco-products	0.90	*			
economic benefits of eco-products	0.85	*			
Consumers' perceived sense of environmental responsibility					
I cannot help to slow down environmental deterioration.	0.64	*			
I do not need to do anything because the environment is not a major concern in Slovenia.	0.68	*	0.710	0.449	0.674
I do not feel responsible for the environment.	0.69	*			
Consumers' purchase intention of eco-friendly packaged products					
I would buy eco-friendly packaged products in the near future.	0.89				
I plan to buy eco-friendly packaged products on a regular basis.	0.85	*	0.923	0.799	0.925
I intend to buy eco-friendly packaged products because they are more environmentally friendly.	0.94	*			

Note: * *p*-values are significant at the 0.05 level.

Table 3. Sample data demographic characteristics.

Sample Data Demographic Characteristics		Frequency	Percentage (%)
Gender	Male	351	49.8
	Female	354	50.2
Age	18–34 years	109	15.5
	35–44 years	118	16.7
	45–54 years	145	20.6
	55–64 years	147	20.9
	65 years and above	179	25.4
Education	Elementary school	7	1.1
	High school	481	68.3
	Bachelor's degree	190	26.9
	Specialization, MBA, master's degree, or PhD	26	3.7

5. Results and Discussion

In this section, we will first present the construct validity of the measurement model (Section 5.1), followed by analysis of the conceptual model and hypotheses testing (Section 5.2).

5.1. Construct Validity of the Measurement Model

Confirmatory factor analysis (CFA) was conducted to examine reliability and validity of the measurement model (Table 2). We used multiple fit criteria to assess the overall fit of the model. The model showed good fit (chi-square 500.928; df 199; NNFI 0.966; CFI 0.971; IFI 0.971; RMSEA 0.046) and reliability, as the Cronbach's alpha of the model was 0.920. Results imply that the model fit indices suggest an acceptable fit to the data and a usable model that ensures the data and results are interpreted reliably. Moreover, Table 2 illustrates factor loadings; it can be noted that all factor loadings for each item are above 0.50, and significantly associated with their respective constructs (all *p*-values are significant at the 0.05 level). This confirms that the convergent validity is ensured [81]. In addition, reliability of measured constructs is acceptable, as the composite reliability of all the constructs is greater than 0.70 [82]. Furthermore, we calculated the square root of average variance extracted (AVE) for each construct to examine the convergent validity of the measurement scales. We can see in Table 2 that the value of AVE for each construct is greater than the threshold limit of 0.50, which implies that the convergent validity is achieved (with the exception of the construct of Consumers' perceived sense of environmental responsibility, which is slightly lower). Overall, the results depicted in Table 2 imply that the reliability and construct validity of the measurement model are adequately supported.

Table 4 depicts correlations between five latent variables, which are comprised in the measurement model. We can see that all correlations among the different constructs (consumers' environmental concern, consumers' consciousness of eco-products, consumers' familiarity with eco-products, consumers' perceived sense of environmental responsibility, and consumers' purchase intention) are statistically significant.

Table 4. Correlations between latent variables comprised in the measurement model.

	EC	CC	CF	CPER	PI
EC	1				
CC	0.56 *	1			
CF	0.39 *	0.62 *	1		
CPR	0.27 *	0.23 *	0.14 *	1	
PI	0.48 *	0.63 *	0.49 *	0.29 *	1

Note: EC = consumers' environmental concern; CC = consumers' consciousness of eco-products; CF = consumers' familiarity with eco-products; CPER = consumers' perceived sense of environmental responsibility; PI = consumers' purchase intention; * *p*-values are significant at the 0.05 level.

Common Method Variance

As we collected the data with a cross-sectional research design, we thus conducted a common method variance (CMV) assessment, starting with a Harman's single factor test. Researchers [83] stressed that if CMV exists, a single factor will emerge from the factor analysis of all survey items. Therefore, we conducted an exploratory factor analysis in SPSS by using all survey items from the 705 questionnaires. The unrotated principal components factor analysis results demonstrate that no factor accounted for the majority of variance, thus indicating that the data do not appreciably suffer from common method bias. The first factor captures 40.11% of the variance, which suggests the absence of a CMV problem.

5.2. Analysis of Conceptual Model and Hypotheses Testing

All constructs were assessed by using exploratory and confirmatory factor analyses. Construct validity and reliability of the measurement model have also been assessed, and the results related to the construct validity for the green consumerism model have been presented (see Section 5.1). From Table 2, we can observe that reliability statistics were over the threshold of 0.70 for all constructs with the exception of one (i.e., Consumers' perceived sense of environmental responsibility), and thus we can conclude that all constructs demonstrate acceptable reliability statistics. The only construct that demonstrated somewhat poor psychometric characteristics is Consumers' perceived sense of environmental responsibility, but this was only slightly below the threshold; therefore, we have kept this construct in the final model, because it represents an important part of the model. The lower results for this construct can be partly explained by the small number of variables (three) included in the Consumers' perceived sense of environmental responsibility construct. For scales that consist of a small number of items, Pedhazur and Schmelkin [84] have suggested that the acceptable Cronbach's alpha limit is as low as 0.60 or 0.50 to still be acceptable for further analysis. Regarding the goodness-of-fit measures, we can conclude that these also show good results and imply that there is an acceptable model fit for all constructs comprised in our measurement model.

In Section 5.1, we conducted a confirmatory factor analysis to assess the quality and adequacy of our measurement model. As the reliability and validity of comprised constructs were adequate, we focus in this section on testing the structural model and causal relationship. To examine the proposed model, we applied structural equation modeling (SEM) in order to examine the structural model and causal relationships. Structural equation modeling simultaneously evaluates multiple related dependent and independent relationships (in our case, relationships between several determinants, such as consumers' environmental concern, consumers' consciousness of eco-products, consumers' familiarity with eco-products, consumers' perceived sense of environmental responsibility, and purchase intention). We deemed the use of structural equation modeling the most appropriate because it allows us to test the hypothesized relationships and takes into account measurement error (estimates) in the evaluation process [85]. In brief, SEM examines the structure of interrelationships expressed in a series of equations, similar to a series of multiple regression equations, and in this way attempts to explain the relationships between several variables [82]. These multiple regression equations depict all of the relationships among constructs (such as dependent and independent variables, which can be unobservable or latent factors represented by multiple variables) involved in the analysis [82].

The resulting model of green consumerism with estimated relationships (i.e., standardized solution) is illustrated in Figure 2. The model's goodness-of-fit indices are as follows: chi-square 689.144; df 198; NNFI 0.944; CFI 0.952; IFI 0.952; RMSEA 0.059; Cronbach's alpha 0.920. Based on the obtained results, we can infer that the model demonstrates a moderate fit to the data. Following the depicted model, we can conclude that we found the empirical evidence to support our hypotheses; thus, all the posited hypotheses are empirically supported, demonstrating positive and significant relationships among the constructs. Figure 2 illustrated the tested structural equation model, encompassing the standardized coefficients of each path; the asterisk (*) means that the significance of the relationships between constructs is significant at the 0.05 level ($p < 0.05$). The results of the structural equation modeling offer

empirical evidence obtained on the basis of 705 consumers and thus provide support for all of the hypotheses (H1–H6), indicating that all of them are supported.

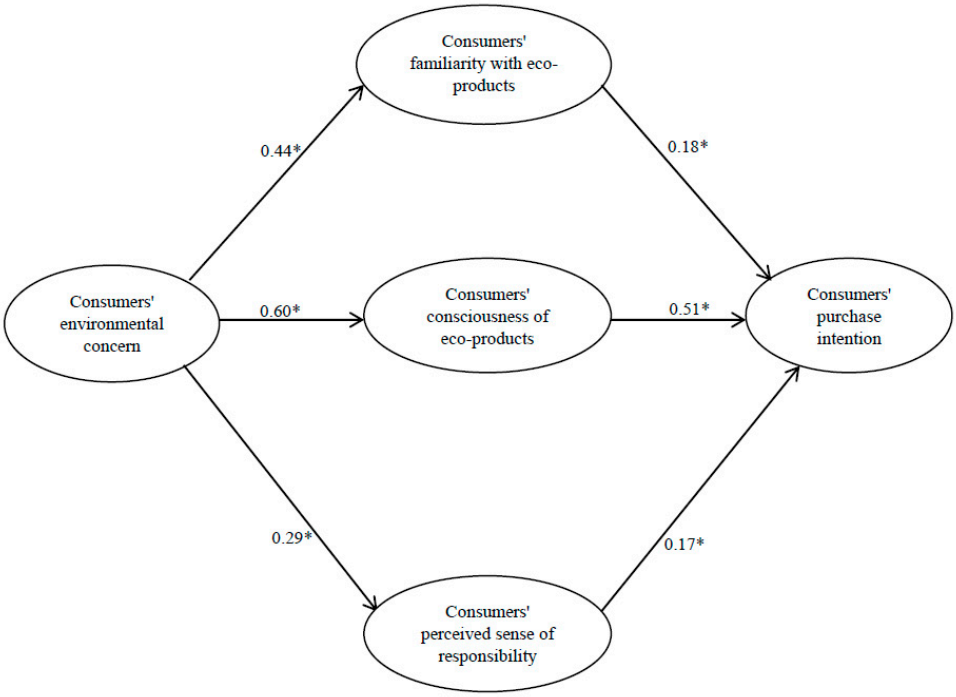

Figure 2. Structural equation model result for the conceptual model. Note: * *p*-values are significant at the 0.05 level.

The results of the present study suggest that the environmental concern of consumers exerts a positive impact on consumers' familiarity with eco-products, on consumers' consciousness of eco-products, and on consumers' perceived sense of environmental responsibility, thus lending support to Hypotheses 1, 2, and 3. In sum, we found a positive effect of consumers' environmental concern on consumers' familiarity with eco-products, which offers support to Hypothesis 1, even though the findings of previous research are not always consistent and offer inconclusive findings, as noted by researchers [15]. Moreover, pertaining to Hypotheses 2 and 3, we found that consumers' environmental concern positively affects their consciousness of eco-products as well as their perceived sense of environmental responsibility, which is consistent with the research of Doran [16], who found that individuals' moral or ethical obligations and personal sense of responsibility enhance the attitude–behavior relationship. Furthermore, the results of this study indicate that consumers' familiarity with eco-products positively affects their purchase intentions (Hypothesis 4), which is in line with findings of other researchers [17,68]. In addition, we found support for Hypothesis 5, which states that consumers' consciousness of eco-products positively affects their purchase intention. This finding is consistent with the prior research of Schlegelmilch et al. [18] and Joshi and Rahman [17]. Finally, the results also indicate a positive effect of consumers' perceived sense of environmental responsibility on their purchase intention (Hypothesis 6), which is in line with the research of Makatouni [71], who found that a sense of responsibility exerts a positive effect on green purchase [15,66,72]. According to the research of Prakash and Pathak [73], personal responsibility emerged as the strongest predictor among other important predictors of the purchase intention of eco-friendly products. Likewise, our findings demonstrate a positive effect of perceived sense of environmental responsibility on purchase intention of eco-products, whereas the strongest mediator (in our case) has been shown to be consumers' consciousness of eco-products. In sum, we conclude that consumers' familiarity with eco-products, their consciousness of eco-products, and the perceived sense of environmental responsibility translate the effect of environmental concern into purchase intention of eco-products.

5.3. Differences between Genders

In order to test if there are any differences between female and male consumers concerning the constructs we adopted, analysis of variance (ANOVA), using SPSS, was conducted. We tested for differences between genders regarding the constructs encompassed in our study. Table 5 demonstrates that the differences between gender occurred in the following constructs: environmental concern, consciousness of eco-products, and perceived sense of environmental responsibility. However, no statistically significant difference has been found between female and male consumers regarding their environmental familiarity or green purchase intention. Female consumers seem to be more concerned about the environment. Furthermore, they express greater consciousness of eco-products than male consumers and, lastly, female consumers have a greater perceived sense of responsibility towards environmental issues (these differences have been found to be statistically significant at $p < 0.05$).

Table 5. Mean differences by gender.

Gender	Environmental Concern		Consciousness of Eco-Products		Consumers' Environmental Familiarity		Perceived Sense of Environmental Responsibility		Green Purchase Intention	
	M	SD	M	SD	M	SD	M	SD	M	SD
Female	5.593	1.165	5.450	1.308	4.674	1.330	5.797	1.309	5.708	1.298
Male	5.297	1.311	4.987	1.366	4.483	1.389	5.531	1.243	5.526	1.362
F ratio	10.059 *		21.072 *		3.482		7.620 *		3.289	
Sig.	(0.002)		(0.000)		(0.062)		(0.006)		(0.070)	

Note: M = mean value; SD = standard deviation; * $p < 0.05$.

Our findings related to the differences in gender are in line with previous studies [25,44], which found that green purchase intention motivational factors are greater among female consumers, indicating that women behave in a more environmentally friendly way. In our case, this concerns environmental concern, consciousness of eco-products, and a perceived sense of environmental responsibility. However, we have found that, regarding green purchase intention, no significant differences occurred between female and male consumers, which is not consistent with the findings of prior research [44], which found that female consumers had higher purchase intention than male consumers.

6. Conclusions

In this section we present the summary of findings (Section 6.1), followed by policy and managerial implications (Section 6.2), theoretical implications, contributions, and limitations of the study (Section 6.3), and future research directions (Section 6.4).

6.1. Summary of Findings

The main aim of this paper was to explore the role of consumers in the transition to sustainability. We aimed to examine what drives Slovenian consumers to purchase eco-products. Based on the responses of 705 consumers, we confirmed all six hypotheses. Our main findings demonstrate that consumers' environmental concern leads to consumers' perceived sense of environmental responsibility, their consciousness of eco-products, and their familiarity with eco-products. That means that consumers that have greater environmental concern will express a higher level of consciousness of and familiarity with eco-products and will also have a greater level of perceived sense of environmental responsibility. Moreover, all three of the previously mentioned constructs (i.e., consciousness of eco-products, familiarity with eco-products, and perceived sense of environmental responsibility) exert positive effects on purchase intention of eco-products. This means that consumers that have a higher level of consciousness of eco-products, familiarity with eco-products, and a perceived sense of environmental responsibility are likely to exhibit a greater intention to purchase eco-products. In addition, we tested

for differences concerning female and male consumers. The findings of ANOVA revealed that female consumers express greater environmental concern, consciousness of eco-products, and perceived environmental responsibility than male consumers, although no differences between female and male consumers have been found for green purchase intention and environmental familiarity. In addition, an extensive literature review was conducted, and the main findings of 47 prior research works were presented in Section 2.

6.2. Policy and Managerial Implications

Our most important finding, on which we wish to place particular emphasis, is that consumers' consciousness of eco-products has the greatest effect in channeling environmental concern into purchase intention of eco-products. That means that the key to transition to sustainability from the point of view of consumers is to enhance the level of their consciousness about environmental problems and also solutions, behaviors, and attitudes that can help to preserve our environment and not lead to further deterioration. More emphasis should be placed by governments, policymakers, companies, and other relevant stakeholders on ecological labels, environmental certification, nonpolluting ingredients, environmentally friendly packaging, and encouraging eco-design—designing the product from the start to be environmentally friendly and educating consumers on opportunity for cost reduction when behaving in an environmentally responsible way. Government support and its informational role for the importance of sustainable behavior on a national level is extremely important. This is evident in the case of the country of Slovenia and its brand, "I feel Slovenia", as sustainable development was recognized as an important issue in managing and marketing the country. As the brand was developed with the help of the most influential stakeholders in the country (using the so-called community-based branding approach), this significantly helped the government to spread an awareness of the importance of sustainability among its inhabitants—the Slovenians who live the brand. A community-based branding approach should encourage greater commitment in people to take part in transitioning to sustainability and to truly live in harmony with the environment in their daily life. The transition to sustainability should follow the same approach by engaging all stakeholders and building a community for which the basic values would be protecting our environment and living in it without compromising the needs of future generations. A change in behavior resulting from consciousness in humans is a lengthy process that needs to be constantly communicated and promoted through proper actions and small steps that finally result in more sustainable behavior.

The main implication for governments and companies is the need to dedicate more effort to building awareness of eco-products and the importance of sustainable behavior. Environmental actions deriving from government, which banned the use of plastic bags for groceries and motivate consumers to buy environmentally friendly bags that can be used for each purchase, is one of the steps that helps consumers realize how they can contribute to act more environmentally friendly. Moreover, campaigns on television, journals, social networks, radio, and other channels that raise awareness of environmental issues should be promoted to a greater extent. In addition, as found by Liu et al. [86], governments can make good use of eco-labeling schemes to increase public awareness of the environmental benefits of eco-labeled products, thereby stimulating consumers' environmental motivation and further behavior. Consumers' environmental concern is not enough in and of itself to spur green consumerism or, in our case, the purchase intention of consumers for eco-products. The findings of our study clearly indicate that consumers' consciousness of eco-products has the greatest effect in channeling consumers' environmental concern into their purchase intention. That means that consumers' consciousness should be enhanced, both by the government and by companies promoting and investing more in raising awareness of ecological labels and environmental certification of eco-products, the presence of nonpolluting ingredients in eco-products, recyclable packaging of eco-products, opportunities related to cost reduction when using eco-products, and the attractive and clean appearance of eco-products. Consumers need to be equipped with information about eco-products, labels, and certifications and other information that can raise awareness of eco-products. Furthermore, consumers need to be

informed about sustainable actions and how they can behave in a more sustainable way, so that they can contribute to society and to saving not only their own country but also our common planet. More conscious consumers are more likely to purchase eco-products and act more sustainably in their lives.

6.3. Theoretical Implications, Contributions, and Limitations of the Study

The most important theoretical contribution of this paper lies in the extensive literature review of the topic of green consumerism from the aspect of consumers, which covers this topic in an up-to-date and thorough way. We have conducted a literature review of research papers, containing as keywords the following phrases: "green consumerism" or "environmentally responsible consumption". We employed the Science Direct database and enriched our search with Google Scholar. In total, our search for the above-mentioned keywords in Science Direct produced 1237 results. We focused only on research papers and presented the main findings of 47 papers, which are presented in Table 1. This study thus offers an important insight into the topic of green consumerism and, specifically, based on empirical research, also into the conduit between consumers' environmental concern and their purchase intention by exploring how consumers' consciousness of eco-products, their familiarity with eco-products, and their perceived sense of environmental responsibility translate the effect of consumers' environmental concern into their purchase intention. In addition, it explores gender-based differences related to green consumerism and environmental behavior.

Although this study covers some important aspects of green consumerism and adds to previous research, some limitations remain, and further research is thus required to better understand and enhance knowledge of green consumerism. This study offers valuable findings using a sample of consumers from Slovenia, which is unique due to country-specific factors, and it should thus be replicated in other countries in order to understand consumers' patterns of purchase behavior or green consumerism. However, we believe that the findings of this study can be generalized to some extent to other economies and countries with similar customs, culture, and other relevant characteristics pertaining especially to the green orientation of a country and its consumers, expressed in high environmental consciousness of the consumers and consequently environmentally friendly behavior. One of the study's limitations, which offers a path for future research, is that we measured consumers' purchase intention and not actual purchasing behavior, which could be interesting to address in future research. Moreover, the present study focused on eco-products in general; to obtain a more precise understanding, future research could consider different or more specific types of eco-products and explore how the drivers of purchase intention vary for different types of eco-products. Moreover, it would be especially interesting to compare the findings of the present study with findings of research conducted or replicated in developing economies. As an important limitation, we need to stress that we aimed to explore the role of consumers in transition to sustainability; however, our research has covered only a small fragment of transition to sustainability, from the point of view of consumers, as this is a broad concept. Moreover, we focused on what drives Slovenian consumers to purchase eco-products from the point of view of what channels the effect of environmental concern on purchase intention and thus covering the research gap that has been identified in the literature/previous research.

Nonetheless, this study sheds light on the importance of raising awareness of eco-products among consumers, which seems to be the starting point for changing the mentality and affecting the behavior of consumers.

6.4. Future Research Directions

Summing up, future research on this topic including actual purchase behavior could provide strong evidence to support/resolve the purchase intention versus actual purchase behavior debate persisting in the literature. It would be meaningful to test this model in other countries that are either equally green-oriented (having environmentally conscious consumers) or less green-oriented (less environmentally conscious consumers) in order to explore the differences in consumer behavior. It would be meaningful to test this model for specific types of eco-products and services in order to see whether, for different

eco-products or services, the consumers' attitude/behavior differs. For more commercially oriented research, it would be important to include the price sensitivity of consumers—how much more are consumers willing to spend for an eco-product and under which conditions are they willing to swap a conventional product for an ecological one. In addition, a multigroup analysis which would examine whether female and male consumers differ in respect of the effect of consumers' environmental concern on consumers' perceived sense of environmental responsibility, their consciousness of eco-products, and their familiarity with eco-products would be valuable as future research. Moreover, do female consumers differ from male consumers in terms of the effect of the above-mentioned constructs on purchase intention? In future research, it would also be beneficial for eco-producers to test different samples (social status, financial status, education level, location, personality traits) of consumers in more detail in order to better determine the green consumer market and more easily target it when entering the market with an eco-product or expanding the market.

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