

Article

Environmental, Health or Social Impacts? Investigating Ethical Food Consumption Behavior in the Case of Palm Oil-Free Foods

Brigitta Plasek * , Zoltán Lakner and Ágoston Temesi 

Institute of Agricultural and Food Economics, Department of Agricultural Business and Economics, Hungarian University of Agriculture and Life Sciences, Villányi str. 29-43, 1118 Budapest, Hungary; lakner.zoltan.karoly@uni-mate.hu (Z.L.); temesi.agoston@uni-mate.hu (Á.T.)

* Correspondence: plasek.brigitta@uni-mate.hu

Abstract: Environmental consciousness, health consciousness, social consciousness—today, all three terms have become buzzwords that influence food consumer behavior and reach many consumers. A number of consumer trends have emerged, which manufacturers have responded to, giving consumers the opportunity to make purchasing decisions that reflect any or all of these three buzzwords. In the context of palm oil, all three of these buzzwords may be associated with a consumer-perceived problem. They may be aware of the social (e.g., child labor), environmental (e.g., burning of rainforests) or potential health impacts communicated by the media. Today, more and more products claim to be palm oil free. Related to this the main question of the research is “why do consumers choose palm oil-free foods?” The results of our model using the theory of planned behavior show that the factor most influencing purchase intention is consumer attitude towards palm oil. The only significant effect on this factor is the environmental impact. Neither the perceived health-, nor the social effect had a significant effect on shaping attitudes among the respondents. A further result of the model is that perceived behavioral control only directly affects actual behavior, but does not influence intention, indicating that although there is a possibility for respondents to purchase palm oil-free products, it was not necessarily a conscious, intentional purchase.

Keywords: consumer behavior; consciousness; ethical consumption; palm oil-free food; structural equation modeling



Citation: Plasek, B.; Lakner, Z.; Temesi, Á. Environmental, Health or Social Impacts? Investigating Ethical Food Consumption Behavior in the Case of Palm Oil-Free Foods. *Sustainability* **2022**, *14*, 9468. <https://doi.org/10.3390/su14159468>

Academic Editor: Andrea Pérez

Received: 30 June 2022

Accepted: 25 July 2022

Published: 2 August 2022

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1. Introduction and Literature Review

What motivates a consumer to buy food that is in line with the trend of ethical consumption? Why is ethical consumption becoming an increasingly important trend? As to what is meant by ethical consumption, although it has been approximated by many researchers, there is no well-defined, uniformly accepted definition. It is generally understood as consumer choices and behaviors based on morals, and described as green consumption, sustainable consumption, responsible consumption, mindful or conscious consumption and critical consumption [1]. Looking at the growth of the market for some products that demonstrate ethical consumption (e.g., fair-trade, vegan, organic), there is a clear trend towards the rise in these types of products [2,3]. Although the growth of the market is evident from the statistics, the share of ethical products in the total market is small [4]. The consumer's purchase of such products may be due to an underlying large consumer megatrend. In Töröcsik's [5] research about the megatrends of food consumption, one of the priority areas is morality, which also covers ethical food consumer behavior to a large extent, as it includes environmental awareness, sustainability, fears and ethical considerations as well as responsibility. These elements also characterize ethical consumer behavior. According to Bezençon and Blili [6], products that have an environmental or social impact that can influence consumers' decisions are considered “ethical”.

Environmental [7,8] and social impacts [9,10] associated with consumption can be considered as the two main strands of ethical consumption. As a result, there are a number

of consumer trends and product developments in the market that follow the principles of ethical consumption, such as fair trade and organic products.

Boycotting different food ingredients—for example, because of social or environmental impacts—is a common manifestation of ethical food consumption. Palm oil is the most widely produced vegetable oil and the most widely consumed vegetable oil in food products [11]. There are many reasons why palm oil has become so prevalent in products, such as its versatility, productivity, price and availability, but there is also a countertrend. Several major NGOs (e.g., Greenpeace) have highlighted the harm that palm oil production can cause [12]. There are also health, social and environmental issues associated with palm oil as perceived by consumers. In recent years, palm oil has also received negative press coverage [13]. This may have led to some countries having the second highest growth rate in the free-from market for palm oil-free products [14].

This begs the question, why do consumers buy food that is free of something? The market for different free-from foods has been the subject of a number of research studies, including on risk perception, quality [15] and health impact [16]. The range of free-from products can be diverse: gluten (wheat)-free, lactose-free, sugar-free, or an area that has recently become the focus of increasing research, palm oil-free products. One of the reasons behind free-from foods is the health consciousness of the consumer, i.e., the belief that by eating free-from foods they can buy healthier food. However, it has also been shown specifically in the context of palm oil that one of the influencing factors for consumers to buy palm oil-free foods is the health impact [17]. Health impact is also an important element in the research, since as Oke et al. [18] have shown, selfish reasons, such as the consumer's own health and well-being, can also underlie ethical food consumption behavior. Nevertheless, free-from products tend to be perceived by consumers as healthier than conventional products [16], so this is another factor that may motivate consumers in the direction of buying and consuming palm oil-free products.

Palm oil-free products are an emerging trend in the free-from food market, with a growing market share in European markets. This is confirmed by a statista.com report on Italy, where palm oil-free products are the third largest market share gainer [19].

This led to the objective of the paper, to understand why palm oil-free food is purchased. The basic elements of the theory of planned behavior were extended by the three main factors, consumer thoughts about health on the line of “free-from” products and consumer thoughts about the social situation and environmental issues on the line of ethical food consumption behavior. The theory of planned behavior is a model that is still widely used today and has been applied in a wide range of research to understand food consumption behavior [20–24]. The model, through its core elements, can provide a well-grounded answer to why consumers engage in the specific behaviors they do. Despite being a well-structured and widely used model in the consumer behavior research community, this model has not been used in previous research to understand the purchasing behavior of palm oil-free food products. In view of this, and the grounding of the model, a conceptual model for the current research was developed and is presented in the first figure.

In the present paper, the theory of planned behavior [25] is used, which assumes that the development of an explicit behavior is preceded by an intention, the development of which is influenced by three factors. These are perceived behavioral control, attitudes towards behavior and subjective norms. The model assumes that if these three factors have a positive and significant effect on the intention, it is highly likely that the intention will be formed in the consumer, which may further lead to the actual behavior. If, however, any of the above factors does not influence the intention, it can be assumed that this factor will also act as a barrier to the behavior.

Based on the above and the model presented in Figure 1, the following questions are sought to be answered in the research:

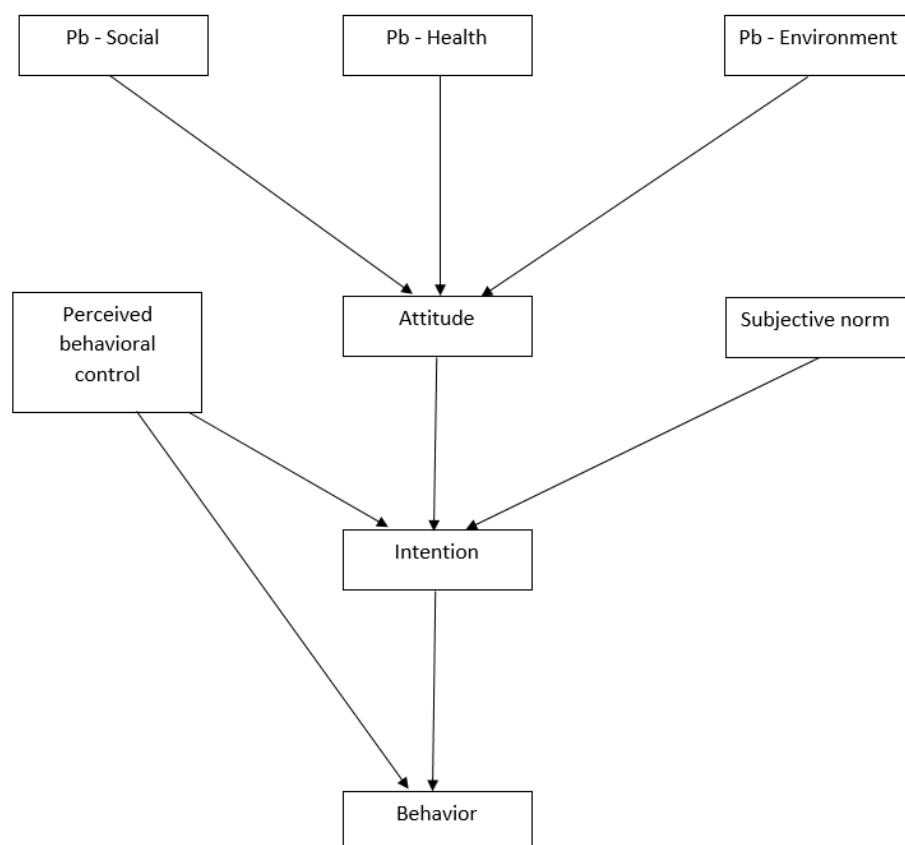


Figure 1. Conceptual model of the research.

RQ1: Which factors contribute most to the intention to purchase palm oil-free food products?

RQ2: Which element of the theory of planned behavior does not influence the formation of conscious ethical consumer intention and thus the intention to purchase palm oil-free food products?

RQ3: Is the perception of environmental, social or health impacts more important in shaping attitudes towards palm oil?

2. Materials and Methods

2.1. Consumer Survey

To answer the research questions, primary research was conducted in July–August 2021. The questionnaires were completed online and 327 respondents were interviewed. In all cases, respondents gave their written consent for their answers to be analyzed. The questionnaire was completed anonymously and respondents had the option to stop completing the questionnaire at any time if they did not wish to continue.

In constructing the questionnaire, the elements of Ajzen's [25] theory of planned behavior were the primary considerations and the statements they made were used in the research [26]. In addition, a number of other research studies have been used to formulate the claims for each category, such as Zemore and Ajzen [27] for the intention scales, Parveen and Ahmad [28] for the subjective norm and Shin and Hancer [29] for the subjective norm. In addition, the questionnaire specifically asked respondents about palm oil, palm oil-free products and consumer beliefs about the environmental, social and health impacts of palm oil. These statements were formulated based on research by Capecci et al. [30]. Demographic and other characteristics of respondents were measured at the end of the questionnaire.

Table 1 shows the distribution of the sample by variables and other consumer characteristics.

Table 1. Distribution of respondents by demographic and other characteristics (n = 327).

Variables		Sample Composition
		%
Gender	Male	23.9
	Female	76.1
Age	18–25 years	26
	26–35 years	46.8
	36–45 years	23.5
	46–55 years	1.6
	56 years and older	2.1
Education	Max 8 years of elementary school	0.6
	Vocational school/ apprenticeship school	0.9
	Secondary school diploma	24.8
	Higher education degree	73.7
Place of living	Capital	41.9
	Greater capital area	11
	Countryside town (not in the greater area)	32.7
	Village/settlement outside of the greater area	14.4
Perceived income status	Very tight	0.6
	Tight	12.8
	Average	49.2
	Good	31.8
	Very good	5.6
Person responsible for grocery shopping in the household	Respondent	34.3
	Other	4.9
	Shared	60.8
Size of household	1 person	14.7
	2 persons	43.1
	3 persons	19.6
	4 persons	17.1
	5 or more persons	5.5

The sample is non-representative, with a predominance of women under 35 in terms of age and in terms of education, those with tertiary education. There is also a group that stands out in terms of residence, with a higher proportion of respondents from the capital. Furthermore, as can be seen in Table 1, those with lower incomes and lower educational attainment are under-represented.

2.2. Data Analysis

In order to construct the proposed model, the data were analyzed using structural equation modelling (SEM). The analysis was performed using SmartPLS software [31]. The previously mentioned statements were applied in the model construction. The latent variables were constructed using elements of the theory of planned behavior, while attitudes towards social, health and environmental impacts associated with palm oil were decomposed using elements of the personal beliefs category created by Capecchi, Amato, Sodano and Verneau [30].

Since a reflective model has been built, a consistent PLS algorithm and consistent bootstrapping have been applied.

The statements used in the model which were based on the above mentioned references [25–30,32] are summarized in Table 2.

Table 2. Items and constructs.

Behavior	
Over the past six months, I have taken care to buy palm oil-free food when shopping in grocery stores.	
Intention	
I intend to buy palm oil-free food products in the near future.	
I expect to buy palm oil-free food products in the coming months.	
I am willing to encourage or persuade others to buy palm oil-free food products.	
I will try to avoid food products containing palm oil.	
I plan to avoid food products containing palm oil.	
I intend to avoid food products containing palm oil.	
Perceived behavioral control	
For me, it is easy to buy palm oil-free food products.	
It is entirely up to me whether I buy palm oil-free food products.	
If I really wanted to, I could buy palm oil-free food products.	
Avoiding foods containing palm oil is completely under my control.	
Avoiding foods containing palm oil is . . . not at all in my control/entirely in my control	
Subjective norm	
I think my family and friends think it is a good thing to buy palm oil-free food products.	
I think most of my family and friends buy palm oil-free food products.	
I think my friends and family don't care whether I buy palm oil-free food products or not.	
Most people who are important to me think I should buy palm oil-free food products.	
They expect me to buy palm oil-free food products.	
Attitude	
If I would avoid products that contain palm oil, that would be . . .	
. . . would be very bad	. . . would be very good
. . . would be very unpleasant	. . . would be very pleasant
. . . would be very harmful	. . . would be very beneficial
. . . would be completely unnecessary	. . . would be very useful
Personal beliefs—environment	
Reducing palm oil production can help reduce deforestation.	
Reducing palm oil production can help offset the effects of climate change.	
Reducing palm oil production can slow the extinction of many animal species.	
Personal beliefs—health	
Consumption of refined palm oil can be harmful to human health.	
Consumption of refined palm oil increases the risk of developing cancer.	
Consumption of refined palm oil increases the risk of cardiovascular disease.	
Personal beliefs—social	
Reducing palm oil production can help reduce child labor.	
Reducing palm oil production could reduce abuses against plantation workers.	
Reducing palm oil production in producing countries can help improve working conditions for farm families.	

3. Results

3.1. Construct Reliability and Validity of the Model

The model was structured using the attitudinal statements already mentioned in the consumer survey and summarized in Table 2. The reliability of the model is supported by a number of indicators, including Cronbach's alpha, composite reliability and average variance extracted (AVE) and the individual outer loadings, which are presented in this order.

Based on the intercorrelation between the claims used, the reliability is estimated using Cronbach's alpha values [33], which are all above the threshold value of 0.7 prescribed by Cortina [34], with the lowest value being 0.759.

Composite reliability values, which are similar in content to Cronbach's alpha [35], but still an important measure due to its limitations [33], should also exceed 0.7 [36]. The lowest value in this study was 0.757.

The average variance extracted (AVE) and outer loading values [33] are important indicators for examining the relationships between the statements that provide the main elements that build the model. Average variance extracted (AVE) values ranged from 0.514, also meeting the minimum value of 0.5 [37].

The lowest value among the outer loadings was 0.626. In principle, a value above 0.7 is acceptable for this indicator [38]. However, in social research, it is often the case that this value will be lower than 0.7 [39], as in two cases here. According to Hair et al. [33], in such a case, "... indicators with outer loadings between 0.40 and 0.70 should be considered for removal from the scale only when deleting the indicator leads to an increase in the composite reliability ... above the suggested threshold value". Accordingly, the model was tested without the two statements in question, but the composite reliability values showed no significant increase, so the two statements were retained in the model. Overall, based on the results presented so far, the reliability of the model can be considered good.

The different values are summarized in Table 3.

Table 3. Construct reliability and validity of the model.

	Outer Loading
Behavior (CA = 1.000 CR = 1.000 AVE = 1.000)	
Over the past six months, I have taken care to buy palm oil-free food when shopping in grocery stores.	1.000
Intention (CA = 0.926 CR = 0.928 AVE = 0.721)	
I intend to buy palm oil-free food products in the near future.	0.827
I expect to buy palm oil-free food products in the coming months.	0.735
I am willing to encourage or persuade others to buy palm oil-free food products.	0.922
I will try to avoid food products containing palm oil.	0.879
I plan to avoid food products containing palm oil.	0.872
Perceived behavioral control (CA = 0.827 CR = 0.824 AVE = 0.612)	
For me, it is easy to buy palm oil-free food products.	0.898
It is entirely up to me whether I buy palm oil-free food products.	0.720
If I really wanted to, I could buy palm oil-free food products.	0.715
Subjective norm (CA = 0.759 CR = 0.757 AVE = 0.514)	
I think my family and friends think it is a good thing to buy palm oil-free food products.	0.854
I think most of my family and friends buy palm oil-free food products.	0.626
I think my friends and family don't care whether I buy palm oil-free food products or not.	0.649
Attitude (CA = 0.836 CR = 0.837 AVE = 0.564)	
If I would avoid products that contain palm oil, that would be ...	
... would be very bad	0.815
... would be very unpleasant	0.634
... would be very harmful	0.740
... would be completely unnecessary	0.802
... would be very good	
... would be very pleasant	
... would be very beneficial	
... would be very useful	

Table 3. *Cont.*

	Outer Loading
Personal beliefs—environment (CA = 0.852 CR = 0.852 AVE = 0.658)	
Reducing palm oil production can help reduce deforestation.	0.794
Reducing palm oil production can help offset the effects of climate change.	0.746
Reducing palm oil production can slow the extinction of many animal species.	0.887
Personal beliefs—health (CA = 0.929 CR = 0.929 AVE = 0.814)	
Consumption of refined palm oil can be harmful to human health.	0.943
Consumption of refined palm oil increases the risk of developing cancer.	0.896
Consumption of refined palm oil increases the risk of cardiovascular disease.	0.865
Personal beliefs—social (CA = 0.878 CR = 0.852 AVE = 0.658)	
Reducing palm oil production can help reduce child labor.	0.875
Reducing palm oil production could reduce abuses against plantation workers.	0.866
Reducing palm oil production in producing countries can help improve working conditions for farm families.	0.782

3.2. Model Fit, Discriminant Validity and Explanatory Power of the Model

In this section, the indicators of model fit, discriminant validity and explanatory power of the model are discussed.

The test of discriminant validity is important because it examines the differences between the elements that build the model, since if this criterion is met, it means that the elements that build the model are unique and are not explained by the other elements in the model [33]. Two indicators, the Fornell–Larcker test (Table 4) and the Heterotrait–monotrait (HTMT) criterion (Table 5) were used to measure this.

Table 4. Fornell–Larcker test of discriminant validity.

	Attitude	Behavior	Intention	Perceived Behavioral Control	Personal Beliefs—Health	Personal Beliefs—Environment	Personal Beliefs—Social	Subjective Norm
Attitude	0.751							
Behavior	0.541	1.000						
Intention	0.767	0.690	0.849					
Perceived behavioral control	0.168	0.431	0.240	0.782				
Personal beliefs—health	0.301	0.332	0.364	0.182	0.902			
Personal beliefs—environment	0.490	0.303	0.486	0.162	0.307	0.811		
Personal beliefs—social	0.373	0.301	0.378	0.190	0.426	0.540	0.842	
Subjective norm	0.359	0.412	0.452	0.303	0.274	0.149	0.336	0.717

Table 5. Discriminant validity: Heterotrait–monotrait (HTMT) criterion.

	Attitude	Behavior	Intention	Perceived Behavioral Control	Personal Beliefs—Health	Personal Beliefs—Environment	Personal Beliefs—Social	Subjective Norm
Attitude	0.542							
Behavior	0.769	0.691						
Intention	0.171	0.427	0.236					
Perceived behavioral control	0.306	0.332	0.368	0.183				
Personal beliefs—health	0.489	0.300	0.487	0.169	0.310			
Personal beliefs—environment	0.375	0.303	0.383	0.189	0.427	0.541		
Personal beliefs—social	0.357	0.415	0.450	0.301	0.277	0.147	0.349	

The Fornell–Larcker test is considered satisfied if a given latent element explains the variance of its own indicator better than the variance of the other latent elements [40], which, as can be seen from Table 4, is satisfied in this study.

The results of Table 5—HTMT criterion—also show that discriminant validity has been established, as the obtained values are all below 0.9 [41].

The explanatory power of the model is presented in terms of R^2 and Adjusted R^2 values, which are summarized in Table 6. The model explains 54.8% (Adjusted $R^2 = 0.548$) of the formation of consumer behavior and 62.9% (Adjusted $R^2 = 0.626$) of the formation of purchase intention for actual behavior. In addition to these R^2 values, which can be considered high, it is also important to note the value for attitude, which took a relatively low value compared to the previous two.

Table 6. Results showing the explanatory power of the model.

	R^2	Adjusted R^2
Attitude	0.272	0.265
Behavior	0.551	0.548
Intention	0.629	0.626

To examine the fit of the model, SRMR (Standardized Root Mean Square Residual) and NFI (Normed Fit Index) are presented. According to Hulland [39], an SRMR of less than 0.8 and an NFI of greater than 0.95 indicate a good model fit. In this model, the SRMR was found to be 0.062, thus fulfilling the first criterion. However, the NFI values according to Marsh et al. [42] can vary depending on several factors, so the value of it was not used as a cutoff value. The results show that the overall model fit is good (SRMR = 0.062, NFI = 0.850). The low NFI value may be due to the relatively low sample size, which often leads to underestimation of the fit [43].

3.3. Results of the Model

Consistent bootstrapping was used to determine the significance level of each relationship and the T- and f^2 values. The results are presented in Table 7 and in Figure 2 below.

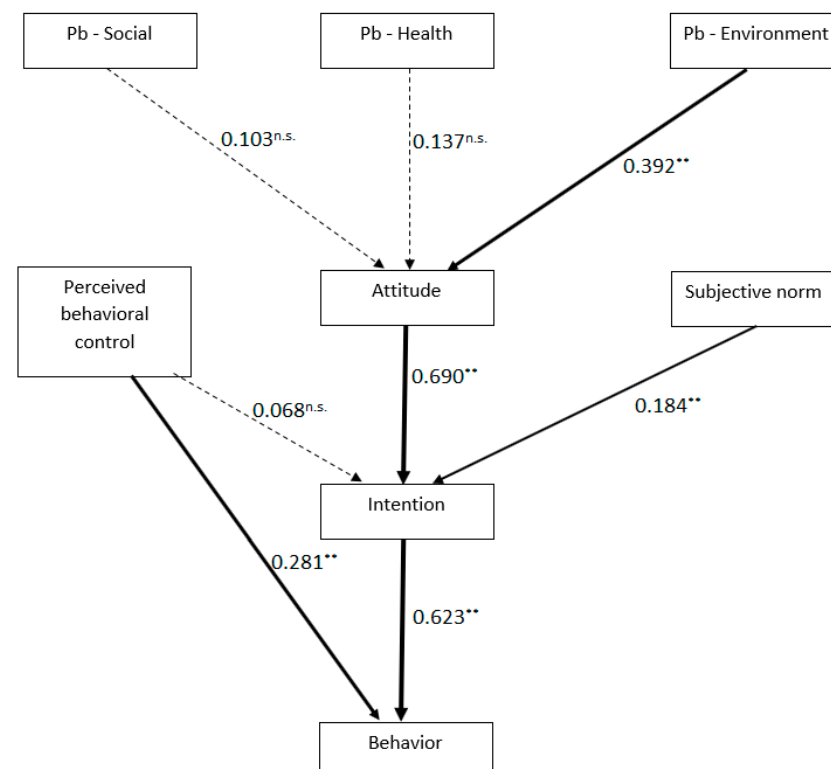


Figure 2. Results of structural equation modelling (** $p < 0.01$; n.s.—non-significant).

Table 7. Results of structural equation modelling.

Relation	Direct Effect		Indirect Effect		Total Effect		Cohen's f ²	Supported?
	Effect Size	T Value	Effect Size	T Value	Effect Size	T Value		
Attitude → Behavior	–	–	0.430 **	8.73	0.430 **	8.73		Yes
Attitude → Intention	0.690 **	11.25	–	–	0.690 **	11.25	1.113	Yes
Intention → Behavior	0.623 **	16.73	–	–	0.623 **	16.73	0.815	Yes
Perceived behavioral control → Behavior	0.281 **	6.36	0.043 n.s.	1.24	0.32 **	6.62	0.166	Yes
Perceived behavioral control → Intention	0.068 n.s.	1.21	–	–	0.068 n.s.	1.21	0.011	No
Personal beliefs—health → Attitude	0.137 n.s.	1.9	–	–	0.137 n.s.	1.90	0.021	No
Personal beliefs—health → Behavior	–	–	0.059 n.s.	1.77	0.059 n.s.	1.77		No
Personal beliefs—health → Intention	–	–	0.095 n.s.	1.81	0.095 n.s.	1.81		No
Personal beliefs—environment → Attitude	0.392 **	3.81			0.392 **	3.81	0.148	Yes
Personal beliefs—environment → Behavior	–	–	0.169 **	3.15	0.169 **	3.15		Yes
Personal beliefs—environment → Intention	–	–	0.271 **	3.28	0.271 **	3.28		Yes
Personal beliefs—social → Attitude	0.103 n.s.	1.38			0.103 n.s.	1.38	0.009	No
Personal beliefs—social → Behavior	–	–	0.044 n.s.	1.34	0.044 n.s.	1.34		No
Personal beliefs—social → Intention	–	–	0.071 n.s.	1.36	0.071 n.s.	1.36		No
Subjective norm → Behavior	–	–	0.115 **	3.64	0.115 **	3.64		Yes
Subjective norm → Intention	0.184 **	3.85			0.184 **	3.85	0.074	Yes

n.s.—non-significant; ** $p < 0.01$

In models built from the elements of the theory of planned behavior, it is important not only to know which characteristics have a significant effect, but also which do not. This is because the model assumes that if all three factors have a significant influence, i.e., if the people in the environment and family members are supportive, if the opportunities to form the intention and subsequently carry out the behavior are available, and if the consumer's attitudes are appropriate, then the intention will be formed in the consumer and this can be further developed into concrete behavior. From this perspective, the model in Figure 2 suggests that the intention to purchase palm oil-free products is most influenced by the consumer's attitudes ($\beta = 0.690$, $p = 0.000$), followed by the subjective norm ($\beta = 0.184$, $p = 0.000$), which is also significant but weaker, but the perceived behavioral control is absent and its effect is not significant.

In the context of perceived behavioral control, it was also examined whether it has a direct effect on purchasing behavior towards palm oil-free products, for which a significant effect was found. These suggest that although some palm oil-free product purchase does occur, it is not necessarily conscious, it is just that the consumer takes the product off the shelf and sees that it is palm oil free. Hence, there is an awareness that he or she has just bought palm oil-free products, but it is not the result of a deliberate search. Another explanation for the model's results is that although there are environmentally conscious consumers, they do not implement environmentally conscious purchasing behavior for various reasons. This paradox is highlighted in the research by Hinsch et al. [44]

As an objective of the research, another aim was to determine whether and to what extent consumer beliefs about environmental, health and social impacts affect attitudes towards palm oil and, indirectly, intentions and actual behavior. The results show that the only one of the three factors that significantly influences attitudes is consumer thinking about environmental impacts ($\beta = 0.392$, $p = 0.000$).

4. Discussion

In addition to the basic elements of the theory of planned behavior, the present research investigated the social, environmental and health-related thoughts related to palm oil and their impact on the intention to consume palm oil-free products and on actual behavior. The results show that two factors directly contribute to the realization of behavior: an existing, already established intention and the extent to which consumers have the means to purchase such products. However, of the two factors, intention is the stronger influence on behavior. Several factors in the model already play a role in the formation of consumer intention. The consumer's environmental concerns towards palm oil play an important role in shaping consumer intention, i.e., if a company aims to sell palm oil-free products, it must aim to change consumers' attitudes and strengthen their feelings towards palm oil. The model also shows that attitudes are strongly influenced by consumers' attitudes towards palm oil, so if a company's long-term strategy is to focus on attitudes, it is worth designing its communications to highlight the environmental impacts of palm oil, as this is the factor that has the strongest impact on attitudes. This could be achieved, for example, by saying that the product is palm oil-free, but also by explaining the importance of this a little more, for example by using a picture of the environmental impact or another appropriate claim. This can also be achieved through the use of third-party certification labels [45] through electronic word-of-mouth [46] or with the tools of green marketing [47].

A number of limitations emerged in the current research, which could also serve as objectives of future studies. The first of these was sampling. The sample was not representative and was only collected in one country, and it would be worth expanding this in a future study. Nevertheless, in a future study, it would be worthwhile to test the model specifically among consumers who admit to being conscious consumers and pay attention to the effects investigated in the present study.

When describing the indicators of the model, R^2 and Adjusted R^2 , it is noticeable that although intention and behavior scored high, this is not the case for attitude. It can be assumed that other factors may be more strongly involved in shaping attitudes than the

elements presented in the present model, and it would therefore be worthwhile to extend the model with additional elements.

Author Contributions: Conceptualization, B.P.; methodology, B.P. and Á.T.; software, B.P.; validation, Á.T. and Z.L.; formal analysis, B.P.; investigation, B.P.; resources, B.P.; writing—original draft preparation, B.P.; writing—review and editing, Á.T. and Z.L.; visualization, B.P.; supervision, Á.T.; funding acquisition, B.P., Z.L. and Á.T. All authors have read and agreed to the published version of the manuscript.

Funding: Supported by the ÚNKP-21-4 New National Excellence Program of the Ministry for Innovation and Technology from the source of the National Research, Development and Innovation Fund.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki and approved by the Interim Ethical Committee of the Hungarian University of Agriculture and Life Sciences, Doctoral School of Economic and Regional Sciences (protocol code 101/2022, 8 March 2022).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on request from the corresponding author.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Manyukhina, Y. *Ethical Consumption: Practices and Identities: A Realist Approach*; Routledge: London, UK, 2018.
2. Bedford, E. Revenue of Fairtrade International Products Worldwide 2004–2018. Available online: <https://www.statista.com/statistics/271354/revenue-of-fair-trade-products-worldwide-since-2004/> (accessed on 25 February 2022).
3. Wunsch, N.-G. Value of the Worldwide Vegan food Market 2020–2025. Available online: <https://www.statista.com/statistics/1280275/value-of-the-global-vegan-food-market/> (accessed on 25 February 2022).
4. Ethical Consumer Market Report. Available online: <https://www.ethicalconsumer.org/sites/default/files/inline-files/ethical-consumer-markets-report-2012.pdf> (accessed on 13 September 2021).
5. Törőcsik, M. The Megatrend Connections Of Food Consumption (Az ételfogyasztás megatrend kapcsolódásai). *Hung. J. Nutr. Mark. (Táplálkozásmarketing)* **2014**, *1*, 19–27.
6. Bezençon, V.; Blili, S. Ethical products and consumer involvement: What’s new? *Eur. J. Mark.* **2010**, *44*, 1305–1321. [CrossRef]
7. Carrier, J.G. Protecting the environment the natural way: Ethical consumption and commodity fetishism. *Antipode* **2010**, *42*, 672–689. [CrossRef]
8. Sudbury-Riley, L.; Kohlbacher, F. Ethically minded consumer behavior: Scale review, development, and validation. *J. Bus. Res.* **2016**, *69*, 2697–2710. [CrossRef]
9. Auger, P.; Devinney, T.M.; Louviere, J.J.; Burke, P.F. The importance of social product attributes in consumer purchasing decisions: A multi-country comparative study. *Int. Bus. Rev.* **2010**, *19*, 140–159. [CrossRef]
10. Morgan, C.J.; Croney, C.C.; Widmar, N.J. Exploring relationships between ethical consumption, lifestyle choices, and social responsibility. *Adv. Appl. Sociol.* **2016**, *21*, 27–39. [CrossRef]
11. Shahbandeh, M. Consumption of Vegetable oils Worldwide from 2013/14 to 2021/2022, by Oil Type. Available online: <https://www.statista.com/statistics/263937/vegetable-oils-global-consumption> (accessed on 17 February 2022).
12. Shimizu, H.; Desrochers, P. The Health, Environmental and Economic Benefits of Palm Oil. *IEM’s Econ. Note* **2012**, 1–4. Available online: https://www.institutmolinari.org/wp-content/uploads/2012/09/note0912_en.pdf (accessed on 18 November 2021).
13. Kovács, A.; Körmendi, L.; Kerti, K.B. Palm oil substitution in hazelnut spread. *Prog. Agric. Eng. Sci.* **2021**, *17*, 111–117. [CrossRef]
14. Statista, R.D. Sales Percentage Change of Free-From Food Products in Italy in 2019, by Claim. Available online: <https://www.statista.com/statistics/1178287/free-from-products-sales-percentage-change-by-claim-italy/> (accessed on 10 March 2022).
15. Potter, R.; Stojceska, V.; Plunkett, A. An investigation of the consumer perception on the quality of the gluten and wheat free breads available on the UK market. *J. Food Meas. Charact.* **2014**, *8*, 362–372. [CrossRef]
16. Priven, M.; Baum, J.; Vieira, E.; Fung, T.; Herbold, N. The influence of a factitious free-from food product label on consumer perceptions of healthfulness. *J. Acad. Nutr. Diet.* **2015**, *115*, 1808–1814. [CrossRef]
17. Plasek, B.; Lakner, Z.; Badak-Kerti, K.; Kovács, A.; Temesi, Á. Perceived consequences: General or specific? the case of palm oil-free products. *Sustainability* **2021**, *13*, 3550. [CrossRef]
18. Oke, A.; Ladas, J.; Bailey, M. Ethical consumers: An exploratory investigation of the ethical food consumption behaviour of young adults in the North East of Scotland. *Br. Food J.* **2020**, *122*, 3623–3638. [CrossRef]
19. Statista Research Department. Italy: Market Share of Free-From Food Products 2018, by Product Claim. Available online: <https://www.statista.com/statistics/955889/market-share-of-free-from-food-products-by-claim-in-italy/> (accessed on 12 March 2022).

20. Ahmed, N.; Li, C.; Khan, A.; Qalati, S.A.; Naz, S.; Rana, F. Purchase intention toward organic food among young consumers using theory of planned behavior: Role of environmental concerns and environmental awareness. *J. Environ. Plan. Manag.* **2021**, *64*, 796–822. [[CrossRef](#)]
21. Bilbiie, A.; Druică, E.; Dumitrescu, R.; Aducovschi, D.; Sakizlian, R.; Sakizlian, M. Determinants of Fast-Food Consumption in Romania: An Application of the Theory of Planned Behavior. *Foods* **2021**, *10*, 1877. [[CrossRef](#)]
22. Carfora, V.; Cavallo, C.; Catellani, P.; Del Giudice, T.; Cicia, G. Why do consumers intend to purchase natural food? Integrating theory of planned behavior, value-belief-norm theory, and trust. *Nutrients* **2021**, *13*, 1904. [[CrossRef](#)]
23. Lim, H.-R.; An, S. Intention to purchase wellbeing food among Korean consumers: An application of the Theory of Planned Behavior. *Food Qual. Prefer.* **2021**, *88*, 104101. [[CrossRef](#)] [[PubMed](#)]
24. Pang, S.M.; Tan, B.C.; Lau, T.C. Antecedents of consumers' purchase intention towards organic food: Integration of theory of planned behavior and protection motivation theory. *Sustainability* **2021**, *13*, 5218. [[CrossRef](#)]
25. Ajzen, I. The theory of planned behavior. *Organ. Behav. Hum. Decis. Processes* **1991**, *50*, 179–211. [[CrossRef](#)]
26. Fishbein, M.; Ajzen, I. *Predicting and Changing Behavior: The Reasoned Action Approach*; Psychology Press: London, UK, 2011. [[CrossRef](#)]
27. Zemore, S.E.; Ajzen, I. Predicting substance abuse treatment completion using a new scale based on the theory of planned behavior. *J. Subst. Abus. Treat.* **2014**, *46*, 174–182. [[CrossRef](#)]
28. Parveen, R.; Ahmad, A. Public behavior in reducing urban air pollution: An application of the theory of planned behavior in Lahore. *Environ. Sci. Pollut. Res.* **2020**, *27*, 17815–17830. [[CrossRef](#)]
29. Shin, Y.H.; Hancer, M. The role of attitude, subjective norm, perceived behavioral control, and moral norm in the intention to purchase local food products. *J. Foodserv. Bus. Res.* **2016**, *19*, 338–351. [[CrossRef](#)]
30. Capecchi, S.; Amato, M.; Sodano, V.; Verneau, F. Understanding beliefs and concerns towards palm oil: Empirical evidence and policy implications. *Food Policy* **2019**, *89*, 101785. [[CrossRef](#)]
31. Ringle, C.M.; Wende, S.; Becker, J.-M. *SmartPLS 3*; SmartPLS GmbH: Boenningstedt, Germany, 2015; Volume 584.
32. Ajzen, I. From intentions to actions: A theory of planned behavior. In *Action Control*; Springer: Berlin/Heidelberg, Germany, 1985; pp. 11–39. [[CrossRef](#)]
33. Hair, J.F.; Hult, G.T.M.; Ringle, C.M.; Sarstedt, M. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*; Sage Publications: Thousand Oaks, CA, USA, 2014.
34. Cortina, J.M. What is coefficient alpha? An examination of theory and applications. *J. Appl. Psychol.* **1993**, *78*, 98. [[CrossRef](#)]
35. Netemeyer, R.G.; Bearden, W.O.; Sharma, S. *Scaling Procedures: Issues and Applications*; Sage Publications: Thousand Oaks, CA, USA, 2003.
36. Hair, J.F.; Ringle, C.M.; Sarstedt, M. PLS-SEM: Indeed a silver bullet. *J. Mark. Theory Pract.* **2011**, *19*, 139–152. [[CrossRef](#)]
37. Hair, J.F.; Risher, J.J.; Sarstedt, M.; Ringle, C.M. When to use and how to report the results of PLS-SEM. *Eur. Bus. Rev.* **2019**, *31*, 2–24. [[CrossRef](#)]
38. Bagozzi, R.P.; Yi, Y. On the evaluation of structural equation models. *J. Acad. Mark. Sci.* **1988**, *16*, 74–94. [[CrossRef](#)]
39. Hulland, J. Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strateg. Manag. J.* **1999**, *20*, 195–204. [[CrossRef](#)]
40. Fornell, C.; Larcker, D.F. *Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics*; Sage Publications Sage CA: Los Angeles, CA, USA, 1981. [[CrossRef](#)]
41. Henseler, J.; Ringle, C.M.; Sarstedt, M. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *J. Acad. Mark. Sci.* **2015**, *43*, 115–135. [[CrossRef](#)]
42. Marsh, H.W.; Hau, K.-T.; Wen, Z. In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings. *Struct. Equ. Modeling* **2004**, *11*, 320–341. [[CrossRef](#)]
43. Bentler, P.M. Comparative fit indexes in structural models. *Psychol. Bull.* **1990**, *107*, 238. [[CrossRef](#)] [[PubMed](#)]
44. Hinsch, C.; Tang, Y.; Lund, D.J. Compulsion and reactance: Why do some green consumers fail to follow through with planned environmental behaviors? *Psychol. Mark.* **2021**, *38*, 2209–2226. [[CrossRef](#)]
45. Brach, S.; Walsh, G.; Shaw, D. Sustainable consumption and third-party certification labels: Consumers' perceptions and reactions. *Eur. Manag. J.* **2018**, *36*, 254–265. [[CrossRef](#)]
46. Filieri, R.; Javornik, A.; Hang, H.; Niceta, A. Environmentally framed eWOM messages of different valence: The role of environmental concerns, moral norms, and product environmental impact. *Psychol. Mark.* **2021**, *38*, 431–454. [[CrossRef](#)]
47. Machová, R.; Ambrus, R.; Zsigmond, T.; Bakó, F. The Impact of Green Marketing on Consumer Behavior in the Market of Palm Oil Products. *Sustainability* **2022**, *14*, 1364. [[CrossRef](#)]