

Article

Perception of Green Product Consumption in the Context of the COVID-19 Pandemic in an Emerging Economy

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Abstract: The COVID-19 pandemic has resulted in changes in consumer behavior and has created new opportunities and challenges for the provisioning of green products in emerging economies. The objective of this study was to identify how perceptions on COVID-19 affected the variables of planned behavior and responsible purchase intention during the pandemic in Colombia. A total of 320 consumers participated in an online survey, and the responses were analyzed using a structural equation model (SEM) and AMOS 24 statistical software. The results were positive regarding the development of better environmental awareness, indicating that COVID-19 (COV) influenced the attitude (ATT) of individuals and contributed to subjective norms (SNs) and perceived behavioral control (PBC), and that SNs and ATT influence eco-friendly purchase intention (EFPI). However, PBC does not contribute to EFPI. Colombian consumers have become aware of the importance to society of buying eco-friendly products, and planned behavior is an opportunity for organizations to formulate new portfolios relevant to the needs of the market. This is an important opportunity to sensitize consumers to the purchase of environmentally friendly products and for the identification of commercial strategies by companies that bet on the formulation and commercialization of eco-friendly portfolios that generate value for society.

Keywords: planned behavior; responsible purchase intention; eco-friendly



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1. Introduction

The COVID-19 pandemic has resulted in multiple issues that must be considered to advance the sustainability and organization of society [1], which can be accomplished through the development of models or work schemes. Such models will allow territories to take a more comprehensive view on industrial processes and on the transformation of raw materials that will arise from the development of a collective awareness concerning the preservation of the environment [2], leading individuals to adapt to new ways of thinking amid uncertainty [3]. The duration of the pandemic has prompted changes in consumer practices beyond the simple stockpiling of large quantities of products. In different countries, consumers have modified their buying habits, breaking away from their traditional practices and exploring new, innovative, and creative options [4].

In this way, each country has had to make decisions to address the specific postpandemic scenarios, not only in the health sector, but also in the business sector and the daily life of its residents [5], so the international support of the World Health Organization has been sought to rethink strategies that benefit management models and administrative action [6–8]. Some of the measures that have been adopted in almost all countries are border

closures and quarantines, which have influenced all aspects of human life, including food systems, due to the current globalization of production and supply chains [9]. In turn, many businesses were shut down by government orders, and people were instructed to stay in their homes to limit travel in various cities and states [10]. In the Colombian context, the national government instituted measures for protection and security through the construction of protocols that arose from the lessons learned from other leading countries [11].

Currently, the consequences of the contingency measures on the normal development of society have been analyzed. More than two years have passed, and the work models, the forms of administrative management, and the course of life of the residents have been impacted by the decisions taken. Therefore, there is a concern about the behavior, attitudes, tastes, desires, preferences, and norms of individuals and how these all affect the purchase and use of products [8,12], including the ecological management and treatment of waste that avoids generating a negative impact on the ecosystem [13].

These situations lead to greater environmental awareness and social responsibility, promoting changes in consumption habits in search of a sustainable way of life that benefits economic development and preserves the quality of life for future generations. In this sense, studies such as [7,8,13–17] have demonstrated that the decision to buy products that are considered to be green, environmentally friendly, produced through responsible processes, and that provide benefits through their consumption or use, all contribute to the social development of countries. In Latin America, studies conducted by [18] have enabled us to understand that the circular economy and the globalization of cultures have led to the current recognition of environmental problems and that young people have begun to adopt purchasing behaviors that benefit the environment. Meanwhile, in Colombia, green and environmental products using clean processes that significantly contribute to the reduction in pollution are being incorporated; however, this dynamic still has some limitations, such as the awareness of companies concerning this issue and the high costs of these green product lines [19].

Even with the growing recognition of organic consumption and its importance in both theory and practice, the purchase of organic products may not be an accurate reflection of consumer concerns [20], so companies should focus more on developing messages aimed at fostering sustainable values or encouraging support for communities to promote this lifestyle [21], as identifying the reasons behind buying decisions in a post-pandemic reality is necessary. In this sense, the study addresses the following question: How can the perceptions on COVID-19 affect the variables of planned behavior and intention to purchase responsibly in Colombia?

To address this goal, a quantitative methodology was implemented to study the concept and foundation of planned behavior, responsible buying intention, and individual adaptation to business dynamics throughout the contingency. A structured questionnaire was distributed, of which 17 questions related to the context of COVID-19, planning behavior, and the attitude and the intention behind ecological purchases, using data from 320 people in Colombia, collected through a convenience sample and analyzed using a structural equation model (SEM) in the statistical software AMOS 24. The questions are presented in the analysis section and contribute to the theme derived from the development of the discussion and conclusion.

Through this analysis, the factors significantly contributing to the development of literature in Latin America are identified, since there have been few studies on these topics. The business component of our inquiry is expected to contribute to the understanding on strategic decision-making concerning the production of environmentally friendly products and services, including the clean and ecological processes meant to support social responsibility, as management awareness is key to ensuring the sustainability of environmental protection and production by supporting the transition to a circular economy [22,23], which includes recycling and remanufacturing [24]. Therefore, this study examines how consumers in an emerging economy perceive green products and how this information can help organizations create green marketing strategies based on actual buying behavior.

2. Theoretical Framework

Understanding the tastes, desires, and preferences of individuals and the product offerings on the market has become a challenge for those who want to preserve good manufacturing practices, use green raw materials, and develop products that are environmentally responsible [7,25]. Given the need for sustainable management practices aimed at generating changes in the environment and the distribution of public resources at a global level, it is necessary to ensure that actual consumption levels are in line with sustainable supply capacity [26].

Although efforts have been made over the last three decades to promote the idea of sustainable consumption [27] since the United Nations Conference on Environment and Development that was held in Rio de Janeiro in 1992, which advocated for sustainability, post-pandemic conditions have accelerated environmental awareness. Companies have been developing appropriate internal practices to improve conditions regarding environmental responsibility and are bringing products to the market that meet the demands of consumers [28]. Some brands have incorporated responsible and ecological strategies, such as advertising communications, to capture more customers or sway current customers to buy more and exhibit brand loyalty [29]. With the onset of the pandemic, society began to become aware of the transition towards ecological products. Therefore, industries are making great efforts to remain sustainable in the competitive, global, open economy [30].

Under this approach, companies prioritize the development of their business models through the implementation of new platforms that support social and sustainable projects [31]. Natural resources are used, and nature-based solutions have become the focus, with the intention of reducing the risks of such phenomena as extreme heat, droughts, and floods, and improving both physical and mental health [32]. As a result, experts have created models to examine user perceptions or detect the determining elements related to a specific topic [33]. In this sense, the theory of planned behavior (TPB) model was shown to be an effective research model for explaining consumers' intentions to purchase eco-friendly products [34].

Although various theories have been proposed since the 1980s, the complexity of the phenomenon and the different ways in which it has been measured still require further research into the fundamental concepts involved [35]. The TPB includes ATT, SNs, and PBC [36], specifically including people's ideas and perceptions about the consumption of eco-friendly products, such as their belief in their effectiveness in protecting the environment [37].

When analyzing these beliefs in terms of the COVID-19 pandemic, an important development occurred, throughout the many challenges for humanity, resulting in greater consumer awareness in purchasing decisions; people now seek products that benefit the environment and their quality of life. This is how ATT, SNs, and PBC have become so very important for understanding and measuring planned behavior [15,38], with the aim of identifying the ways that these perceptions can influence responsible purchasing intentions in Colombia. It should also be noted that information consumption has become more important due to its ability to transform the media [39]; consumers are increasingly seeking accurate and verified information about the products they purchase. It is necessary to identify the reasons behind purchasing decisions in a post-pandemic reality.

Applying some technological applications to the identification of new options in health and to combat the fear of COVID-19, the extended technology acceptance model (TAM) has enabled individuals to become sensitive to the importance of monitoring one's own health [40]. Aspects such as fear or anguish regarding the deterioration of health, the scarcity of basic products, and the weakening of personal fiscal independence were also stimulated by the appearance of COVID-19 [41].

Thus, a responsible purchase intention has become a key to providing viable options for families; for example, consumers are motivated to develop the intention to buy products that improve their health [42] and that benefit the environment through clean and organized processes [40].

Currently, there is a demand for a green and sustainable economy that highlights eco-friendly products. The low demand for these products is a significant concern for researchers and policymakers [43], and the theory of planned behavior has recently been utilized to understand the ways in which individuals behave in the face of green purchasing. Studies such as those by [36] serve as a starting point on these issues, contributing to society and sensitizing academia to the incorporation of strategic aspects in the training of society. Previous studies in different countries have noted the importance of the theory of planned behavior [15,38–42,44] and how it influences responsible purchase intention, generating findings that have motivated research interest in this topic in Colombia, as there are few studies in this country that contribute significantly to the themes analyzed. The following hypotheses, which are applicable to the regional context, are therefore proposed.

2.1. H1. COV—ATT: COVID-19 Influences the ATTs of Individuals

Throughout history, pandemics have caused generalized behaviors involving fear, anguish, anxiety, and restrictions on close relationships, which has led individuals to adopt different tastes, desires, and preferences from those normally experienced [45]. Society continues to be reframed through new ways of acting and facing the day-to-day to respond to the needs of the family, organizations, and the daily functioning of individuals [46].

This is relevant in Colombia because the attitude of individuals regarding COVID-19 was similar to that of individuals worldwide; preparing for the unknown and improvising protections against the pandemic was not and continues to not be easy, and adapting to government regulations and efforts created an attitude of forced compliance [47].

2.2. H2. COV—SNs: COVID-19 Contributes to SNs

COVID-19 influences human behavior to a great extent because changes in human behavior are necessary for adaptation and continued evolution. Laws and regulations were created to enable adaptation and navigation regarding the COVID-19 pandemic, which exerted social, economic, and emotional pressure on the population [48].

This pandemic generalized the dynamics of social pressure, fears, and frustrations; therefore, SNs have been used to provide stability so that individuals can adapt to new environments that, although uncertain, develop the understanding that trust in individuals, families, organizations, and society coupled with the goal of safety are the best means of advancing society in the pandemic context [47].

By including the COVID-19 variable and SNs in the model, a more comprehensive understanding of the factors that influence consumer behavior and how these factors can be addressed to improve marketing strategies and business decision-making can be achieved.

2.3. H3. COV—PBC: COVID-19 Influences Behavioral Control

Behavioral control is affected by external and internal stimuli, and there have been some events in society that have led to changes in the behavior of individuals [49]. For example, since 2019, with the appearance of the COVID-19 pandemic, the behavior of society was altered by an external factor that generated uncertainty, fear, and anguish in individuals, affecting learned behavior and the development of behavioral patterns at that time. COVID-19 triggered new behaviors in an attempt to adapt to the new reality [50]. Therefore, it is essential to understand how these new behaviors influence the responsible purchasing decisions and behavior of consumers.

2.4. H4. SNs—EFPI: Subjective Standards Influence EFPI

Interest in EFPI has been increasing for many years, and aspects such as improvements in health and the environment have strengthened this green trend, which has remained constant in the minds of consumers, generating greater awareness of how individuals, companies, society, and the planet can benefit from such improvements [51].

The pressure that COVID-19 exerted on individuals indicates behavioral adaptation in the search for personal and social development that responds to the needs of the

moment and allows greater articulation concerning the intention to acquire eco-friendly products [28]. In this context, the relationship between the variables of SNs and purchase intention becomes important, as the perception of what others believe or expect can significantly influence the decision to purchase eco-friendly products, thus acting as a key determinant of behavioral intention and, therefore, an important predictor of sustainable consumption behaviors in society.

2.5. H5. PBC—EFPI: PBC Contributes to EFPI

Human behavior is gradually learned in families and by each generation, which is how behavior patterns that contribute to the norms of society develop [12]. With the passing of time, new ways of acting emerge because of the normal development and evolution of individuals, contributing greatly to the way in which products or services are acquired for satisfying consumer needs and strengthening EFPI [52]. When consumers believe that it is easy to acquire eco-friendly products and that these products have environmental benefits, then they are more likely to form purchase intentions around them. Therefore, understanding the relationship between these variables can help businesses develop effective strategies to promote eco-friendly buying.

2.6. H6. ATT—EFPI: Attitude Influences EFPI

With the arrival of COVID-19, individuals took different stances towards society and family [25], business and their own day-to-day responsibilities [53], modifying the traditional attitude towards solving issues and driving the goal of well-being and tranquility regarding the health of the body and soul [54]. The attitude towards the purchase of eco-friendly products is related to consumer beliefs about the benefits that these products can convey for the environment and society. The COVID-19 pandemic changed people's perspectives on the importance of health and well-being, which increased the awareness about environmental issues and the need for products or services that focus on eco-friendly solutions [55].

3. Methodology

The present research aimed to evaluate how perceptions on COVID-19 affected the variables of planned behavior and responsible buying intention in Colombia. A quantitative and transversal research method was used involving a self-administered survey [56].

3.1. Sample and Procedure

Participants in the present study were Colombian citizens who were 18 or over at the time of treatment. Non-probabilistic sampling was applied for convenience [57]. This technique is commonly used in consumer behavior studies [58–63] because of its low cost and the ease of finding willing participants [56]. The data were collected through an online survey via Google Forms. Respondents had to give their consent to participate. This type of online survey was applied due to it having the lowest cost, quickest feedback, best coverage, and shortest timespan, and because it enabled the researcher to quickly contact the sample group [64,65]. The survey was sent via email and various social networks (Facebook, LinkedIn, Instagram, and WhatsApp). In this way, a total of 384 questionnaires were completed. The questionnaires were then filtered, and those that were incomplete or had been answered by children under 18 years of age were omitted. Finally, 320 valid questionnaires were included in the sample.

3.2. Measures

The study was conducted using a structured questionnaire, with reference to other studies and approaches that have been conducted from the perspective of planned behavior (ATT, SNs, and PBC), which include items such as those identified by [14,15], responsible purchase intention, which include items such as those identified by [66], and the COVID-19 context, which include items such as those identified by [51].

The questionnaire is shown in Table 1; 17 questions pertaining to the COVID-19 context, planned behavior, ATT, and EFPI were compiled. After developing the questionnaire, a pilot test was conducted, which was used to adjust the language and wording of the questionnaire. The descriptive statistics for the items (mean, standard deviation, skewness, and kurtosis) in the instrument show that item COV1 has the highest mean ($M = 4134$; $SD = 1192$), and the item SN1 ($M = 2891$; $SD = 1290$) has the lowest mean and variability. Regarding asymmetry and kurtosis, all the values are less than $+/- 1.5$ [67], thus fulfilling the multivariate normality assumption (see Table 1).

Table 1. Preliminary analysis of the items. Source: author’s elaboration 2022.

Variables Analyzed		Mean	Standard Deviation	Asymmetry	Kurtosis
1. The COVID-19 pandemic has caused me to worry about life in the future.	COV1	4.134	1.192	−1.223	0.419
2. The number of people infected with COVID-19 has changed my social behavior.	COV2	4.091	1.207	−1.167	0.311
3. The many deaths related to COVID-19 scare me.	COV3	3.997	1.293	−1.037	−0.163
4. I believe that the current vaccines are effective in fighting COVID-19.	COV4	3.700	1.146	−0.599	−0.328
5. I believe that the COVID-19 pandemic prevention campaigns have reduced the number of infected people.	COV5	3.234	1.303	−0.219	−0.984
6. The COVID-19 pandemic ... (has caused me to increase the separation of organic and recyclable waste).	PBC1	3.144	1.396	−0.099	−1.220
7. The COVID-19 pandemic ... (has caused me to reduce water consumption because it is a limited resource).	PBC2	3.091	1.376	−0.084	−1.222
8. The COVID-19 pandemic ... (has made me worry more about natural resource availability for future generations).	PBC3	3.094	1.329	−0.076	−1.104
9. The COVID-19 pandemic has made ... (the people I listen to influence me regarding the purchasing of organic products).	SN1	2.891	1.290	0.073	−1.007
10. The COVID-19 pandemic has made ... (people important to me think that I should buy green products).	SN2	3.000	1.311	−0.059	−1.097
11. The COVID-19 pandemic has made ... (my family and friends think that buying green products is a good idea).	SN3	3.219	1.323	−0.171	−1.097
12. The COVID-19 pandemic has made me ... (prefer to buy products that can be recycled).	EFPI1	3.303	1.322	−0.261	−1.067
13. The COVID-19 pandemic has made me ... (decide to buy green products, even when they are not from a well-known company).	EFPI2	3.250	1.291	−0.202	−0.992
14. The COVID-19 pandemic has made me ... (prefer to buy products that use green materials).	EFPI3	3.272	1.329	−0.227	−1.059

Table 1. Cont.

Variables Analyzed		Mean	Standard Deviation	Asymmetry	Kurtosis
15. The COVID-19 pandemic has made me ... (be willing to pay more for green products).	ATT1	3.281	1.328	−0.245	−1.049
16. The COVID-19 pandemic has made me ... (be willing to pay more for conventional products if they are made from organic materials).	ATT2	3.397	1.342	−0.401	−0.975
17. The COVID-19 pandemic has made me ... (be willing to pay more for green products to reduce the use of cleaning supplies and detergents).	ATC3	3.266	1.294	−0.251	−0.983

3.3. Statistical Analysis

This study applied the SEM approach, which is highly recommended for analyzing cause–effect relationships and/or descriptive models [57]. Therefore, the SEM approach is ideal for testing the hypotheses of dependence relationships and their correlations and for estimating the effect of moderating variables [68]. To test hypotheses with this approach, it is necessary to assess the reliability and validity of the measurement model. In the case of the present work, the model was tested by performing an exploratory factor analysis (AFE), and then calculating Cronbach’s alpha to measure the reliability of the latent variables and the internal consistency of the items used in the instrument. Then, confirmatory factor analysis was applied to verify the adjustment of the measurement model and evaluate the composite reliability and average variance extracted. An evaluation of the study variables was also carried out. For this analysis, IBM SPSS Statistics software and AMOS 26 software were used. This software was also used to test the proposed hypotheses.

4. Results

A total of 320 valid questionnaires were collected from Colombian consumers, including both men and women and ranging between the ages of 18 and 69 years. Table 2 shows the sociodemographic characteristics, including sex and age, of the participants. The largest group of respondents were female (60.0%) and 18 to 25 years of age (34.1%), followed by those who were 26 to 35 years of age (26.3%). Additionally, it is observed that single people formed the largest amount in the sample (56.3%) from the academic level of bachelor’s degree or graduate school (40.3%).

Table 3 shows the EFA results for the items. The items are distributed across five factors based on the variables analyzed. There is a clear difference among the five variables. The Kaiser-Meyer-Olkin (KMO) and Bartlett test results were as follows: the KMO measure of sampling adequacy = 0.938 (which is higher than 0.7), and Bartlett’s test significance = 0.000 (highly significant); therefore, factor analysis could be performed. The total variance explained in the model is 74.277% (which is greater than 50%), with EFPI = 55.817%, ATT = 4.443%, SN = 6.198%, COVID-19 (COV) = 6.132%, and PBC = 1.668% (see Figure 1). All items were grouped according to the study variables, thus confirming the theories on which the variables are based.

Table 2. Sociodemographic data of the participants ($n = 320$).

Age Range (Years)	Male		Female		Prefer not to Say		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
18 to 25	46	14.4	62	19.4	1	0.3	109	34.1
26 to 35	30	9.4	54	16.9	0	0.0	84	26.3
36–45	19	5.9	33	10.3	0	0.0	52	16.3
46–55	23	7.2	29	9.1	0	0.0	52	16.3
56–69	9	2.8	14	4.4	0	0.0	23	7.2
	127	39.7	192	60.0	1	0.3	320	100.0
Marital status				Academic level				
	<i>n</i>	%					<i>n</i>	%
Single	180	56.3			High school		129	40.3
Married	68	21.3			Undergraduate		104	32.5
Living together	43	13.4			Specialization		44	13.8
Divorced	25	7.8			Postgraduate (Dr./PhD. or Mg.)		21	7.5
Widower	4	1.3			Preparatory		19	5.9
Total	320	100		Total			320	100

Table 3. Factor analysis.

	Factor				
	1	2	3	4	5
EFPI2	0.976				
EFPI1	0.884				
EFPI3	0.881				
ATT2		0.928			
ATC3		0.845			
ATT1		0.801			
SN2			0.883		
SN1			0.808		
SN3			0.671		
COV2				0.817	
COV3				0.799	
COV1				0.755	
COV4				0.345	
COV5				0.330	
PBC3					0.691
PBC1					0.638
PBC2					0.634

Extraction method: maximum probability. Rotation method: Promax with Kaiser normalization. The rotation converged in eight iterations.

Table 4 shows the validation for the final measurement model using measures of convergent reliability and validity: Cronbach's alpha (α) > 0.7 for all variables, the composite reliability (CR) > 0.70, and the average variance extracted (AVE) > 0.50; *** $p < 0.001$ (level of significance). The results indicate the significant validity and reliability of the model.

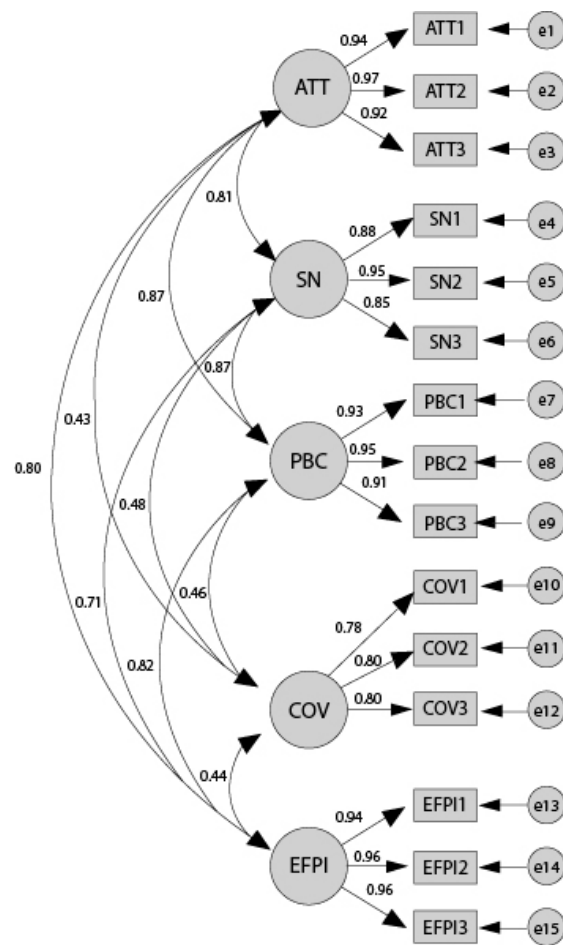


Figure 1. COVID-19 measurement model, using PBC and EFPI variables.

Table 4. Validation of the final measurement model (reliability and convergent validity).

Predictor	Outcome	Std Beta	Alpha	CR	AVE
ATT	ATT1	0.938 ***			
ATT	ATT2	0.970 ***	0.960	0.961	0.890
ATT	ATC3	0.922 ***			
SN	SN1	0.878 ***			
SN	SN2	0.947 ***	0.918	0.921	0.796
SN	SN3	0.849 ***			
PBC	PBC1	0.931 ***			
PBC	PBC2	0.948 ***	0.950	0.950	0.864
PBC	PBC3	0.908 ***			
COV	COV1	0.777 ***			
COV	COV2	0.802 ***	0.765	0.836	0.630
COV	COV3	0.801 ***			
EFPI	EFPI1	0.938 ***			
EFPI	EFPI2	0.955 ***	0.966	0.966	0.905
EFPI	EFPI3	0.961 ***			

COV = perception of COVID-19, ATT = buying attitude, SN = subjective norm, CPP = perceived behavioral control, EFPI = eco-friendly purchase intention. Note: *** $p < 0.001$ (significance level).

Table 5 presents the discriminant validity results, which validate the measurement model due to the confidence intervals not reaching unity and the quantile covariances not exceeding the AVE value. In this case, the diagonal represents the square root of the AVE [69]. In addition, the heterotrait-monotrait ratio (HTMT) criterion is met, validating the constructs for each of the factors due to all the coefficients being below the strict discriminant validity threshold (0.850) [70]. All these requirements fit into the proposed model. Therefore, hypothesis testing could proceed using SEM.

Table 5. Discriminant validity of the model using the HTMT criterion.

	CR	AVE	ATT	SN	PBC	COV	EFPI
ATT	0.961	0.890	0.944				
SN	0.921	0.796	0.814 ***	0.892			
PBC	0.950	0.864	0.871 ***	0.865 ***	0.929		
COV	0.836	0.630	0.431 ***	0.475 ***	0.460 ***	0.794	
EFPI	0.966	0.905	0.801 ***	0.711 ***	0.825 ***	0.441 ***	0.952

Note: The square root of AVEs is shown diagonally in bold. *** $p < 0.001$ (significance level).

The fit of the study model is shown in Table 6, and all the indicators are at optimal levels, thus allowing for further analyses.

Table 6. Fitting of the measurement model.

Indicators	Estimation	Limits	Interpretation
CMIN	139.006	-	-
DF	81.000	-	-
CMIN/DF	1.716	Between 1 and 3	Excellent
CFI	0.990	>0.95	Excellent
RMSEA	0.047	<0.06	Excellent
PClose	0.619	>0.05	Excellent

Note: [60,71] recommend combinations of measures. A combination of CFI > 0.95 and SRMR < 0.08 was selected for this study and, to further solidify the evidence, RMSEA < 0.06 was added as a criterion.

Hypothesis Testing

After verifying that all the indicators in the measurement model supported the reliability and validity of the instrument, an estimation of the structural model was conducted to test the hypotheses proposed in the present study. The data obtained from the SEM are displayed in Figure 2 and Table 7. As in the confirmatory factor analysis, the goodness of fit of the SEM was excellent for all the indicators (CMIN = chi-square; DF = degrees of freedom; CMIN/DF = chi-square/degrees of freedom; CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; PClose = p of close fit). The results allowed further testing of the hypotheses.

As seen in Figure 2, COVID-19 (COV) exerts had a strong impact on the three variables of planned behavior, with perceived PBC experiencing the greatest impact, with a variance of 0.96. This factor has the greatest impact on the EFPI, with a variance of 0.59.

Table 7 shows the results of the hypothesis testing. Most of the hypotheses are accepted, with the exception of H5, which was not supported. Therefore, COVID-19 (COV) impacted the three variables of planned behavior ($p = 000$). In addition, purchase intention was affected by ATT and PBC ($p = 000$), but was not impacted by SN ($p = 0212$).

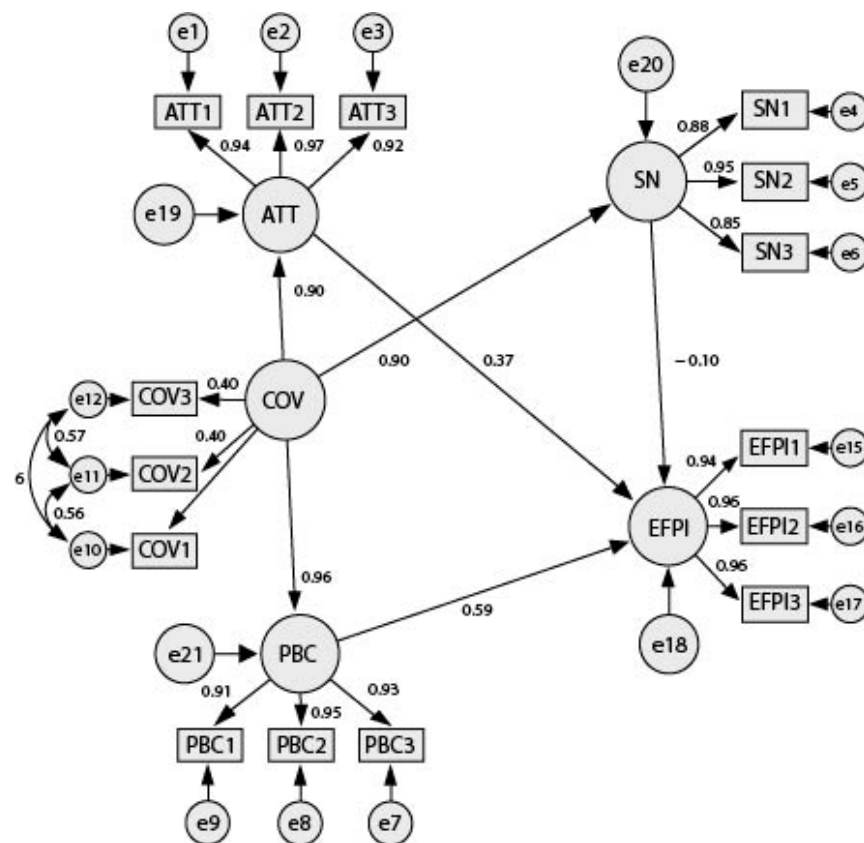


Figure 2. SEM of COVID-19, including PBC and EFPI variables.

Table 7. Hypothesis testing.

H		Hypothesis		Estimation	<i>p</i>	Decision
H1	COV	--->	ATT	0.905	***	Accepted
H2	COV	--->	SN	0.902	***	Accepted
H3	COV	--->	PBC	0.961	***	Accepted
H4	ATT	--->	EFPI	0.371	***	Accepted
H5	SN	--->	EFPI	−0.101	0.212	Rejected
H6	PBC	--->	EFPI	0.590	***	Accepted

Note: *** $p < 0.001$ (significance level).

5. Discussion

The confinement and social changes resulting from the pandemic have influenced human behaviors, such as driving the adoption of environmentally friendly technologies. Therefore, previous studies have analyzed the relationship between the COVID-19 pandemic context and favorable perceptions on green products. Additionally, one study addressed green finance and logistics in the adoption of sustainable production and a circular economy [61,72].

In this study, COVID-19 has significantly impacted the variables that allude to planned behavior, which shows that respondents in Colombia understand the importance of raising awareness about environmentally friendly products. Environmental and behavioral modification are undertaken in times of crisis to cope with the fear caused by COVID-19. In the same way, the purchase intentions of the surveyed Colombians were altered due to the changes in ATT and PBC that lead individuals to become aware of the importance of sustainable products.

During the pandemic, consumers considered green products to be safer and healthier in the context of an emerging economy [62,73]. The effect of the pandemic on the consumption of green products in the post-COVID era has also been studied based on attitudinal factors using the theory of planned behavior. PBC and purchasing intentions have been shown to have positive effects on behavior, indicating that when consumers accept green products and have more time, resources, and opportunities, they come to believe that they can control external factors when pursuing their buying behaviors, which increases the levels of both their PBC and their willingness to adopt green products [63,74].

Similarly, the adoption of green foods during the pandemic has been studied from the perspective of the theory of planned behavior [64,75]. The findings indicated that ATT and PBC have a positive relationship with green food purchase intentions. The theory of planned behavior can be extended to include other important factors in the adoption of this type of technology.

Few studies have focused on addressing the intention to purchase environmentally friendly products under the effect of the COVID-19 pandemic, especially in the context of emerging economies. This study offers an analysis of the most influential factors in the purchase intention of green products in an emerging Latin American economy. Therefore, a precedent is set for the application of the theory of planned behavior in the study on the adoption of green products during and after a pandemic.

Regarding the practical implications, this study increases our understanding on the perceptions of consumers in a pandemic context, which is useful for the generation of green marketing strategies by organizations based on the green purchasing behaviors of consumers in an emerging economy. Finally, there are limitations to this study that should be noted. The sample was small; it is important to contrast the results with a much larger number of people in the same context and even under the panorama of a developed economy, through which comparative future studies between the perceptions of consumers in an emerging economy and consumers in a developed economy could be developed. It is also important to include additional factors beyond those analyzed in this study, i.e., the original TPB.

6. Conclusions

Consumers in Colombia are aware of the impact that COVID-19 has had on the normal development of their lives, which is why they have developed positive attitudes towards green products and recognition on their health and quality of life benefits. It is evident that COVID-19 has promoted an important sensitization in the awareness of individuals regarding the consumption of environmentally friendly products, since they see in this issue an opportunity for promoting products produced by environmentally friendly processes, using clean resources that provide the consumer with greater peace of mind regarding their contributions to society. In Colombia, there has been little development regarding the purchase or consumption of products that meet high standards of environmental responsibility; however, in this study, it is observed that COVID-19 has influenced the ATT around purchasing and, indeed, this aspect contributes to the purchasing decisions of individuals, since it allows the SNs to contribute to such considerations in a more conscious way that can help to mitigate the environmental problems in the territory. This provides an opportunity to better assess PBC in society, as well as the way in which small actions can benefit the environmental issues of the community and raise awareness in corporate decision-making when designing products or services that contribute to environmental needs and the new demands of consumers for green products.

COVID-19 has positively impacted the attitude of consumers by making them aware of the importance of buying or acquiring products derived from environmentally friendly processes.

SNs have led individuals to view the pandemic objectively in terms of green products and have contributed to the PBC of individuals regarding green decision-making, leading companies to reformulate their products and services to meet these new market demands.

SNs also affect the purchase intention of individuals for environmentally friendly products.

However, behavioral control does not contribute to EFPI.

Finally, attitude greatly influences EFPI, thus providing an opportunity to generate greater awareness among Colombian individuals on the societal importance of green business strategies that use clean processes and keep environmental welfare in mind.

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