

Environmental Self-identity and Purchasing Eco-Friendly Products

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Abstract. This study analyzed a process model of purchasing eco-friendly products. It extended Ajzen's theory of planned behavior by linking environmental self - identity to purchase intention and behavior. Survey data from 466 consumers aged 20 to 59 years in Seoul, South Korea, were collected. SEM was used to test 10 hypotheses and of the 10 hypotheses, 9 were supported. The results of this study suggest that the environmental self-identity is an important preceding variable in the process of eco products, and theory can be applied to the purchase intention and behavior of eco-friendly products. By incorporating environmental self-identity an extended model of TPB was proposed and empirically tested. This model is comprehensive as it affects the intent to purchase and ultimately links to buying behavior.

Keywords: Extended theory of planned behavior, theory of planned behavior, environmental self-identity, purchasing eco-friendly products.

1. Introduction

In the context of growing environmental concerns on a global scale, environmental experts around the world are arguing that household and individual consumption behaviors in industrialized countries have lasting impacts on the global environment (2018). Individuals are increasingly interested in their personal consumption. The results of a 2011 public opinion survey on environmental awareness revealed that more than 90 percent of the respondents were very concerned with environmental problems and recognized the seriousness of environmental pollution, In South Korea. However, a study on eco-friendly purchase behavior reported a score of 50.3 out of 100 (Daniel, 2012), suggesting that despite the high level of awareness about eco-friendliness, actual eco-friendly purchasing behavior is low. Therefore, to promote eco-friendly behavior, we need to understand the process by which consumers buy eco-friendly products (Mcdonagh, 2012). Recent studies examining eco-friendly purchasing have been conducted in the social and environmental sciences (Cordano and Frieze, 2017; Ko and Jin, 2017; Mosahab et al., 2010; Paul et al., 2016; Schniederjans and Starkey, 2014). However, few of these studies were conducted with the South Korean population. The present study aimed to fill that knowledge gap by investigating the process of purchasing eco-friendly products using survey data collected from South Korean consumers. A conceptual framework for understanding an eco-friendly purchasing process was developed on the basis of extended theory of planned behavior (Fishbein and Ajzen,2010). The theory is a broad explanation of human behavior, and to focus on this study's research topic, we included a variable measuring environmental self-identity, which previously was found to predict individuals' environmental behaviors. Recent research indicated that environmental self-identity positively predicted environmental and behavior (Olivos and Aragonés, 2011; Werff et al. 2012).

This study aimed to advance our knowledge by identifying antecedents of eco-friendly purchase behavior and confirming a theoretically-based process model regarding purchasing eco-friendly products. The analytical results found. Further, environmental self-identity positive related purchase intention and behavior regarding eco-friendly products.

Which were used to frame this study, and presents the conceptual model used to develop the 10 hypotheses that were tested using survey data. A description of the data, measures, and methods of statistical analysis is presented in the next section, followed by the empirical results of the hypotheses tests, discussion and offers suggestions for future research.

2. Theoretical Framework

2.1. TRA

Fishbein's and Ajzen's 1967 theory of reasoned action argues that attitudes about a

given behavior and subjective norms about that behavior influence intentions to enact the behavior (Ajzen, 1991). In this theory, attitudes a behavior are defined “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” (Ajzen, 1991). This definition implies that individuals have knowledge upon which they rely to consistently respond favorably or unfavorably to particular behaviors. In theory, subjective norms have two components. The first component is normative beliefs, which are based on the likelihood that important others (e.g., family members, friends, and teachers). Subjective norms are social factors generated within interpersonal relationships with important others, and individual’s predictions of the evaluations that those important others would make regarding her or his behavior. The ‘Theory of Reasoned Action’ postulates that individuals base their behavioral decisions and actions on their “social pressure” is defined as the important others’ influences on them (Fishbein and Ajzen, 1981).

2.2. TPB

In 1985, the ‘Theory of Planned Behavior’ extended the theory of reasoned action (Ajzen, 1985). This theory is similar in that an individual’s intention to perform a given behavior strongly predicts enactment of the behavior, and attitudes and subjective norms about the behavior are antecedents of both the intention and of the behavior (Ajzen,1991; Fishbein and Ajzen, 1975). However, the theory of planned behavior further proposes that perceived behavioral control directly influences intention and behavior. Perceived behavioral control, as an antecedent of the intention to perform a behavior, refers to “people’s perception of the ease or difficulty of performing the behavior of interest” (Ajzen, 1991). Thus, although both theories assume that humans are rational, the theory of planned behavior increased the explanatory power of the theory of reasoned action by including perceived behavioral control as an independent variable.

2.3. Extended Theory of Planned Behavior

Ajzen (1991) showed that there were clearly more antecedents or variations in the pathways from predictors to outcomes that might further increase the explanatory power of the model of the theory of planned behavior (Ajzen, 1991). Perugini and Bagozzi (2001) proposed adding variables and modifying pathways as a way to extend and deepen the theory (Perugini and Bagozzi, 2001). Therefore, an extended theory of planned behavior might be developed by adding one or more variables to the set of other factors conceptualized in the theory (Stets and Burke, 2000).

Empirical studies have extended the theory of planned behavior in various ways. First, in a review of previous studies relevant to extending the theory, Chen (2016) considered individuals’ sense of moral obligation to reduce the impact of global warming as a predictor to help explain variation in intentions to engage in energy savings. Chen and Tung (2014) suggested in which consumers’ environmental

concerns positively influenced attitude toward “green” (the predictors of the original model), and their perceived moral obligation, which, in turn, influenced intention to visit “green” hotels (Chen, 2014). These studies focused on pro-environmental or eco-friendly intentions or behaviors.

Since 2010, some studies about purchasing eco-friendly products, which is a topical area in consumer intentions and behaviors research and the focus this.

Paul et al. (2016) included environmental concern, a key variable in the eco-friendly marketing literature, to explain variation in Indian consumers’ “green” product purchase intentions. They found that consumer attitude and perceived behavioral control mediated the relationship between environmental concern and purchase intention. Another study found that, unlike perceived behavior control, green availability and environmental consciousness were statistically significant predictors of green purchase intention in Nigeria. Olivos and Aragonés (2011) demonstrated that environmental self-identity, modeled as an antecedent variable, strongly related to eco-friendly purchase behavior.

Each of these extended applications provides additional details to help explain variation in certain behaviors. We followed this approach and developed this study as an extended theory of planned behavior by including environmental self-identity as an antecedent factor of attitude, subjective norm, and perceived behavioral control.

3. Conceptual Framework

The theory of planned behavior extended by the hypothesis that environmental self-identity indirectly influences purchase intention and purchase behavior of eco-friendly products through its influences on attitude, subjective norm, and perceived behavioral control was used to develop the model. The study tested 10 hypotheses. All of the paths from environmental self-identity to purchase intention and purchase behavior were hypothesized as positive.

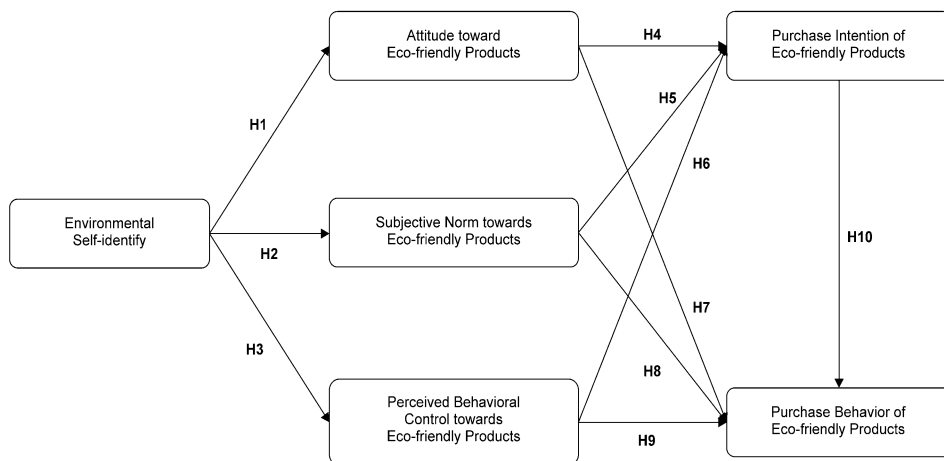


Fig. 1: The conceptual framework used to assess the relationships among

3.1. H1 – H3: The Relationships of Environmental Self-Identity to Attitude, Subjective Norm, And Perceived Behavioral Control

This study defined “environmental self-identity” as “an individual’s self-perception as someone who acts in environmentally-friendly ways” (Werff et al., 2013). Clayton (2003) found that environmental self-identity predicted individual-level environmental concern, and predicted attitude toward the natural environment. Regarding perceived behavioral control, stronger environmental self-identity was associated with stronger perceived behavioral control. The previous studies consistently demonstrated that individuals with stronger environmentally friendly self-identities had relatively positive attitudes, subjective norms, and perceived behavioral control about the environment.

These previous studies extended the theory of planned behavior by including environmental self-identity as an antecedent to one or more antecedent variables in. The first antecedent variable investigated its relationships to TPB as follows:

H1. Environmental self-identity positively relates to attitude toward eco-friendly products.

H2. Environmental self-identity positively relates to subjective norm regarding eco-friendly products.

H3. Environmental self-identity positively relates to perceived behavioral control regarding eco-friendly products.

3.2. H4 – H6: Relationships of TPB Factors to Intention to Purchase Eco-Friendly Products

Based on the previous research that extended the TPB regarding factors as determinants of intention to purchase eco-friendly products, we devised three hypotheses. Attitude toward a behavior has consistently predicted that behavior in the fields of consumer science and behavioral sociology (Godin et al., 2009). The relationship between attitude and purchase intentions was positive in a variety of studies (Kim and Han, 2010; Urbanand Zverinova, 2009). Regarding subjective norm, Fishbein and Ajzen (1975) and Perugini and Bagozzi (2001) proposed that individuals’ behavioral intentions increase as their subjective norms become stronger. Several studies found that attitude, subjective norm, and perceived control positively predicted purchase intentions (Casaló et al., 2010; Lam and Hsu,2004; Ouellette and Wood, 1998).

Therefore, we hypothesized as follows:

H4. Positive attitude toward eco-friendly products positively relates to purchase intention of eco-friendly products.

H5. Positive subjective norm regarding eco-friendly products positively relates to purchase intention of eco-friendly products.

H6. Perceived behavioral control regarding eco-friendly products positively

relates to purchase intention of eco-friendly products.

3.3. H7 – H9: The Relationships of Attitude, Subjective Norm, and Perceived Behavioral Control to Actual Purchase Behavior of Eco-Friendly Products

Many previous studies have positively related to actual purchase behavior. As examples of this large stream of research, Schultz and Oskamp (1996) and Kim, Lim, and Choi (2019) found that individual behavior was enhanced by attitude, Kwon (2016) demonstrated that subjective norm positively influenced pro-environmental behavior, and several studies found that attitude and subjective norm positively predicted pro-environmental behaviors. It has been further reported that high levels of perceived behavioral control facilitate eco-friendly purchase behavior (Ebreo et al,1999). Moreover, previous empirical studies conceptualized these factors as psychological characteristics (Bamberg, 2003).

H7. Positive attitude toward eco-friendly products positively relates to purchase behavior regarding eco-friendly products.

H8. Positive subjective norm regarding eco-friendly products positively relates to purchase behavior regarding eco-friendly products.

H9. Perceived behavioral control regarding eco-friendly products positively relates to purchase behavior regarding eco-friendly products.

3.4. H10: The Association Between Purchase Intention and Actual Purchase of Eco-Friendly Products

Ajzen (1991) argued that the intention to perform a given behavior depends on the likelihood that attitude and subjective norm are expressed as the behavior and, thus, contended that intention mediates the relationship between attitude and behavior. Further, the theory assumes that intention includes motivational factors that influence behavior; thus, purchase intention has been assumed to strongly relate to purchase behavior. Karatu and Mat (2015) found that purchase intention strongly influenced purchase behavior, and based on these propositions and empirical findings, the following hypothesis was tested:

H10. Intention to purchase eco-friendly products positively relates to purchase behavior regarding eco-friendly products.

4. Materials and Methods

4.1. Sampling and Data Collection

An internet survey method (Ritter and Sue, 2007) supplemented by email was used to collect the data in this study. A research company employed to collect the data. However, we first implemented a pilot survey to assess the questionnaire's validity and identify any problems (Chen and Tung, 2010). A weblink to the questionnaire was sent to 70 individuals selected using convenience sampling, and the reliability and validity of the returned questionnaires were assessed. After finalizing the

questionnaire based on findings from the pilot study, the survey was conducted. The data were collected from September 12, 2018 to September 18, 2018. The study design was approved by the Ewha Womans University Institutional Review Board (EWIRB-17-3.0-20170901, IRB No. 166-3) and study participants provided written informed consent.

G*Power 3.1.9.2 was used to calculate the desired number of respondents. When the effect size, statistical significance level (α), and power were set at 0.15 (moderate effect), $p < .05$, and .95, respectively, 234 was calculated as the minimum number of participants required to stably analyze the statistical model (see Figure 1). We decided on an optimal sample of 500 respondents because: (1) the interaction terms were not accounted for in the G*Power calculation for which the subsamples would be smaller and (2) when the number of variables in an analysis using structural equation modeling (SEM) exceeds 12, the sample size should be no smaller than $1.5 \times$ the number of observed variables \times (the number of observed variables + 1) (Jöreskog, 2018).

The target respondents were adult consumers living in Seoul, South Korea. A total of 500 individuals were contacted and asked to participate in the study. Of them, 466 respondents were included in the study. The exclusion criteria were: (1) non-response because of the limitations of online surveys, (2) obvious false responses, (3) aged less than 20 or more than 59 years, and (4) not a resident of Seoul. The 20-59 age range was used because previous studies have found that about 80 % of online shoppers in Korea who regularly shop on the internet are in that age range. The statistical software SPSS 23.0 and AMOS.

4.2. Variables and Measurement

The relevant previous studies were used to develop the 32 questionnaire items for measuring the study's variables. In that process, we aimed to improve the content validity of the questionnaire by revising and supplementing the scales based on the opinions of five consumer science experts. The reliability and validity of the survey scales were evaluated through the pilot survey. All items had response options on a seven-point Likert-type scale ranging from 1 = never to 7 = very much.

4.2.1. Dependent Variables

There were two dependent variables: purchase intention and purchase behavior. Purchase intention was measured using Paul et al.'s (2016) scale. Barbarossa and De Pelsmacker's (2016) items were used to measure purchase behavior of eco-friendly products.

4.2.2. Independent Variables

Environmental self-identity was measured using a modified and supplemented set of items based on Aquino and Reed's (2002) questionnaire and van der Werff et al.'s (2013) items for measuring environmental self-identity. The items were

adapted to fit the Korean context. We modified Schniederjans and Starkey’s (2014) items to measure attitude toward eco-friendly products. factors analysis were performed on each scale, which reduced the original 32 items to 20 items. The internal reliability of the constructs was assessed with the composite reliability and Cronbach’s alpha was tested. Table 1 shows that the alpha coefficients ranged from .830 to .921, which clearly met the standard of > .60. In addition, composite reliability was of a satisfactory level on all the constructs (.777–.869). Table 2 shows the analytical variables’ means and SD.

Table 1: Factor analysis results on the six factors, reliability (Cronbach’s alpha coefficient), and composite reliability (CR); n = 466

Constructs	Items	Cronbach’s alpha	CR ^a
Environmental self-identity	1) I respect the earth’s natural environment.	.883	.772
	2) Being friendly to the environment is important to me.		
	3) I feel guilty when I purchase products that are harmful to the natural environment.		
	4) I should reduce consumption to help prevent environmental pollution.		
	5) Humans should live in harmony with nature.		
	6) I should protect the natural environment.		
	7) I see myself as an environment-friendly person.		
	8) Although it slows down the pace of economic development, the environment should be considered first.		
Attitude toward EFP ^b	1) All things considered, I think purchasing EFP is a very good idea.	.909	.848
	2) All things considered, I think purchasing EFP is a positive step.		
	3) All things considered, I think purchasing EFP is very wise.		
Subjective norm about EFP	1) Most people who are important to me think I should purchase EFP.	.888	.803
	2) Most people who are important to me want me to purchase EFP.		
Perceived behavioral control about EFP	1) I believe that purchasing EFP is not completely within my control.	.830	.777
	2) I believe I have the ability to purchase EFP.		
Intention to purchase EFP	1) I plan to purchase EFP in the future because of their positive environmental contributions.	.882	.820

	2) I plan to spend more money on EFP than on products less friendly to the environment.		
	3) I definitely want to purchase EFP in the near future.		
Purchase behavior regarding EFP	1) I currently buy eco-friendly products.	.919	.869
	2) I bought eco-friendly products last month.		

^aCR: Composite reliability.

^bEFP: Eco-friendly products.

Table 2: Descriptive statistics of all analytical variables; n = 466

Variable	Mean	Standard Deviation	Minimum	Maximum
Environmental self-identity	5.24	0.93	1.00	7.00
Attitude toward EFP ^a	5.49	1.01	1.00	7.00
Subjective norm about EFP	4.44	1.33	1.00	7.00
Perceived behavioral control about EFP	4.84	1.11	1.00	7.00
Intention to purchase EFP	4.85	1.10	1.00	7.00
Purchase behavior regarding EFP	4.86	1.26	1.00	7.00

^aEFP: Eco-friendly products

5. Results

5.1. Respondents' Characteristics

Age was almost equally distributed in the sample (n = 466) in four groups (20–29: 24.2 %, n = 113; 30–39: 25.1 %, n = 117; 40–49: 25.1 %, n = 117; and 50–59: 25.2 %, n = 119). In terms of gender, there were 235 (50.4 %) females and 231 (49.6 %) males. The respondents were most likely to be four-year university graduates (n = 331, 71.0 %), followed by master's degree holders (n = 58, 12.4 %), high school graduates (n = 56, 12.0 %), and professional college graduates (n = 21, 4.5 %). Just over one-half of respondents (51.5 %, n = 240) were married and 226 (48.5 %) were not married. Average monthly household income was distributed as follows (in KRW millions): 7.5, 6, 4.5, and 1.5 comprised 35.0 %, 32.4 %, 15.7 %, and 2.1 % of the sample, respectively; respondents reporting more than KRW 7.5 million comprised 5.6 % of the sample. Regarding self-reported social class, 62.2 % (n = 290) considered themselves middle class, 33.7 % (n = 157) chose lower class, and 4.1 % (n = 19) considered themselves to be in the upper class.

5.2. Correlations and Confirmatory Factor Analysis Results

Before the hypotheses were tested, the bivariate correlations between the variables were examined to assess their statistical relationships to each other. Table 3 presents

the results on the analytical variables. All of the bivariate correlations were statistically significant and positive. Discriminant validity was assessed using the AVE, and Table 3 shows that AVE statistics were larger than the variables' largest squared correlation with any other variable, indicating that discriminant validity was supported.

Table 3: Bivariate correlation coefficients, discriminant validity test results (AVE), and squared correlation coefficients in parentheses; n = 466

No	Variable	1	2	3	4	5	6	AVE ^a
1	Environmental self-identity	--	(.712)	(.379)	(.237)	(.667)	(.515)	.728
2	Attitude toward EFPb	.848**	--	(.251)	(.336)	(.518)	(.346)	.736
3	Subjective norm about EFP	.616**	.501**	--	(.261)	(.563)	(.423)	.670
4	Perceived behavioral control about EFP	.487**	.580**	.511**	--	(.469)	(.245)	.636
5	Intention to purchase EFP	.817**	.720**	.750**	.685**	--	(.560)	.695
6	Purchase behavior regarding EFP	.718**	.588**	.650**	.495**	.748**	--	.768
Goodness of Fit								
χ^2					251.765 (df = 62, $p < .001$)			
GFI					.926			
AGFI					.874			
TLI					.945			
CFI					.962			
RMR					.059			
RMSEA					.081			

** = $p < .01$, two-tailed tests of significance.

^aAVE: Average variance extracted.

^bEFP: Eco-friendly products.

5.3. Hypothesis Test Results

Because all of the model fit indices except for the chi-squared result exceeded the recommended cut-off values, the structural equation model was considered an acceptable fit to the data ($\chi^2 = 335.01$ (df = 132; $p < .001$). Table 4 presents the test results of the SEM. The statistical significance cut-off value was $p < .05$.

Table 4: SEM results on the relationships among the key variables (unstandardized (**B**) and standardized (**β**) coefficients); n = 466

Panel 1						
Path		<i>B</i>	β	SE ^a	CR ^b	
Environmental self-identity	→	Attitude toward EFP ^c	1.091	0.900***	0.065	16.718
	→	Subjective norm about EFP	0.903	0.582***	0.081	11.132
	→	Perceived behavioral control about EFP	0.663	0.574***	0.064	10.326
Panel 2						
Path		<i>B</i>	β	SE ^a	CR ^b	
Attitude toward EFP	→	Intention to purchase EFP	0.391	0.670***	0.044	8.79
Subjective norm about EFP	→		0.362	0.435***	0.036	10.113
Perceived behavioral control about EFP	→		0.294	0.263***	0.048	6.059
Panel 3						
Path		<i>B</i>	β	SE ^a	CR ^b	
Attitude toward EFP	→	Purchase behavior regarding EFP	0.182	0.151**	0.07	2.598
Subjective norm about EFP	→		0.210	0.223***	0.061	3.448
Perceived behavioral control about EFP	→		-0.045	-0.035	0.07	-0.639
Panel 4						
Path		<i>B</i>	β	SE ^a	CR ^b	
Intention to purchase EFP	→	Purchase behavior regarding EFP	0.559	0.493***	0.11	5.062

** $p < .01$, *** $p < .001$, two-tailed tests of significance.

^aSE: Standard Error. ^bCR: Critical Ratio. ^cEFP: Eco-friendly products.

5.3.1. H1–H3

The first three hypotheses addressed the influences of environmental self-identity on attitude toward eco-friendly products, subjective norm, and perceived behavioral control (Table 4, Panel 1). These three hypotheses were supported by the data because all three relationships were positive and statistically significant ($p < .001$). The positive influence was the strongest regarding attitude ($\beta = .900$), and similar regarding subjective norm ($\beta = .582$) and perceived behavioral control ($\beta = .574$).

5.3.2. H4–H6

The second set of hypotheses concerned the influences of attitude toward eco-friendly products, subjective norm, and perceived behavioral control on intention to purchase eco-friendly products (Table 4, Panel 2). These hypotheses were also supported by the data because the relationships were positive and statistically significant ($p < .001$). The standardized coefficient was the strongest regarding attitude ($\beta = .670$), followed by subjective norm ($\beta = .435$) and perceived behavioral control ($\beta = .263$). The more positive the attitude, subjective norm, or perceived behavioral control, the higher is the purchase intention of eco-friendly products.

5.3.3. H7–H9

The focus of H7 through H9 was actual purchase behavior, which was expected to be positively influenced by attitude, subjective norm, and perceived behavioral control, respectively (Table 4, Panel 3). Hypotheses 7 and 8 were supported because the coefficients of the direct effects were positive and statistically significant (H7: $p < .01$; H8: $p < .001$). The indirect effect of attitude was .330, the direct effect was .151, and the standardized total effect was 0.480 ($p < .001$). Subjective norm had an indirect effect of .210, direct effect of .223, and total standardized effect of .433 ($p < .001$).

5.3.4. H10

The last hypothesis (“Intention to purchase eco-friendly products positively relates to purchase behavior regarding eco-friendly products”) was supported ($\beta = .493$, $p < .001$), which confirms the findings of many previous studies on this relationship (see Table 4, Panel 4).

6. Discussion and Conclusion

This study investigated consumers’ process of purchasing eco-friendly products as a response to the increasing seriousness of global environmental problems. To gain further knowledge about these intentions and behaviors, we proposed environmental self-identity as an antecedent factor which is frequently employed to help explain consumer behavior. The study analyzed the relationships among the variables and paths between them using SEM.

The most important contribution of this study was its finding that the process of

intending to purchase and actually purchasing eco-friendly products. We found that environmental self-identity positively influenced regarding eco-friendly products; further, it was positively related to both purchase intention and purchase behavior of eco-friendly products. The relatively high level of significance and strong coefficients indicate that environmental self-identity is important in understanding variations in purchase intention and behavior regarding those type of products, both directly and in the decision-making process.

This study's results support the theory of planned behavior, its extended versions, and previous studies that. However, which differs from previous studies' findings of direct positive relationships (Ajzen,1991). The reason for this difference might be that consumption behaviors vary depending on the characteristics of the purchased products (Kumar and Ghodeswar, 2015; Lin andf Huang,2012). For example, some previous studies on individual behavior toward eco-friendly products found negative associations between perceived behavioral control and actual behavior (Bamberg and Möser,2007; Kumar and Ghodeswar, 2015). Thus, the present study's finding might be related to the characteristics of eco-friendly products. Although purchasing eco-friendly products is considered an environmentally positive and socially beneficial behavior, the altruistic aspect of eco-friendly products alone might be inadequate to lead to purchases. People might take a rational approach and weight their expected satisfaction with a purchase against the expected inconvenience of making the purchase and decide that the costs outweigh the benefits (Barbarossa and Pelsmacker, 2016).

6.1. Limitations and Future Research

This study was an anonymous web-based survey based on an empirically validated theory, but the sample was not obtained through a random probability method. Larger samples obtained using random sampling methods would be more likely to provide results representative of the population. Comparative studies across countries, cultures, and global economic regions would be quite informative as well. A promising direction for future research on purchase intentions and behaviors regarding eco-friendly products would be to focus on environmental self-identity because this study identified it as a significant antecedent variable. The results might be helpful in developing ways to encourage people to purchase these products. Future research could also examine the extent to which price sensitivity influences the process of purchasing eco-friendly products, which is widely accepted as the strongest influence behavior.

In the current global context of threats to climatic and environmental stability, and despite the increasing worldwide interest in environmental problems, eco-friendly behaviors at the level of the consumer are not widespread. This study contributes to developing ways to promote products by examining the process of intending to and actually purchasing these products. We hope that the results of this study will encourage consumers to participate in the purchase of environmentally

friendly products, so that the importance of consumers' environmental self-identity can be important.

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