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THE IMPORTANCE OF ENVIRONMENTAL ATTITUDES TOWARDS PRODUCTS FOR SUSTAINABILITY AND BUSINESS STRATEGIES

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Key words: green marketing, sustainability, environmental attitudes, environmental behavior, structural equation modeling.

Abstract. In green marketing, it is crucial for businesses to decide first to whether the environmental benefits of the product or its individual benefits should be emphasized. Knowing the environmental behaviors of those who prefer these products in their daily lives will also help to classify the consumers. In this research, the relationship between ecocentric and anthropocentric attitudes towards products, environmental behavior, eco-brand awareness, and eco-brand loyalty have been investigated in order to highlight the aforementioned issues. These relationships have been tested with a structural equation model. Within the scope of the research, the questionnaire method was used as the data collection method. The sample of the research consists of teacher candidates. The results show that there is a positive relationship between ecocentric attitude towards products and environmental behavior and no statistically significant relationship between anthropocentric attitude and environmental behavior. In addition, there was a positive relationship between environmental behavior and brand awareness; and brand awareness and brand loyalty.

Introduction

Today, in many disciplines, research on the causes, consequences, and prevention of environmental problems seems to have gained importance. It can be said that, because natural resources are limited and rapidly decreasing while environmental pollution is increasing, research is obligatory. Many of the causes of environmental pollution are human-induced, and the direct impact of consumption on the reduction of natural resources reveals the importance of understanding

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people's environmental attitudes and behavior. Production activity leads to pollution, and it is not possible to remove pollution completely (Yıldız et al., 2008). It is a fact that businesses cause pollution due to their production and even distribution activities. However, since businesses have to carry out their activities taking into account the needs and desires of consumers, the attitudes and behavior of individuals will give direction to the activities of businesses. Polonsky (1994) asserted that product demand ultimately belongs to consumers, that these demands can also create environmental problems, and that responsibility does not belong to businesses alone. Today, consumers who are aware of this situation are more sensitive to environmental issues in purchasing decisions. Within the framework of this approach, Paço and Raposo (2009) argued that the relationship between the marketing, environment and consumer behavior was increasingly taken into account and emerged in two ways: (1) public awareness of environmental issues, (2) the increase in environmental responsibility or the visibility of green marketing activities. Polonsky and Rosenberger (2001) pointed out that the environmental activities of enterprises can occur as a result of internal or external pressures, and the importance of consumer influence by putting consumer demand in first place as external pressure.

Knowing the sources from which an individual's environmental attitudes are fed is critically important for understanding environmental behavior. However, the information that will be obtained about this subject will be useful for marketing, but it will be insufficient because the issue will include the product component so that the individual will assume the identity of the consumer who pays for the product and expects the highest benefit from the product. This distinction will lead to the development of a different environmental attitude towards products. Therefore, the effect of these attitudes on environmental behavior will be different. Consumers' making of purchasing decisions, partly on the basis of personal environmental criteria (Hartmann and Ibanez, 2006), reveals that environmental attitudes differ where products are concerned. In addition, green products are often priced higher than traditional products (Polonsky and Rosenberger, 2001), which may cause environmental awareness to lose priority in the process of buying. For environmental household products, Ottman et al. (2006) pointed out that consumers are more concerned with the benefits such as "safe for children," "does not contain poisonous substances," "does not contain chemical residues" rather than benefits such as "recyclable packaging" or "not tested on animals." This indicates that individual benefits outweigh environmental awareness. All of these reasons emphasize the importance of evaluating "environmental attitudes related to products" separately from environmental attitudes in general terms.

Green products are those that do not harm the environment and do not contain potentially harmful items (Borin et al., 2011). Fuller and Ottman (2004)

emphasized that, from a broader perspective, production, use, and post-use stages of the product are important for sustainability.

Consumers' growing concerns about the environment have begun to manifest themselves in the form of purchasing with preference for environmentally friendly products, and the resulting trend has created a new consumer segment called green or ecological consumers (Paço and Raposo, 2009). But what will motivate this consumer segment (and even those who are not concerned about the environment) to buy environmentally friendly products? Are benefits for nature more motivating or are the benefits for the individual more motivating? While the two components will create a total useful value, the determination of their priority and weight is crucial for activities promoting green product.

Very few customers only buy a product because it is green (Dutta, 2011). It is important for the green product to provide the benefits expected from the product, to not harm the environment, and to provide other social benefits. (D'Souza et al., 2006; Hartmann and Ibanez, 2006). Successful green product marketing activities give clear information on the benefits of green products to consumers (Ottman et al., 2006).

Attitudes towards the environment can be dealt with in two groups, ecocentrism and anthropocentrism. In anthropocentric ethics, nature deserves moral attention because it affects humans, but in ecocentric ethics, nature deserves ethical value because it has an intrinsic value (Kortenkamp and Moore, 2001). Lautensach (2009) describes anthropocentrism as a personal ethic that ignores the long-term effects of human actions on humanity, concerning the well-being of living people. Kortenkamp and Moore (2001) point out that anthropocentrism regards people as the most important life form, and that other forms of life are important in the way that they affect people or are useful to people. Ecocentric ethics require that any material or life form consumed by humans be replaced or reproduced in order to keep the ecosystem healthy (Lautensach, 2009).

Although environmental attitudes do not guarantee environmental behavior, these attitudes are likely to lead to environmentalist behavior (Baker and Ozaki, 2008). Environmental consumerism is a type of environmentally responsible behavior in the form of purchasing and consuming environmentally friendly products (Mainieri et al., 1997).

1. Method

1.1. Purpose. In green marketing, it is crucial for businesses to respond, firstly, to whether the environmental benefits of the product or its individual benefits should be emphasized. On the other hand, knowing the environmental behaviors of those who prefer these products in their daily lives will also help to classify consumers. In this research, the relationship between ecocentric and

anthropocentric attitudes towards products, environmental behavior, eco-brand awareness, and eco-brand loyalty were investigated in order to highlight the aforementioned issues.

Structural equation modeling (SEM) was used to demonstrate the relationship with the help of the model and to test the suitability of the research model. SEM is used in many disciplines to solve research problems related to causal relationships between latent constructs measured by observed variables (Çelik and Yılmaz, 2013). The theoretical model of how variable sets define structures and theoretical models of how connections are made between structures can be tested in SEM (Schumacker and Lomax, 2004). Raykov and Marcoulides (2006) emphasized two important features of SEM. The first one is the ability of SEM to test and measure theories with a comprehensive method. Another obviously important feature is the addition of measurement errors to the account.

1.2. Research hypotheses and structural model. In this study, the suitability of the model presented and four hypotheses within the framework of this model were tested. The first and second hypotheses were established to examine the relationship between environmental attitudes towards products (ecocentric and anthropocentric bases) and environmental behavior.

Ecocentrism does not see humans in the center and suggests that nature is equally valuable. As stated by Lautensach (2009), in order to keep the ecosystem healthy in ecocentrism, it is necessary to replace any consumed material. This approach suggests that an ecocentric attitude will lead to environmental behavior. In addition, Thompson and Barton (1994), Casey and Scott (2006), and Gheith (2013) found a positive relationship between ecocentrism and environmental behavior. Similarly, in Alnıaçık's (2010) study, a positively meaningful relationship between a nature-centered attitude and environmental behavior was reached.

Anthropocentric attitudes are based on utilitarian philosophy (Erten, 2007), and human happiness is seen as the only acceptable target (Karaca, 2008). Anthropocentrism differs from ecocentrism in terms of environmental attitudes. People with anthropocentric attitudes exhibit environmental behavior for the sake of their quality of life. While Casey and Scott (2006) found a negative correlation between anthropocentric attitude and environmental behavior, Thompson and Barton (1994), who improved the originality of the scales we used in our research, reached a negative relationship in one of their studies. Based on past findings in the literature, our first two hypotheses are as follows:

H_1: An ecocentric attitude towards products affects environmental behavior positively.

H_2: An anthropocentric attitude towards products affects environmental behavior negatively.

Consumers have become more concerned about the environment, and these concerns have increasingly begun to manifest themselves in the form of purchasing environmentally friendly products (Paço and Raposo, 2009: 365). Hartmann and Ibanez (2006) also report that consumers are making purchasing decisions partly on the basis of personal environmental criteria. Consumers consume products, not only to satisfy their physiological needs, but also to meet their psychological and psychosocial needs, and, at this stage, the brand gains importance as it distinguishes a product that expresses different meanings from social and psychological aspects (Yılmaz, 2005). As a result, it can be expected that the environmental behaviors of the individuals whose concerns are reflected in their wishes and needs also affect eco-brand awareness.

H_3: Environmental behavior affects eco-brand awareness positively.

Brand awareness consists of the brand's recognition and the remembered performance of the brand and defines the likelihood of a brand being remembered in different situations (Keller, 2008). Brand awareness plays an important role in the consumer's purchasing process. Research has indicated that the brands engraved on consumer memory are preferred more intensively in the purchasing process (Aktepe and Baş, 2008). Gil et al. (2007) by using the structural equation modeling method in their research, found that brand awareness and brand connotations have a strong influence on brand loyalty. For the aforementioned variables, the scale used in our research and the scale used by Gill et al. (2007) is the same. According to results from the literature and this study, our last hypothesis is as follows:

H_4: Eco-brand awareness affects Eco-brand loyalty positively.

The model with hypotheses is shown in figure 1.

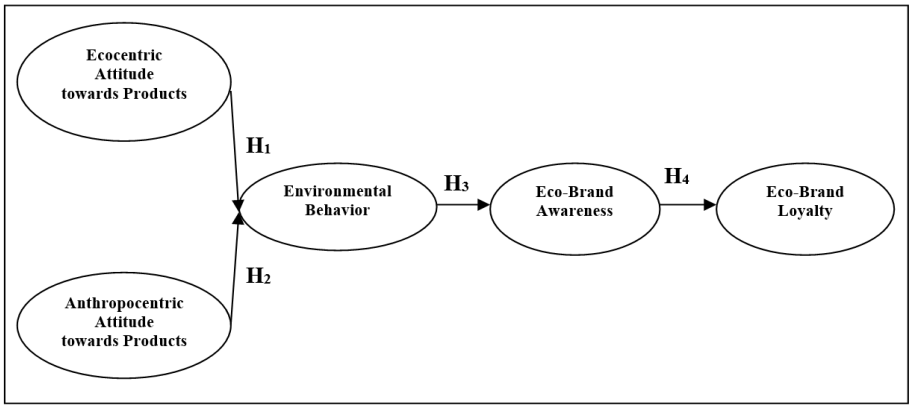

Figure 1. Model and Paths

1.3. Scales. In order to measure environmental behavior, an environmental behavior scale was used which was developed originally by Goldman et al. (2006), the Turkish version of the validity and reliability sections was conducted by Timur and Yilmaz (2013). The scale consists of 20 items in total. In order to measure brand awareness and brand loyalty, some of the scale items developed by Yoo et al. (2000) were used. A total of six questionnaires were used, three for each scale.

When choosing a brand to measure awareness and loyalty, the criterion for exhibiting an ecocentric approach as possible in green marketing applications was taken into consideration. Accordingly, scales included items measuring awareness and loyalty regarding the brand of cleaning product which exhibited an ecocentric approach with the slogan of environmentally friendly cleaning. The Ecocentric and Anthropocentric Product Attitude Scales produced by the researcher were based on three different products (chicken, tea, automobile), four questions for each product and 12 questions in total for measuring the environmental attitude towards the products. Eco-product characteristics and ecocentric and anthropocentric attitudes were taken into consideration when constructing scale items. All questionnaires used in the research were structured as a 5-point Likert type.

1.4. Sample and procedure. Survey participants were teacher candidates who were third and fourth year students in the Pamukkale University Faculty of Education. The choice of sampling was influenced by the assumption that teacher candidates had as a homogeneous structure as possible because of a similar educational process, and that the effect on the environment of an educator will be greater than that of other people. 855 teacher candidates were reached during the data collection process. Survey forms were eliminated from those who did not want to participate in the survey and those who did not correctly answer the questionnaire (multiple choice markers, people filling only one part of the questionnaire, etc.). Ultimately, 706 healthy questionnaires were obtained and included in the analysis. Questionnaires were filled in directly by respondents. In this way, it was aimed at preventing interviewer errors. On the other hand, the interviewers were accompanied by respondents during the implementation process to remove responder errors (low response rate, unexplained items, abandonment of multi-items, and risk of responding outside the sample).

2. Results

2.1. Measurement model. Within the scope of the research, a confirmatory factor analysis of the model was first tested, and then a structural model was created by path analysis. Hypotheses were tested after the goodness of fit statistics were examined. There are many goodness of fit statistics in the literature, but there is no consensus on which of these statistics should be used (Şimşek, 2007). In this study, the ratio of Chi-square ($\chi 2$) value to the degree of freedom value (χ^2/df) and

Table 1. Measurement model results and construct reliability

Factor / Item	CR	t-value	R^2
Ecocentric Attitude towards Products	**0.79**		
ECO1		14.40	0.31
ECO2		12.58	0.25
ECO3		14.31	0.32
ECO4		13.99	0.30
ECO5		13.14	0.27
ECO6		16.61	0.40
ECO7		18.10	0.46
ECO8		14.06	0.30
Anthropocentric Attitude towards Products	**0.63**		
ANT1		7.83	0.11
ANT2		16.35	0.52
ANT3		16.39	0.53
Environmental Behavior	**0.84**		
EB1		15.93	0.34
EB2		13.29	0.26
EB3		14.08	0.28
EB4		12.43	0.23
EB5		10.61	0.17
EB6		6.22	0.06
EB7		14.15	0.28
EB8		19.91	0.49
EB9		6.70	0.07
EB10		6.91	0.07
EB11		17.08	0.39
EB12		14.47	0.29
EB13		18.08	0.42
EB14		17.91	0.42
EB15		14.92	0.31
EB16		10.65	0.17
Eco-Brand Awareness	**0.95**		
EBA1		28.03	0.73
EBA2		34.54	0.96
EBA3		34.83	0.97
Eco-Brand Loyalty	**0.95**		
EBL1		33.56	0.90
EBL2		33.78	0.90
EBL3		30.39	0.80

Hu and Bentler's (1999) RMSEA-SRMR strategy were used in the model-data compatibility calculations.

In the criteria of goodness of fit, $0 \leq \chi 2 / df \leq 2$ good fit, $2 < \chi 2 / df \leq 3$ indicates acceptable fit (Schermelleh-Engel et al., 2003). Hu and Bentler (1999) suggested 0.06 as the cut-off point for the RMSEA value, McDonald and Ho (2002) reported that values well below 0.05 were considered good fit and values below 0.08 were considered acceptable. For the SRMR value, values of 0.05 and below indicate good fit, and values of 0.05 to 0.10 indicate acceptable fit. (Schermelleh-Engel et al., 2003). In addition, in the analysis process, the errors of the proposed items were linked and the models were retested based on the modification indices suggested by the program for some substances. Kleine (2005) also noted that the parceling technique is a controversial issue. Due to the fact that the number of items in the model is not reduced and parcels are not made in dimensions, modification indices were used both in the confirmative factor analysis and in the path analysis.

In the measurement model, there are 5 latent variables and 33 observed variables belonging to these latent variables. The composite reliability, t-values, R^2 values and goodness-of-fit statistics obtained from the analysis are shown in Tab.1.

According to the measurement model results, it is seen that all observed variables have enough t-values to explain the related latent variables (t-value>1.96; p<.05). Composite reliability values of the measurement model and goodness-of-fit statistics are also sufficient. (χ^2=1421.48, df=476 χ^2/df=2.98, RMSEA=0.053 , SRMR=0.067).

2.2. Structural Model and Hypotheses Testing. As a result of the path analysis performed, the goodness-of-fit statistics for the model fit were determined as χ^2=1441.80, df=481, χ^2/df=2.99, RMSEA=0.053, and SRMR=0.072. The statistics show that the model is acceptable. When examining the parameter estimates between the latent variables (Figure 2), it is seen that all the paths except for the path showing the relationship between Anthropocentric Product Attitude → Environmental Behavior (t-value = 1.30) are significant.

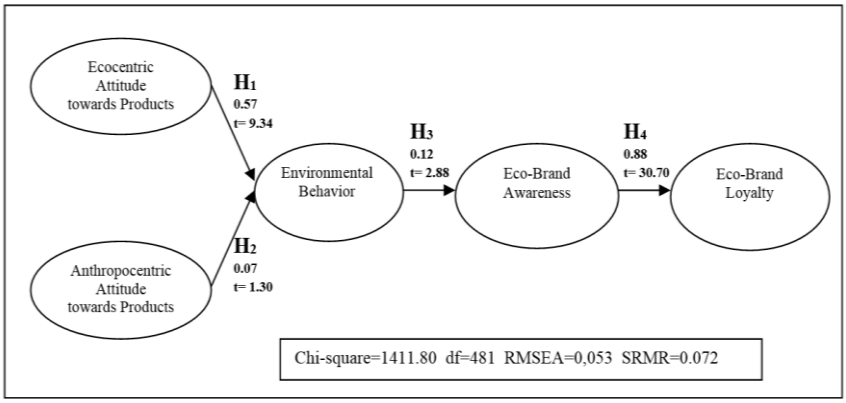

Figure 2. Path analysis findings of the model

The results of the hypotheses in the light of these data is shown in Table 3. As a result of the path analysis, a one unit increase in ecocentric attitude towards products affects an increase of 0.57 units in environmental behavior. In other words, as "ecocentric product attitude" increases, "environmental behavior" also increases, so **H_1** was supported. The relationship between "anthropocentric attitude towards products" and "environmental behavior" was not statistically significant and **H_2** was not supported.

When we examined the relations between dependent latent variables, it is determined that a unit increase in the "environmental behavior" factor increased the "eco-brand awareness" by 0.11 units, and a unit increase in the "eco-brand awareness" factor had an increasing effect on the "eco-brand loyalty" by 0.88 units. As a result, **H_3** and **H_4** were supported.

Table 3. Hypotheses results

Hypothesis	Standardized Loads	t-value	Conclusion
H_1: Ecocentric attitude towards products affects environmental behavior positively.	0.57	9.34	**Supported**
H_2: Anthropocentric attitude towards products affects environmental behavior negatively.	**0.07**	**1.30**	***Not supported***
H_3: Environmental behavior affects eco-brand awareness positively.	0.11	2.59	**Supported**
H_4: Eco-brand awareness affects Eco-brand loyalty positively.	0.88	30.70	**Supported**

3. Discussion

In general, the results of our research show that ecocentric attitude toward products affected environmental behavior positively, and anthropocentric attitude had no statistically significant effect on environmental behavior. In addition, it was been determined that there was a positively relationship between environmental behavior→eco-brand awareness and eco-brand awareness→ eco-brand loyalty.

The findings reveal the effect of ecocentrism on environmental behavior in terms of approach to products. This result largely overlaps with the correlation between ecocentric attitude and environmental behavior in the research findings of Casey and Scott (2006). Similarly, research conducted by Thompson and Barton (1994) and Gheith (2013) concluded that there is a positive correlation between ecocentric attitude and environmental behavior. Alnıaçık (2010) measured the environmental attitude with the New Ecological Paradigm Scale (NEP) and found that there is a positively correlation between ecocentrism and environmental behavior overlapping with other research results. Relevant studies have investigated the relationship between ecocentric attitudes and environmental behavior independent of products. However, their findings are parallel to the findings of the relationship between ecocentric attitude towards products and environmental behavior in our research.

As a result of our research, no statistically significant relationship was found between "anthropocentric attitude towards products" and "environmental behavior". This result reveals the possibility that eco-products are not bought by consumers to perform environmentally friendly behavior. Our findings reveal the effect of anthropocentrism in product choice. According to these results, it would seem to be a priority to emphasize individual benefits in order to ensure that consumers buy eco-friendly products. Ottman (2010) stated the significance of this issue by emphasizing that focusing environmental benefits before personal benefits would be a false strategy. However, in a real sense, ecocentrism seems to be the only way out for consumers who think about nature and future generations in the long term. Ecocentrism is the factor that increases the relationship between environmentalist behavior and eco-brand awareness. Therefore, unless ecocentrism predominates in consumers' attitudes towards products, products that primarily aim to protect nature will not be demanded (e.g. recyclable packaging, free-range chickens). In this context, Carrete et al. (2012) pointed out that understanding the motivating and inhibiting factors of green consumer behavior is a prerequisite for effectively changing these behaviors. The problem of creating behavioral changes in consumers for green marketing may perhaps be overcome by social marketing, a solution from marketing.

Another result of our study is that environmental behavior affects eco-brand awareness positively. On the other hand, although the results are significant, it can

be said that the effect of environmental behavior on eco-brand awareness is not high. However, because the selected brand is not included in a very wide distribution channel and, when compared to competitors' advertising activities in Turkey, its activities remain at a very low rate, this increases the importance of the relationship between environmental behavior and eco-brand awareness. Finally, on the findings, the high level of relationship between eco-brand awareness and eco-brand loyalty draws attention. In other words, environmentally conscious consumers are aware of the eco-brand, and this awareness brings loyalty to the eco-brand.

Conclusions

In conclusion, the findings of the models and relationships tested in our research reveal the importance of attitudes towards eco-friendly products. There are also differences in environmental behavior among consumers who have different expectations from eco-friendly products. Businesses that claim to have a green approach should carefully analyze what the environmental attitudes of the targeted customer segment are and then build marketing strategies as a result of this analysis.

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