IMPACT OF THE ENVIRONMENTAL VARIABLES ON ATTITUDES TOWARD SUSTAINABLE FASHION PRODUCTS THE ROLE OF SOCIAL MEDIA ENGAGEMENT

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Abstract

This study aims to determine how individuals connect with the environment while expressing themselves and how this affects their attitudes toward sustainable fashion products. This is accomplished by using reasoned action theory to see to what extent these relationships are affected by social media engagement. The model created within the scope of the study is tested with structural equation modeling. The findings suggest that self-expressiveness has a positive effect on environmental variables. Environmental variables has a positive effect on attitude toward sustainable fashion products as well. It is expected to make significant contributions to businesses and designers in the sustainable fashion products sector. Additionally, it is expected to provide new perspectives in the literature in consumer behavior.

***Keywords**: Self-expression, environmental variables, sustainable fashion products*

***Track**: Consumer behavior*

1. Introduction

Recently, increasing concerns about environmental problems have pushed people to act in an environmentally minded manner. The fashion industry is one of the main sources of problems for social and environmental sustainability (Pedersen & Andersen, 2015). Sustainable fashion has emerged as a solution for these problems. Consumers tend to prefer sustainable products to express their environmental values because products or services act as intermediaries in reflecting the identity of people (Park, Eisingerich, Pol and Park, 2013). So, it is valuable to understand if any relationship exists between consumers' identity and environmental variables. Thus, we seek to understand if any relationship exist between consumer's self-expressiveness and environmental variables. We also try to find out whether environmental variables of the consumers' influence the attitude towards sustainable fashion products.

This study aims to fill three different gaps in the literature. Firstly, there are rare study conducted on self-expressiveness as a precursor to using sustainable products in fashion. In this context, the investigation of the effect of self-expressiveness on attitudes through environmental variables (Do Paço and Raposo, 2008) (environmental concern (EC), the man-nature orientation (MNO), environmental self-identity (ESI), environmental knowledge (EK)) are expected to make significant contributions to the literature of sustainable fashion marketing. Secondly, because social media provides greater chances for the people to express themselves and gives wider chances to have information and participate in activities, we also aimed to understand if there is any effect of social media engagement. Lastly, most of the sustainability studies that have been conducted focused on a specific product, such as food or apparel (e.g., Kim & Damhorst, 1998; Ko & Jin, 2017), while this study takes up a more general product portfolio (apparel, furniture, technological products, etc.) regarding sustainable fashion products. Based on the results of the research, theoretical contributions regarding the importance of the study and suggestions for businesses are given in detail in the conclusion section.

Thanks to new trends and easily accessible information in social media, a new set of information sources has been created for consumers. Individuals who actively use social media form a field of use by synthesizing the information they have acquired. At the same time, social media has allowed us to observe consumer behavior and to see changes in the marketplace. Therefore, the use of social media is seen as the most effective tool for individuals to synthesize information (Park, Sung, and Im, 2017), and individuals who use

social media as a means of communication and self-expression usually reflect their beliefs and values on social media by raising environmental awareness and protecting environmental resources (Khan, 2017). At the same time, social media allows people to keep important information about the environment up-to-date and to share this information among users (Dolan, Conduit, Fahy, and Goodman, 2016).

2. Hypotheses Development

2.1. Impact of Self-Expressiveness on Environmental Variables

Self-expressiveness is consumers' perceptions of a product or service to reflect their identities (Thorbjørnsen, Pedersen, and Nysveen, 2007). According to the study by Carroll and Ahuvia (2006), self-expressive products are those that develop the social identity of individuals. Through self-expressive products, consumers take part in consumption activities in harmony with their identities and reflect their identities through brands and products. Individuals can acquire some social benefits that lead to the development of their selves and social impact (Ruane & Wallace, 2015). As an example of this, in studies examining consumer psychology, it was concluded that individuals turn to sustainable products to reflect their environmental variables (Thorbjørnsen, Pedersen and Nysveen, 2007).

H_1: *Self-expressiveness has a positive effect on environmental concern.*

H_2: *Self-expressiveness has a positive effect on man-nature orientation.*

H_3: *Self-expressiveness has a positive effect on environmental self-identity.*

H_4: *Self-expressiveness has a positive effect on environmental knowledge.*

2.2. The Impact of Environmental Variables on Attitudes toward Sustainable Fashion Products

Environmental concern expresses individual's emotional and cognitive concerns toward the earth and people damaging it (Reimers, Magnuson and Chao, 2017). Generally, individuals with positive environmental attitudes are more likely to act in an environmentally responsible manner (Kim & Damhorst, 1998). It has been suggested by various studies that *man-nature orientation*, which focuses on people's relationships with nature (Ko & Jin, 2017) and asserts that people can have an impact on nature, can be a decisive element in a person's attitude towards nature (Chan, 2001). *Environmental self-identity* defines the degree to which an individual sees himself/herself as an environmentally responsible person, and this is considered an extension of self-identity (Van der Werff, Steg, and Keizer, 2013; Reimers, Magnuson, and Chao, 2017). A person with a strong environmental self-identity will strongly perceive himself/herself as an environmentally friendly person and will, therefore, be more

likely to behave as one (Van der Werff et al. 2013). *Environmental knowledge* can be defined as the accumulation of knowledge about the natural environment for people to understand the changes that occur in the environment for a sustainable life (Fryxell & Lo, 2003). For the individual to act in an environmentally friendly behavior, he or she must first have environmental knowledge, and the more the individual has knowledge of the environment, the more positive this attitude will be. Therefore, environmental information is emphasized as a prerequisite for environmental attitude (Synodinos, 1990).

H_5: *Environmental concern has a positive effect on the attitude towards sustainable fashion products.*

H_6: *Man-nature orientation has a positive effect on the attitude towards sustainable fashion products.*

H_7: *Environmental self-identity has a positive effect on the attitude toward sustainable fashion products.*

H_8: *Environmental knowledge has a positive effect on the attitude toward sustainable fashion products.*

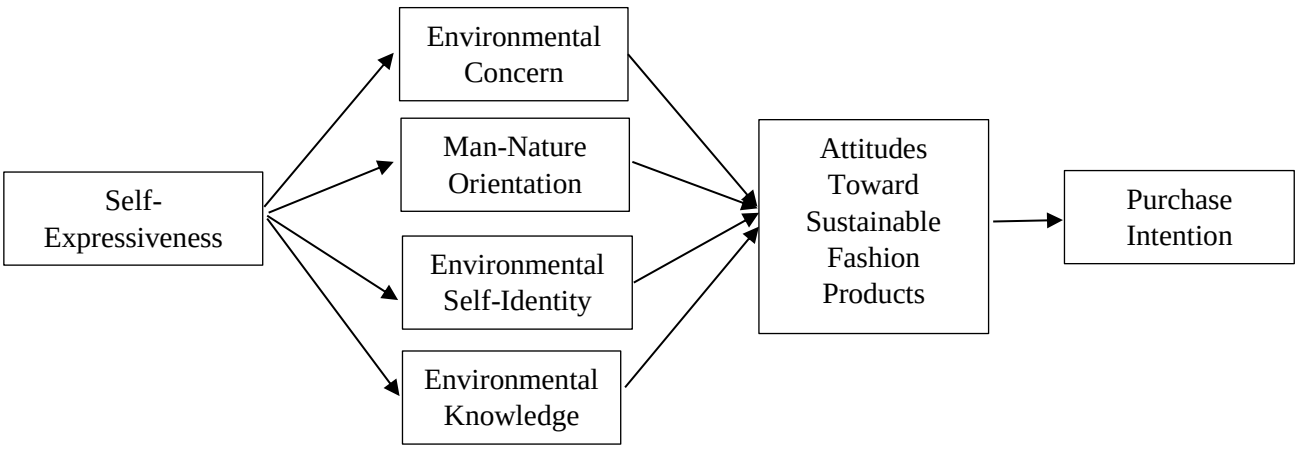
2.3. The Impact of Attitude Towards Sustainable Fashion Products on Purchase Intention

According to reasoned action theory, which developed to understand the relationships between attitude, intention, and behavior, attitudes are important determinants of *behavioral intent* (Ajzen & Fishbein, 1980). Many studies have been conducted in various fields in the literature regarding the effect of attitude has on intention. For example, the attitude towards green products has a significant effect on the intention to buy green products (Chan, 2001).

H_9: *The attitude towards sustainable fashion products positively affects purchase intention.*

According to the explanations above, we propose the following model.

Figure 1: *Research Model*



3. Methodology

Sample and Data Collection

Data were collected with an online survey design. Prolific Academic was the crowdsourcing area we used to gather the data from the United Kingdom (UK). Respondents were residents of the UK, were 18 years old, and were users of social media. First, we informed the respondents about what sustainable fashion products are and then asked them to complete a questionnaire. We used a seven-point Likert scale for the measures to gather the data, ranging from strongly disagree to strongly agree. We also asked some demographic questions at the end of the questionnaire. The survey took around five minutes to complete. In total, 510 respondents completed the survey, and the data for 453 was left after eliminating 57 inadequate responses.

Measures

We used existing measures for the constructs. Self-expressiveness was measured with the eight-item scale adapted from Carroll and Ahuvia (2006). We used the scales from different sources for the variables that are related to environmental variables. Environmental concern was adapted from Do Paço and Raposo (4 items), (2008), man-nature orientation from Chan (2001) (5 items), environmental self-identity from Van der Werff et al. (2013) (3 items), and environmental knowledge from Mohr, Eroğlu and Ellen (1998) (6 items). We measured attitudes towards sustainable fashion products with 6 items, adapted from Lang et al. (2019), purchase intention with 3 items, adapted from Armitage et al. (1999), and social media engagement with 5 items adapted from Hall-Phillips et al. (2016).

4. Analysis and Results

Demographic and descriptive statistics

The respondents were mostly female (%63,8), 26,9 of the respondents were between 18-25 years old, %43,3 of them had 2000£ and lower income, and %34,6 were graduated from a university or college. The majority of the participants spend time in social media 1-3 hours in a day (%49,4), and %77of them spend time in social media every day.

Analysis

We checked the mean values and correlations of the variables. The mean values ranged from 3,80 to 5,74 (SD ranged from 0,91 to 1,41) for all the variables. We checked the normality of the data with skewness and kurtosis. Skewness and kurtosis were both lower than the recommended levels of < 2 and < 7, respectively. (Tang, Fang and Wang, 2014). Correlations were significant and ranged from .16 to .71 ($p < .01$).

Common method bias can be a problem when a single factor accounts for the majority of the variance. Thus, we used Harman's single factor test to check common method bias. Single-factor accounted for %39,89 of the variance when we included all the items into principal component analysis and forced to single factor with no rotation. The explained variance was lower than %50 as Podsakoff and Organ (1986) suggested. Without forcing to single factor, the first factor accounted only %17,42 of the variance. Besides, we ran a confirmatory factor analysis with single latent variable. Results indicated poor fit after loading all items to one latent variable (X2= 5551,182; df = 495; X2/df = 11,215; CFI = .56; NFI:.54 TLI = .57; GFI = .43; RMSEA = .15). While the results were worse than seven-factor model reported below, there was a support that common method bias was not an important problem for the study (Podsakoff & Organ, 1986).

Measurement Model

We first used principal component analysis to determine uni-dimensionality. All the items loaded to their respective factors. The item "I think buying sustainable fashion products is easy" had low factor loading (,38<.50), thus we removed the item from further analysis (Hair, Black, Babin, Anderson and Tatham, 1998). All the other factor loadings for the items were higher than the recommended level of .50 ranging from .68 to .95. Thus, all scales indicated uni-dimensionality. We checked internal consistency with Cronbach's alpha values. All the values were higher than the recommended level of .70. Cronbach's alpha value for environmental concern was .87, man-nature orientation was .78, environmental self-identity was .92, environmental knowledge was .87, self-expressiveness was .95, attitudes toward sustainable fashion product was .84, and purchase intention was .91.

Confirmatory factor analysis for the model showed a good fit. However, the last item of attitude towards sustainable fashion products (I think buying sustainable fashion products is comfortable) had high standardized residual value (> 1.96). Thus, we removed the item from the analysis (Schumacker & Lomax, 2004). Also, factor loadings for two items of man-nature orientation ("being adapted to the world, human beings are not entitled to deploy any of the natural resources as they like" and "human beings are only part of nature" had lower factor loadings in confirmatory factor analysis (.56 and .53 respectively), lowering the AVE value of the factor. AVE value increased after eliminating the two items from the study because of low factor loadings (< .60, Iglesias, Markovic and Rialp, 2019). Then, the model indicated better fit ($\chi2$ = 885.278, df = 380, p = .000, $\chi2$/df = 2.33, CFI = .95, NFI = .92, GFI = .88, AGFI: 86, TLI = .95, and RMSEA = .05). All paths in the measurement model

loaded to the respective factors, and all of them were significant (p<.01, lowest t-value was 11.36). We followed Fornell and Larcker's (1981) criteria for convergent and discriminant validity. All the composite reliability (CR) values were higher than the recommended level of .70 (ranging from .77 to .94), and average variance extracted (AVE) values were higher than the recommended level of .50 (ranging from .53 to .81), indicating convergent validity. We compared AVE values with squared correlations of the variables. Results show that all AVE values were higher than the correlations between variables. Thus, the study indicated discriminant validity (Fornell & Larcker, 1981).

Hypothesis testing

We ran structural equation modeling to test the hypotheses. The model fir was acceptable ($\chi2$ = 1458.618, df = 796, p = .000; $\chi2$/df=3,721; CFI= .90, NFI = .88 TLI = .89, and RMSEA = .08). Structural equation modeling results showed that all hypotheses were supported (Table 1).

Table 1: The structural model results

				Est.	Stn. Err.	C. R.	Stn. Est.	R^2
H1	SE	→	EC	0,36	0,03	11,07*	0,53	.28
H2	SE	→	MNO	0,26	0,03	8,39*	0,46	.21
H3	SE	→	ESI	0,50	0,03	14,71*	0,66	.43
H4	SE	→	EK	0,46	0,04	12,20*	0,64	.40
H5	EC	→	ATT	0,15	0,05	3,22*	0,17	.38
H6	MNO	→	ATT	0,42	0,06	6,61*	0,38	
H7	ESI	→	ATT	0,16	0,04	3,77*	0,20	
H8	EK	→	ATT	0,11	0,05	2,21**	0,12	
H9	ATT	→	PI	1,10	0,08	14,48*	0,75	.56

*p<.01, **p<.05, ***SE:*** Self-expressiveness, ***EC:*** environmental concern, ***MNO:*** man-nature orientation, ***ESI:*** environmental self-identity, ***EK:*** environmental knowledge, ***ATT:*** attitudes towards sustainable fashion products, ***PI:*** purchase intention

Multigroup Analysis

We used social media engagement as a moderator to determine if the model differs for low and high engagement. We first used median split (median=3.2, low N:236, high N:217), then compared the unconstrained model with constrained model. According to the results, we found significant difference between constrained and unconstrained models ($\Delta \chi2$= 50,357, df=32, p < 0,05). Social media engagement moderated only one path significantly (self-expressiveness → environmental concern, p < 0.1). We did not provide any detail for each path while we did not propose any hypothesis in the study. When we compared the paths in general, we found that almost all the effects were higher in high engagement. EK (p=.68) and ESI's (p=.10) effect on attitude were not significant for low engagement, while all paths were

significant for high engagement. Only EC and MNO's effect on attitude was higher in low engagement, even though there were no statistical differences.

5. Conclusion

According to the findings of the study, individuals use environmental variables to self-express their selves. That finding is consistent with Aaker's (1999) findings. Individuals' environmental variables positively affect attitude toward sustainable fashion products which is also consistent with Chan (2001). This means that there is a close link between individuals' connections with the environment and their intentions to use sustainable fashion products. As can be seen from the findings, in line with the reasoned action theory (Ajzen & Fishbein, 1980), an individual's attitude toward sustainable fashion products positively affects the individual's purchase intention.

The contribution of the study is to explain the effect of self-expressiveness on environmental variables. Relationship with sustainable fashion products are another contribution because we considered all product classes while earlier studies mainly focused on apparel or food. As we expected, self-expressiveness positively affected all environmental values. Results indicate that the consumers expressing themselves with environmental fashion products will give higher value to environmental thoughts. The consumers will use their environmental values as a way of giving more importance to pollution, nature, environmentally friendly approach to products and business. The results also find that environmental variables increase the positive attitudes toward sustainable fashion products, which leads to higher purchase intention.

Another contribution of the study is to use social media engagement as a moderator. We found that high engagement to social media will result with higher levels of environmental focus. The reason is that social media provides more chances to consumers to express themselves by benefiting the interaction, participation, and support. All environmental values affected attitude higher when social media engagement is higher.

As a final result, all the relationships established in the literature for the gaps given in the previous chapters were confirmed by the interaction of the variables formed within the scope of the aim of the study. In this context, businesses should develop promotional activities that emphasize environmental variables, taking into account the impact of social media and taking into account that consumers are turning to sustainable fashion product

consumption to express their selves and should determine their strategies accordingly. In this way, more constructive steps can be taken to protect the environment by transforming well-designed sustainable products or services into fashionable activities that appeal to customers (Yin, Qian, and Singhapakdi, 2018). Thus, nature, society, businesses, and consumers can all benefit mutually. UK sample is our limitation and it can be extended to cross cultural studies for wider explanation. The effect of being in an online communities specifically can be examined as well.

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