

PERSONALITY TRAITS AND GREEN PURCHASING BEHAVIOUR OF YOUNG CONSUMERS

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ABSTRACT

The study focused on young consumers who are expected to drive green consumption in the present and future through their purchasing behaviour. The study examined the relationship between personality traits using the Five-Factor model and the green purchasing behaviour of young consumers in South Africa. The cross sectional survey method was used for data collection in a quantitative study. Data was collected from final year undergraduate students at two South African universities and the PLS SEM was used for analysis. The results indicated significant positive relationships between four personality traits (openness to experience, conscientiousness, extraversion, agreeableness) and green purchasing behaviour. Research implications and areas for further study are discussed.

Keywords: Personality Traits, Five-factor Theory, Green Products, Purchasing Behaviour, Young Consumers.

INTRODUCTION

Rapid economic growth in many developing and developed countries has led to many negative effects such as the overuse of resources, pollution and environmental degradation. There is a growing acceptance that one of the most important challenges faced by the world is climate change. Human behaviour and actions related to consumption are one of the causes of these ecological challenges. Reducing the negative environmental effects of consumption will require individuals to change many behaviours that they normally perform (Hirsh, 2010; Wuertz, 2015). Protecting the environment has become very important and researchers have examined many factors that can predict pro-environmental behaviour. Studies have found psychological and non-psychological reasons why individuals continue to pursue behaviours that affect the environment. Recently, attention has shifted to personality traits as correlates of environmentally friendly behaviour at the individual level (Pavalache-Illie & Cazan, 2017; Sun et al., 2018). Personality traits describe an individual's characteristics patterns of feelings, thought and behaviour that are consistent and stable over time. Many theories such as the Eysenck's Personality Theory and HEXACO have been used to examine personality traits, however, the Five-Factor theory or the Big Five which describes the important traits that function as the building blocks of personality is the most widely used model in environmental research (Kvatova, 2015; Diener & Lucas, 2019). The aim of the study is to examine the effect of personality traits on the green purchasing behaviour of young consumers using the Five-Factor model.

LITERATURE REVIEW

Green Products and Green Purchasing Behaviour

Durif et al. (2010) compared the definitions of a green product from academic, industrial and consumer perspectives using a descriptive meta-analysis. The authors through a

literature review identified thirty-five different definitions of the concept "green product" and formulated an integrative definition. Durif et al. (2010) define a green product as "a product whose design and/or attributes (and/or production and/or strategy) use recycling (renewable/toxic-free/biodegradables) resources and which improves environmental impact or reduces environmental toxic damage throughout its entire life cycle". Green purchasing behaviour is associated with the purchase, use and post-use of products with positive or less negative environmental impacts. (Pinto et al., 2014).

The Five-Factor Theory of Personality and Green Purchasing Behaviour

Personality traits describe an individual's characteristics patterns of feelings, thought and behaviour that are consistent and stable over a period of time. The Five-Factor theory of personality depicts a hierarchical organisation of personality traits in terms of five basic dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience (Goldberg, 1990; McCrae & John, 1992). The five-factor theory of personality has been widely used to predict individual actions in the area of pro-environmental behaviours (Kvasova. 2015; Sun et al., 2018).

Agreeableness and Green Purchasing Behaviour

Agreeableness explains the tendency of an individual to be warm compassionate, generous, cooperative and in social harmony (McCrae & John, 1992). According to Hirsh & Dolderman (2007), agreeableness is a significant personality predictor of empathy and agreeable individuals tend to display higher levels of environmentalism because they are more likely to be warm and altruistic and high respect for others. Sun et al. (2018) find that agreeableness has a significant positive relationship with green buying intention because agreeable individuals are more kind and altruistic and are more likely to consider other people and the environment. Studies by Hirsh (2010) and Kvatova (2015) also find a positive relationship between agreeableness and environmental engagement, pro-environmental behaviour and eco-friendly tourist behaviour. Individuals that are altruistic and compassionate will display a higher level of environmentalism and willingness to purchase green products. It is hypothesised that:

(H1): There is a significant positive relationship between agreeableness and green purchasing behaviour

Openness to Experience and Green Purchasing Behaviour

Openness to experience refers to an individual's appreciation of diverse and unusual experiences. Individuals with high levels of openness to experience tend to be more broad-minded, intelligent, creative, artistically sensitive and curious (McCrae & Costa, 1985). This can promote environmental friendly behaviour because of intellectual curiosity and aesthetic appreciation. Studies by Hirsh (2010), Markowitz et al. (2012), Milfont & Sibley (2012) and Sun et al. (2018) find that openness to experience promote pro-environmental behaviour and green consumption. However, Kvatova (2015) reports a significantly negative relationship between openness to experience and eco-friendly tourist behaviour. Nevertheless, individuals with high levels of openness to experience tend to be intellectually curious and appreciative of nature. It is hypothesised that:

(H2): There is a significant positive relationship between openness to experience and green purchasing behaviour

Conscientiousness and Green Purchasing Behaviour

Conscientiousness focuses on a high level of responsibility, organisation, self-discipline, eagerness to follow rules and future-orientation by an individual (McCrae & Costa, 1985). Empirical findings are inconclusive about the effect of conscientiousness on pro-environmental behaviour. Hirsh & Dolderman (2007) find a significant negative relationship between conscientiousness and environmentalism and Markowitz et al. (2012) find an insignificant but positive relationship between conscientiousness and environmental activities. However, the findings of studies by Milfont & Sibley (2012), Kvatova (2015) and Sun et al. (2018) support a significant positive relationship between conscientiousness and various measures of environmentalism. According to Milfont and Sibley (2012), individuals with high levels of conscientiousness are future-oriented and are interested in the long-term effect of their actions on the environment. Therefore, it is hypothesised that:

(H3): There is a significant positive relationship between conscientiousness and green purchasing behaviour

Extraversion and Green Purchasing Behaviour

Extraversion explains the tendency of an individual to be social, assertive, energetic, outgoing and helpful to other people (McCrae & Costa, 1985). Individuals with high levels of extraversion are people-oriented and tend to have a positive environmental attitude (Markowitz et al., 2012). Empirical findings are inconclusive about the relationship between extraversion and pro-environmental behaviour. Hirsh & Dolderman (2007) and Hirsh (2010) did not find an association between extraversion and environmental concern. However, Markowitz et al. (2012) and Milfont & Sibley (2012) find a significant positive relationship between extraversion and environmental engagement and pro-environmental behaviour. High level of extraversion tend to be associated with self-expression, subjective wellbeing and environmental concern. Consequently, it is hypothesised that:

(H4): There is a positive relationship between extraversion and green purchasing behaviour

Neuroticism and Green Purchasing Behaviour

Neuroticism is a personality factor that describes the extent to which an individual is aggressive, anxious, angry and emotionally unstable (McCrae & Costa, 1985). Hirsh & Dolderman (2007) report a negative relationship between neuroticism environmentalism. Hirsh (2010) finds that environmental concern is positively associated with high level of neuroticism. The explanation for this finding is that individuals with high levels of neuroticism are inclined to be more worried about adverse consequences in general. Therefore, concern about the environment may depict anxiety about the negative effects of ecological degradation whereas individuals that are emotionally stable may potentially feel less emotional disturbance when thinking about the environment. Kvasova (2015) reports a significant positive relationship between neuroticism and eco-friendly behaviour by tourists. Individuals with high levels of neuroticism will be more worried about behaviours that can lead to negative environmental consequences. This may stimulate the purchasing of green products. Consequently, it is hypothesised that:

(H5): There is a significant positive relationship between neuroticism and green purchasing behaviour

METHODOLOGY

This study followed the quantitative research design and the cross-sectional survey approach was used to collect data from the respondents. The participants in the survey were final year undergraduate students of the Departments of Business Management of two universities located in the Limpopo and Gauteng provinces of South Africa. University students can be considered as young customers because of their age (Uddin & Khan, 2018). The participants were conveniently sampled and the self-administered questionnaire method was used to collect data. Between July and September 2019. The questionnaire was reviewed by two academic experts in the areas of marketing and consumer behaviour and also pretested with thirty students. Minor adjustments were made to the questionnaire based on the feedback from the reviewers and the pilot study. Scales with acceptable psychometric properties were adapted for all the constructs from previous studies on personality traits and pro-environmental behaviour (Lang et al., 2011). Uddin & Khan (2018) and the five point Likert scale was adopted for the study The Partial Least Square Structural Equation Modelling (PLS SEM) was used for analysis.

RESULTS AND DISCUSSION

Three hundred and five questionnaires were distributed and two hundred and ninety-eight questionnaires were returned and found usable. The gender composition of the respondents was 53% female and 47% male. All the respondents were between 20 and 30 years. Independent samples T-test did not indicate any significant gender difference in the results

Measurement Model

The study followed the criteria suggested by Hair et al. (2019) for the evaluation of the measurement model. These include the examination of factor loadings (>0.708), composite reliability (between 0.790 and 0.900), Cronbach's alpha (>0.700) and the AVE (minimum 0.5). Also, the square roots of the AVEs should be greater than the correlations amongst variables. Table 1 depicts the measurement model while the Table 2 tells about the discriminant validity.

Construct	Measurement items	Item loading	Cronbach's alpha	Composite reliability	AVE
Agreeableness (AGR) I see myself as someone: Is sometimes rude to others (recoded). Mean 4.04, SD 1.01	AGR1	0.851	0.772	0.855	0.664
Has a forgiving nature.	AGR2	0.764			
Is considerate and kind to almost everyone.	AGR3	0.826			

Extraversion (EXT) Mean 3.52, DS 1.09 Is talkative.	EXT1	0.822	0.801	0.834	0.627
Is outgoing, sociable	EXT2	0.753			
Is reserved (recoded).	EXT3	0.799			
Conscientiousness (CON) Does a thorough job. Mean 4.18 SD 1.07	CON1	0.844	0.783	0.854	0.660
Tends to be lazy (recoded).	CON2	0.802			
Does things efficiently	CON3	0.791			
Openness to experience (OPE) Mean 4.01, DS 1.13 Is original, comes up with new ideas. Has an active imagination	OPE1	0.836	0.806	0.844	0.663
Values artistic, aesthetic experiences.	OPE2	0.808			
Has an active imagination	OPE3	0.761			
Neuroticism (NEU) Mean 2.69, SD 0.91 Worries a lot.	NEU1	0.806	0.791	0.812	0.590
Gets nervous easily.	NEU2	0.771			
Is relaxed, handles stress well (recoded)	NEU3	0.726			
Green purchase behaviour (GRE) Mean 3.10, SD 1.07 I have purchased green products in the past.	GRE1	0.899	0.725	0.873	0.711
I currently use green products.	GRE2	0.852			
Purchasing green products makes me feel that I have played a great part in protecting the environment	GRE3	0.746			

Structural Model Assessment

Following the suggestions by Hair et al. (2019), the structural model assessment included the analysis of the common method bias, the R^2 , the Q^2 and the evaluation of the path coefficients. The results of the path coefficients and T-statistics using the bootstrapping technique are depicted in Table 3.

Construct	1	2	3	4	5	6
GRE	0.843					
AGR	0.529	0.815				
EXT	0.402	0.426	0.792			
CON	0.514	0.522	0.608	0.812		
OPE	0.409	0.593	0.511	0.608	0.814	
NEU	0.500	0.614	0.622	0.511	0.547	0.768

Diagonals in bold signify the square root of the AVE while the other figures depict the correlations.

Table 3 depicts the results of hypothesis testing. The results ($\beta = 0.263$, $T = 2.906$, $p < .05$), ($\beta = 0.177$, $T = 2.601$, $p < 0.05$), ($\beta = 0.314$, $T = 4.064$, $p < 0.01$) and ($\beta = 0.209$, $T = 2.771$, $p < 0.05$) show a significant positive relationship between agreeableness, openness to experience conscientiousness and extraversion and green purchasing behaviour. The results ($\beta = 0.042$, $T = 0.061$, $p > 0.05$) support an insignificant relationship between neuroticism and green purchasing intention. Hypotheses 1, 2, 3, 4 are accepted while hypothesis 5 is rejected. The findings indicated a significant positive relationship between agreeableness and green purchasing behaviour. This suggests that individuals with high levels of agreeableness tend to be ecologically friendly and support pro-environmental behaviour by purchasing green products. Similar results have been obtained by previous empirical studies (Hirsch, 2010; Milfont & Sibley, 2012; Kvatova, 2015; Sun et al., 2018). Openness to experience is found to have a significant positive relationship with the green purchasing behaviour of young consumers. Individuals that are open to experience are intellectually curious and tend to love nature. This can stimulate pro-environmental behaviours such as the purchasing of green products. The results are consistent with some previous empirical findings (Hirsch, 2010; Markowitz et al., 2012; Milfont and Sibley, 2012; Sun et al., 2018).

Hypothesised path	Standardised Beta	T-statistics	Decision
H1 AGR→GRE	0.263	2.906**	Accepted
H2 OPE→GRE	0.177	2.601**	Accepted
H3 CON→GRE	0.314	4.064*	Accepted
H4 EXT→GRE	0.209	2.771**	Accepted
H5 NEU→GRE	0.042	0.061	Rejected

* $p < 0.01$; ** $p < 0.05$

The findings of the study revealed that conscientiousness is positively associated with green purchasing behaviour. This indicates that individuals with high levels of conscientiousness will be more willing to buy green products. The results are consistent with the findings of other researchers (Milfont & Sibley, 2012; Kvatova, 2015; Sun et al., 2018). The results indicated a significant positive relationship between extraversion and green purchasing behaviour. Individuals with high levels of extraversion tend to be associated subjective wellbeing and environmental concern. Similar studies Markowitz et al. (2012) and Milfont and Sibley (2012) reported similar empirical findings. The findings indicated an insignificant relationship between neuroticism and green purchasing behaviour. The characteristics of neuroticism include aggressiveness, anxiety, anger and emotionally instability. These negative factors can lead young consumers to have little or no concern for the environment. The study by Hirsh & Dolderman (2007) reported similar empirical findings.

CONCLUSIONS

The study investigated the effect of personality traits on green purchasing behaviour of young consumers using the five factor theory. The findings indicated significant positive relationships between four personality traits (openness to experience, conscientiousness, extraversion, agreeableness) and green purchasing behaviour. Theoretically, the study tested the applicability of the five factor theory of personality traits to green purchasing behaviour of young consumers in South Africa. The study has some policy contributions. The findings of this study can help, universities and businesses understand how to promote green consumption. The study found that openness to experience, conscientiousness, extraversion, agreeableness positively affect green purchasing decision. Therefore, to improve green consumption and pro-environmental behaviour of young consumers especially students, sustainability education should be embedded in the curricula and teaching and learning activities of universities. Businesses selling green products should consider these positive personality traits when creating promotional messages. The study has some limitations. The study used the short fifteen-item measure of personality traits which although gives a good measure of the Big Five dimensions but does not permit the assessment of lower-order personality traits. Data was collected from final year business students in two universities and this limits the generalizability of the findings of this study. Other studies should include students in other departments and universities to improve the generalizability of the findings.

REFERENCES

- Diener, E., & Lucas, R. E. (2020). Personality traits. In Biswas-Diener, R., & Diener, E. (Eds), *Noba textbook series: Psychology*. Champaign, IL: DEF publishers.
- Durif, F., Boiven, C., & Julien, C. (2010). In Search of a Green Product Definition. *Innovative Marketing*, 6(1), 25-33.
- Goldberg, L. R. (1990). An alternative description of personality: the big-five factor structure. *Journal of Personality and Social Psychology*, 59(6), 1216-1229.
- Hair, J. F., Risher J. J., Sarsstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31, 2-24.
- Hirsh, J. B. (2010). Personality and environmental concern. *Journal of Environmental Psychology*, 30(2), 245-248.
- Hirsh, J. B., & Dolderman, D. (2007). Personality predictors of Consumerism and Environmentalism: A preliminary study. *Personality and Individual Differences*, 43(6), 1583-1593.
- Kvasova, O. (2015). The Big Five personality traits as antecedents of eco-friendly tourist behaviour. *Personality and individual differences*, 83, 111-116.
- Lang, F. R., John, D., Lüdtke, O., Schupp, J., & Wagner, G. (2011). Short assessment of the Big Five: robust across survey methods except telephone interviewing. *Behavioural Research*, 43, 548-567.

- Markowitz, E. M., Goldberg, L. R., Ashton, M. C., & Lee, K. (2012). Profiling the proenvironmental individual. *A personality perspective. Journal of Personality, 80*(1), 81-111.
- McCrae, R. R., & Costa, P. T. (1985). Updating Norman's "adequacy taxonomy": Intelligence and personality dimensions in natural language and in questionnaires. *Journal of Personality and Social Psychology, 49*(3), 710-721.
- McCrae, R. R., & John, O. P. (1992). An introduction to the FFM and its applications. *Journal of Personality, 60*, 175-215.
- Milfont, T. L., & Sibley, C. G. (2012). The big five personality traits and environmental engagement: Associations at the individual and societal level. *Journal of Environmental Psychology, 32*(2), 187-195.
- Pavalache-Illie, M., and Cazan, A. (2017). Personality correlates of pro-environmental attitudes. *International Journal of Environmental Health Research, 28*(1), 71-78.
- Pinto, D. C., Herter, M. M., Rossi, P., & Borges, A. (2014). Going green for self or for others? Gender and identity salience effects on sustainable consumption. *International Journal of Consumer Studies, 38*(5), 540-549.
- Sun, Y., Wang, S., Gao, L., & Li, J. (2018). Unearthing the effects of personality traits on consumer's attitude and intention to buy green products. *Natural Hazards, 93*, 299-314.
- Uddin, S. M., & Khan, M. N. (2018). Young Consumer's Green Purchasing Behaviour: Opportunities for Green Marketing. *Journal of Global Marketing, 31*(4), 1-12.
- Wuertz, T. R. (2015). *Personality Traits Associated with Environmental Concern*. Unpublished Doctoral thesis, Walden University.