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Analysis of the Perception of the Social Level and its Relationship with Environmental Awareness of the Consumer Behaviour

Marindia B. Santos[a], Kálien A. Klimeck[a], Cristiano D. Schimith[b], Annibal Scavarda[*,c], Sandro Bittencourt[b], Guilherme L. R. Vaccaro[b], Clandia M. Gomes[a], Flavia L. Scherer[a], Andreas D. Weise[a]

[a]Federal University of Santa Maria, Santa Maria 97105-900, Brazil
[b]University of Vale dos Sinos, São Leopoldo 93022-000, Brazil
[c]Federal University of the State of Rio de Janeiro, Rio de Janeiro 22290-240, Brazil
annibal.scavarda@unirio.br

The growing concern about environmental consequences of the level of consumption has driven the issue of the need of conscious consumption. In that people plan the future of the planet as a whole, the attitude of conscious consumption becomes understood as a feeling of responsibility for the individual and collective wellbeing. The objective of this study is to analyse the impact of the social level on the environmental awareness of the consumer behaviour through the scale of Zabkar and Hosta (considering the pro-social status in the dimensions of the environmentally conscious consumer behaviour: concern, willingness, information, and behaviour). The methodology begins by addressing the descriptive aspects of the research question, which was followed by a quantitative data collection using a questionnaire based on the model proposed by Zabkar and Hosta. The authors surveyed the total of 222 respondents. This study has raised five hypotheses. The three confirmed hypotheses were: the concern with the environment, the willingness to act in an environmentally conscious way, and the environmentally aware consumer behaviour. The two rejected hypotheses were: the information about the environmental impact and the perception of the social level.

1. Introduction

The attitude of consuming consciously becomes observed as an act of feeling responsible for the individual and collective well-being (De Toni et. al., 2010) at the time that the future of the planet is been projected as a whole (Delatoura et al., 2014). The conscious, ethical, responsible, healthy, and green consumptions according to de Freitas et al. (2010) arise from the interplay of three factors: the first one (in the 70s) is related to the public environmentalism, the second one (in the 80s) is related to the infusion of environmental concern in the business sector, and finally the third one (from 1990) is related to the public concern about the social impact of lifestyle and consumption. In order to get this recognition for their individual actions, Griskevicius et al. (2010) state that often individuals begin to act in an environmentally conscious way because they understand that this type of behaviour can be seen as an effective strategy to achieve a pro-social status in society.

From this premise, this study aims to identify the impact of pro-social status in the dimensions of environmentally conscious consumer behaviour (concern, willingness, information, and behaviour). Therefore, we adopted the Zabkar and Hosta (2013) scale and performed a descriptive research with quantitative approach using a sample of 222 respondents located in Southern Brazil. This study is divided into four stages: the literature review on conscious consumption, the environmentally conscious consumer behaviour, the perception of pro-social status, and the presentation of the theoretical model elaborated by Zabkar and Hosta (2013) used in this research. Then we discuss about the research method and finally we present the results and conclusions.

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2. The perceptions of pro-social status

The construction of a pro-social status goes through the adoption of a pro-social reputation behavior, in which building a reputation as a member of a cooperative group can be very valuable, because these people are not only seen as more reliable, but they are more desirable as friends.
In line with this thought, Griskevicius et al. (2010) point out that the reasons of status can lead people to prefer green instead of more luxurious products. Thus, the purchase of such products may be interpreted as selfless, since green products often cost more and are of lower quality than conventional options. Besides, Griskevicius et al. (2010) argue that green products can demonstrate to others that their owners are voluntarily willing and able to pay the costs of owning a product that benefits the environment (and society), even if it is a lower quality for personal use. Therefore, these voluntary actions of self-sacrifice and the ability to incur costs would be strongly associated with pro-social status.
In this scenario, this study focuses in comparing the model proposed by Zabkar and Hosta (2013) performed with consumers in a European country, which used five constructs (concern, willingness, information, behavior, and perception of pro-social status) by five point Likert scale.
The model of Zabkar and Hosta (2013) aimed to understand the environmentally conscious consumer behavior in which willingness to act in an environmentally conscious way was moderated by the perception of pro-social status. The proposed model consists of five dimensions and 20 variables, as shown in Figure 1.

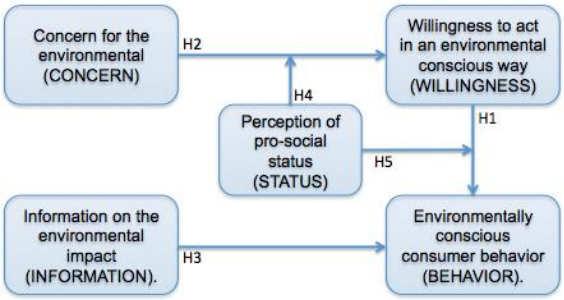

Figure 1: The conceptual model of Zabkar and Hosta (2013) research.

In Table 1 we describe the research hypotheses that we adopted from the conceptual model of Zabkar and Hosta (2013).

Table 1: The research hypotheses

H1	Willingness to act in an environmentally conscious way is positively related to Environmentally Conscious Consumer Behaviour (ECCB).
H2	Concern for environment is positively related to willingness to act in an environmentally conscious way.
H3	Information about environmental impact is positively related to ECCB.
H4	The positive association between concern and willingness to act in an environmentally conscious way is higher if the perception of pro-social status increases.
H5	The positive association between willingness to act in an environmentally conscious way is higher if the perception of pro-social status increases.

In this model, the concern provides willingness to act, while willingness and information lead to a more significant environmentally conscious behaviour. The results exposed that the perception of pro-social status increases the positive association between willingness and behaviour and it can be incorporated into green products, advertising, and also signal personality traits like kindness and intelligence. Besides, we verified that women have a higher average representation in groups of people with high "pro-social status."

3. Methodological procedures

In considering the conceptual model of Zabkar and Hosta (2013), this paper proposes to identify the impact of pro-social status in the dimensions of the environmentally conscious consumer behaviour (concern, willingness, information, and behaviour).

From the application of a survey research, we used, as data collection instrument, a questionnaire based on a finished and validated model as shown in Figure 1. The questionnaire was composed by the metric scale proposed Zabkar and Hosta (2013) and it consists of 20 Likert-scale questions of five points ranging from strongly disagree (1) and strongly agree (5).

To collect data, we used a non-probability sample of 222 respondents living in Santa Maria, Rio Grande do Sul, applied between 20th and30th November 2013. The analysis and processing of the data were performed using Microsoft Excel 2010, IBM SPSS Statistics 21, and AMOS 21. We performed the following statistical analyses: the profile of respondents considering frequencies, the exploratory factor analysis with the goal of creating a new set of variables (dimensions) from factors (Hair Jr. et al., 2009), the descriptive statistics of the dimensions, the hypothesis testing using linear regression (H1, H2, and H3), and the invariance analysis to test the influence of pro-social status (H4 and H5).

4. Results

Results will be presented in four sub-items. Initially, the reduction of variables in the dimensions from an exploratory factor analysis, as well as the descriptive statistics of the dimensions will be presented. After, the hypothesis testing will be presented from the linear regression analysis and the invariance analysis. Finally, the comparison of the results with the results of Zabkar and Hosta (2013) will be presented.

4.1 Exploratory factor analysis

To reduce the factors for hypothesis testing, we performed an exploratory factor analysis for each of the five dimensions of the research model used. For this, we analysed the group of factors for the analysed dimension.

As parameters, we defined the extraction of a single factor, the dimension itself, from the method of principal components without rotation. The results were analysed from the factor loading matrix, variables with values less than 0.50 were removed, because, according to Hair Jr. et al. (2009), these are not considered with practical significance. The commonality was also analysed to verify the variance explained by the factor solution; to Hair Jr. et al. (2009), variables with commonality of less than 0.50 do not have sufficient explanation and should be removed. Finally, analysis of Cronbach's alpha was performed, it varies from 0 to 1, it is important to notice that the value 0.6 is considered the lower limit for acceptance (Hair Jr. et al., 2009). We also defined as acceptable the Kaiser-Meyer-Olkin values (KMO) and the explained variance greater than 0.50 (Pestana and Gageiro, 2003).

4.1.1. The concern dimension

The concern dimension had initially four variables. From the load analysis, we removed P3 (load = 0.320) and performed further analysis. From this, we analyzed the commonalities that indicated the removal of P4 (commonality = 0.481). After these two exclusions, values of factor analysis were acceptable according to Table 2.

Table 2: The concern variables

Variable	Explained Variance	KMO	Cronbach's Alpha
C1 Currently pollution is one of the most critical problems faced by this nation. C2 I feel pollution affects my personal life.	67.99 %	0.500	0.529

Table 3: The willingness variables

Variable	Explained Variance	KMO	Cronbach's Alpha
W2 I would be willing to have my clothes less white or bright in order to be sure that I would be using a laundry product non-polluting. W3 I think it is good to stop buying products from companies that are guilty of polluting the environment, even if it is inconvenient for me. W4 I think that making personal sacrifices to minimize pollution is important, even if the immediate results do not seem significant.	60.80 %	0.659	0.666

4.1.2. The willingness dimension

The willingness dimension had initially four variables. Factorial loadings were adequate to variables. However, in commonality analysis, we excluded D1 (commonality = 0.445). With this exclusion factor analysis obtained acceptable values according to Table 3.

4.1.3. The information dimension

The information dimension had initially three variables. From the analysis of factorial loadings, we removed variable I1 (load = 0.202). After this, the values of factorial analysis were acceptable according to Table 4.

Table 4: The information variables

Variable	Explained variance	KMO	Cronbach's Alpha
I2 The information that companies release on their ecological influences are reliable. I3 The most reliable information on environmentally friendly products comes from the salesperson.	69.07 %	0.500	0.552

4.1.4. The behaviour dimension

The behaviour dimension has four variables. The values of factorial loadings and commonality were acceptable and exclusions were necessary. The values are described in Table 5.

Table 5: The behaviour variables

Variable	Explained variance	KMO	Cronbach's Alpha
B1 I always choose the product that helps to reduce the amount of pollution, when there is a choice. B2 If I understand the potential environmental damage that some products can cause, I would not buy these products. B3 I substitute products for ecological reasons. B4 I convince some members of my family and friends not to buy some products that are harmful to the environment.	58.86 %	0.755	0.765

4.1.5. The pro-social status dimension

The *pro-social status* dimension had initially five variables. However, because of values of commonality, the following variables were sequentially excluded: P3 (commonality = 0.367), P4 (commonality = 0.387), and P5 (commonality = 0.261). With these three exclusions performed, the values of factorial analysis were acceptable according to Table 6.

Table 6: The pro-social status dimension variables

Variable	Explained Variance	KMO	Cronbach's Alpha
P1 Most members of my family pay attention to green values. P2 Most of my friends buy green products.	77.69 %	0.500	0.706

To evaluate the influence of pro-social status it was necessary to perform a handling test for creating the variable perception of pro-social status in high and low. To perform it, we first calculated the average of the dimension (Average = 2.64), then a new variable was created from the following codification. If the value of the dimension was equal or less than average, then the perception of pro-social status is low; while if the value is higher than average, then the perception of pro-social status is high. The frequency of 102 respondents (46 %) was low perception of pro-social status, but, in the other hand, 110 respondents (54 %) had a high perception of pro-social status.

4.1.6. The descriptive statistics of the dimensions

Table 6 shows statistics, averages, and standard deviations of the dimensions, after the reduction performed from the results of the exploratory factor analysis. It should be noted that the Likert scale used in the questionnaires consisted of five points, 1 totally disagree and 5 totally agree, so, a higher value in

answer implies a higher average agreement and it should also be noted that there were no negative assertions, that required reversal of the response scale.

Table 7: The descriptive statistics

Dimension	Average	Standard deviation
Concern	3.81	0.793
Willingness	3.68	0.751
Information	2.27	0.723
Behaviour	3.37	0.710
Status	2.64	0.832

As seen in Table 7, the highest average was found for the concern dimension (3.81), while the lowest average was found in the information dimension (2.27), which could show that the sample is concerned about the environment and it is still wary of the information received from companies and salespeople.

4.2 The hypothesis testing

The hypothesis testing was conducted in two stages. To test the hypotheses H1, H2, and H3, we performed a linear regression to verify the relationship and strength of the relationship between the variables. These data are available in Table 8. As it could be observed, all regressions were significant and they have a positive relationship between the variables. However, none of the relationships was considered strong, but only weak or moderate.

Table 8: The hypothesis testing with regression

Regression		Relation	Hypothesis
Willingness → Behaviour	Sig.<0.05 R=0.575 R^2=0.327	Moderate Positive	H1 (+)
Concern →Willingness	Sig.<0.05 R=0.303 R^2=0.088	Weak Positive	H2 (+)
Information → Behaviour	Sig.<0.05 R=0.206 R^2=0.038	Weak Positive	H3 (+)

The second stage of the hypothesis testing was performed with the help of AMOS, from the invariance test, as shown in Table 9. As it could be observed, there are small differences between values for R and R^2; however, these are not statistically significant as shown by the t-value found. Thus, H4 and H5 were not supported by the results of the sample.

Table 9: The invariance in the hypothesis testing

Hypothesis	R	R^2	t-value	
D → C				
High	0,591	0,342	0,425	H5 (Not supported)
Low	0,548	0,092		
P → D				
High	0,304	0,092	0,071	H4 (Not supported)
Low	0,313	0,098		

4.3 The comparison of results

In order to compare the results in the applied research and the results found by Zabkar and Hosta (2013) in Europe, we made the comparison described in Table 10.

Table 10: The comparison between the results in the applied research and the results from Zabkar and Hosta (2013)

	Cronbach's Alpha		Hypothesis		
	Europe	Results		Europe	Results
Concern	0.74	0.52	H1	+	+
Willingness	0.76	0.66	H2	+	+
Behaviour	0.82	0.55	H3	+	+
Information	0.78	0.76	H4	Not	Not
Pro-Social Status		0.71	H5	+	Not

According to Table 10, we can notice that Zabkar and Hosta (2013) obtained higher Cronbach's Alpha values. So, we can assume that the internal consistency of the model used in Europe was better. In relation to our hypotheses, we confirmed the same hypotheses except for H5, which the invariance test showed no significant difference.

5. Conclusions

The study aimed to understand the background of environmentally responsible consumption, as well as the influence of the perception of pro-social status in environmentally responsible consumer behaviour. We used a model that, after the adjustments made from the exploratory factor, showed a good internal reliability index, with Cronbach's alpha values between 0.52 and 0.76, satisfactory performance.

Regarding the hypotheses of the model, those that did not involve the perception of pro-social status were confirmed, the two cases that used the perception of pro-social status as moderator, in the other hand, were not supported by the data collected.

In a comparison with the study used as a basis, data obtained lower Cronbach's alpha indices. However, with the exception of H5, all cases were confirmed, as the original research. Therefore, this paper differs from the original one, because it considers that the perception of pro-social status does not influence the other variables in the model.

As limitations of our research, we could mention the fact that the sample was not probabilistic and the use of a geographically restricted population compared to the study by Zabkar and Hosta (2013). As suggestions for future studies, we suggest applying the model to the population of different regions of Brazil and Latin America, as well as defining a target public for research in order to direct the results in a practical way validating the model in this context.

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