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**THE ENVIRONMENTAL AWARENESS DIMENSIONS' INFLUENCE ON THE INTENTION OF BUYING ORGANIC PRODUCTS: What does gender have to do with it?**

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# **THE ENVIRONMENTAL AWARENESS DIMENSIONS' INFLUENCE ON THE INTENTION OF BUYING ORGANIC PRODUCTS: What does gender have to do with it?**

## **1 INTRODUCTION**

The late 1940s marked the Green Revolution beginning with the introduction of new cultivation practices, which gained popularity between 1960 and 1970, through the development of mechanization and artificial farming techniques in the field (Pinheiro et al., 2018). Since then, the problems related to the soil, air and water pollution intensified and, together with the industrial capitalist model, these problems began not only to promote changes in the natural environment, but in the people behavior.

Throughout XX century, discussions around sustainable development have expanded in the political and educational worldwide, sensitizing the human being to issues of collective interest and stimulating critical and ethical thinking, with the discourse of achieving the satisfaction of human desires without compromising the generations' future (Santana, 2018).

In this context, concerns about the environment began to grow (Shelest, Ionov, & Tikhomirov, 2017). In this way, the discussions that incorporate the environmental theme are gaining space in institutions of different segments and levels, since how much more institutions debate the ecology, more it expresses itself as responsible with its surroundings pressing for changes mainly in the corporate and governmental environments (Silva et al., 2013; Rotta, Batistela, & Ferreira, 2017).

Through this scenario, organic production has gained popularity because it has a sustainable basis and, its principles are environmentally correct, socially just and it has an economically viable production (Pinheiro et al., 2018). Thus, the consumers of this class of products present purchasing behavior that combines environmental preservation with the transition to a more sustainable society (Scalco et al., 2017).

Therefore, the understanding of the intentional behavior of buying organic products is essential for the sustainable consumption realization (Hsu, Chang, & Lin, 2019; Qi & Ploeger, 2019), since Brazil is the third largest producer of organic products and has the largest consumer market for organic products in Latin America (Branco, Watanabe, & Alfinito, 2019; FiBL & IFOAM, 2019). Furthermore, Branco, Watanabe and Alfinito (2019), admit that the Brazilian consumer has a purchasing profile with particular motivators, such as the fact that 67% prefer going to specialized retailers in order to find a greater supply of healthy foods, as 76% of Brazilians affirm to read labels in order to evaluate the nutritional content. Moreover, for being a multifaceted construct, the buying behavior undergoes alteration according to the gender, because men and women have different needs (Gorni, Gomes, & Dreher, 2012). These data reinforce the need for deeper investigations about the purchase drivers.

Thus, this research aimed to propose and test a theoretical model to evaluate how some dimensions of environmental awareness influence the intention of consuming organic products and how the gender influence it too. Therefore, the research questions are: *“What is the influence of the environmental awareness in the intention of consuming organic products?”* and *“What is the influence of the gender in the intention of consuming organic products?”*

The paper is structured in five parts, in addition to this introduction. In section two, we being to present the theoretical framework approaching the dimensions of environmental awareness and its relation with organic products consumption. Section three describes the methodological part of the study. The results are presented and discussed in section four.

Finally, we present the study's final considerations, indicating its contributions, limitations, and suggestions for future studies in section five that is followed by the references in section six.

## **2 ENVIRONMENTAL AWARENESS DIMENSIONS AND ITS RELATION WITH ORGANIC PRODUCTS' CONSUMPTION**

The current context referred to the human confrontation with the natural environment has demanded the need to rethink, be and act humanity on a world level, evoking a new more equitable "worldview" that values life as a collective maintenance commitment (Pinheiro et al., 2018; Qi & Ploeger, 2019; Ruano, 2017; Santana, 2018).

Pitanga (2016) argues that the environmental crisis is not strictly linked to "hyperconsumption", but to a knowledge crisis, more social than ecological, which has brought to the fore the problems of social inequality that, in order to be reversed, requires global mobilization (Svanström, Lozano-García, & Rowe, 2008).

On the other hand, Furtado and Sampaio (2018) attribute the repercussion of environmental issues to the media, a vehicle of communication that drives the purchase together with disrespectful organizational practices (Ritter, Hidalgo, & Haag 2018).

However, it is known that consumption is a primordial activity for the human life maintenance, since it be carried out in a healthy way in service of vital needs. However, when fulfilling desires, consumption can become an impulsive and irrational act. In this context, conscious consumption proposes a reflection on the consumer lifestyle (Capucho, Baccaro, & Raminelli 2018).

Since the Stockholm Conference in 1972, although with different denominations, the expression "sustainable development" was present, but this denomination became popular in 1992 after the United Nations Conference on the Environment in Rio de Janeiro (Barbieri & Silva, 2011), treating concerns about maintaining the future life (Furtado & Sampaio, 2018).

Sustainable development aims to change the behavior and habits of citizens in relation to consumption and production activities, and is based on the three main pillars of sustainability: economic, environmental and social (Santana, 2018). However, such development takes different interpretations according to the perspective as analyzed and therefore contemplates respect for diversity, since each individual has its subjective form of interpreting sustainability according to its values (Dubey, 2017, Lopez-Cabrales & Valle-Cabrera, 2019).

In the middle of the return in relation to environmental, economic and social crises, the progress of environmentally friendly innovations was boosted (Capucho, Baccaro, & Raminelli 2018; Niu, Jiang & Li, 2010), making common concerns about sustainable development, which has manifested itself in several product segments, including the increased consumption of organic.

Particularly in relation to food cultivation, until the middle of the last century agricultural practices was heavily dependent on the chemical industry (Durán & Wives, 2018). However, in order to achieve the proposal for more sustainable food production, organic farming began to expand (Campos et al., 2018; Kim, 2019; Scalco et al., 2017), by strengthening the affective ties between human and environment, as a way of initiation and deeper environmental awareness.

Organic production has ideological foundations in seeking to contribute to the society improvement beyond cooperation with the environment. Thus, organic producers are protagonists in the sustainable development dissemination (Campos et al., 2018; Pinheiro et

al., 2018) and they are, also, contributing to the innovation in the sustainable food sector with crop systems specially directed to social, as well as, environmental nutritional responsibility (Scalvedi & Saba, 2018). On the other hand, in the systematic literary review of Campos et al., (2018), it is revealed that, in addition to environmental awareness, there is a need for an entrepreneurial attitude of organic producers.

Consumers of organic foods, therefore, have an ideology behind the purchase of this products class and they like to have the privilege of belonging to the class of conscious consumers (Kim, 2019), forming a questioner consumer profile of urban life, who is concerned about the recurrent unsustainable way of life (Pinheiro et al., 2018).

The search for well-being - health, perception of quality, taste and high number of nutrients (Branco, Watanabe, & Alfinito, 2019; Demirtas, 2018; Kim, 2019) - is among the organic products consumption motivators (Furtado & Sampaio, 2018), because the conscious consumers is aware of the product benefits for themselves and for the environment. Consequently, the consumer is concerned about his physical and mental health. In consumers concerned about the aesthetic benefits, the search for sustainable products must meet the expectations that touch on "perceived values", in which the sustainable cosmetics sale gains market expansion (Furtado & Sampaio, 2018).

Hsu, Chang and Lin (2019) study draws attention to the significant health concern influence for healthy products consumption. With this, the offer of security for the consumer should be a priority in the business strategies formulation that should seek for a balance between economic profit and generation of value for the environment.

Like this, the organics consumption, whether consciously or not, is positive for the environment and has significantly transformed the processes of food choice because it represents a food ideology that corroborates with a set of values (Pinheiro et al., 2018).

However, the organic consumption dissemination is tortuous and has several obstacles that make the research on consumer behavior reflect, only in the theoretical scope, expectations that match a conscious profile (Tambosi et al., 2015). In the literary review of Campos et al. (2018), the cultivation technical difficulty, the production management lack and the public incentives absence are the entry barriers features in the organic foods cultivation. The next obstacle, suggested by Hsu, Chang and Lin (2019), is that because of the nutritional difference between organic and conventional food not be scientifically proven, conventional products with a high-perceived environmental degree value, go beyond the sale of green products because they are more affordable.

In addition, Branco, Watanabe and Alfinito (2019), confer credibility attributes, which are not perceived by the consumer unless he is informed, the difficulty of consumer confidence in the producer, which is also affected by the urbanization that physically distances consumers from producers (Branco, Watanabe, & Alfinito, 2019). In the middle of this context, there is a need for organic certification that requires time and money (Ritter, Hidalgo, & Haag 2018).

Moreover, the lack of information about the benefits of organic products supports an anti-consumption barrier, since, according to Demirtas (2018) and Branco, Watanabe and Alfinito (2019), consumers have simplistic and restricted knowledge which involves only the exemption of pesticides instead of the positive consequences for health and nature. Thus, when seeking short-term benefits, several consumers prefer to substitute a healthy diet for faster drugs effects (Branco, Watanabe, & Alfinito, 2019).

As an example, Demirtas (2018) tests in his study the consumer knowledge influence about the organic in the intention to purchase these products. The results pointed out the positive importance of the interaction. Therefore, the author argues that advertising should focus on convincing the quality of these products to consumers still skeptical, thus developing the trust feeling. In addition, Demirtas (2018) defends the past experiences importance for the

organic products consumption perpetuation, citing the familiarization importance with products, as if it mirrored the individual's values towards the environment.

Thus, the development of sustainability requires small primary attitudes that begin with critical reflections on consumerism oriented to the power and status possession (Carmona & Barreto, 2018). Practices of aware consumption can be expressed in several dimensions, which may even affect the realization of purchases of green products. In the domestic environment, for example it is seen in recycling programs participation, reuse and saving in the water use, among others (Jacomossi, Morano, & Barrichello, 2014), that is, individually, or within the home itself, through small changes in attitudes and habits (Santana, 2018; Shelest, Ionov, & Tikhomirov, 2017).

A research carried out in 2018 by Akatu aimed at assessing consumer awareness and behavior towards conscious consumption, their perception and expectation about sustainability practices and corporate social responsibility. The research conducted a comparison with a study of 2012. The results showed that there is a recent advance in relation to the consumption of products made with recycled material and organic products purchase, in addition to demonstrating that the concerns with garbage remains stable since 2012.

These concerns, in the study by Pato, Ros, and Tamayo (2005), are enough for a behavior to be considered ecological, currently. In the study, carried out with Brazilian university students, only four background characterized the ecological behavior of participants: activism, saving water and energy, urban cleaning, and recycling (Pato, Ros, & Tamayo, 2005). Being thus, in the present study, it was considered the engaged consumption, the domestic environment, the mobilization and the concern with the garbage as the dimensions of the environmental conscience and, therefore, the first hypothesis is:

*H1: Environmental awareness positively influences the intention on buying organic products.*

For example, Pinheiro et al. (2018) study analyzed how the connectivity with nature and the consideration about the future consequences are relate to the organic food consumption behavior. The results confirmed the positive relationship effect adding, in addition, that individuals with immediate lifestyles seek a kind of refuge in organic food.

This whole scenario involves the consumer buying behavior, a complex study field, since the people individualities make them have different desires and needs that are influenced by internal and external factors (Demirtas, 2018; Hsu, Chang, & Lin, 2019; Furtado & Sampaio, 2018).

In this sense, the consumption habits of young people may vary in relation to gender, since men and women have some different needs (Gorni, Gomes, & Dreher, 2012). Thus, although several scientists criticize the distinction between sex, arguing that it is a mere social imposition, it has culturally rooted the compromising woman role with the household tasks execution that involves the cleaners use the elaboration of a meal with quality, mainly of mothers (Demirtas, 2018), while men show greater interest in technology and automation (Gorni, Gomes, & Dreher, 2012). This context favored the second hypothesis formulation:

*H2: There are differences in the relationship between environment awareness and intention on buying organic products regarding gender.*

In sum, sustainable consumption does not aim to push back consumption activities, but to make them less environmentally aggressive and more socially egalitarian, based on a demand for provenance throughout the production chain of the products by consumers, which, in the sight of Furtado and Sampaio (2018), are the main stakeholders and business activities revenue generators. In this sense, corporate efforts are being directed towards a less

dependence on natural resources like raw material (Furtado & Sampaio, 2018), characterizing the eco-efficiency proposal, which objectives the delivery of goods and services that contemplate human needs at competitive prices, that provide quality of life and environmental impacts reduction (Moraes et al., 2018; Lopez-Cabrales & Valle-Cabrera, 2019).

However, the environmental re-education process has to change paradigms rooted in the individual. It is important that this reflection reaches, to be better achieved, young people who are still suffering the maturing criticality process (Capucho, Baccaro, & Raminelli 2018; Ruano, 2017; Shelest, Ionov, & Tikhomirov, 2017), once Scalvedi and Saba (2018) argue that the environmentally correct choice expansion will be achieved when the individual's cognitive system concretize the environmental variable importance in purchasing decisions. In the case of adults, the process of environmental re-education is tortuous because it depends on the family culture and the economic and social reality of the individual as a significant antecedent of their environmental awareness (Hoppe et al., 2012; Kranjac, Vapa-Tankosic, & Knezevic, 2017; Kim, 2018).

Thereby, according to Pitanga (2016) and Santana (2018), the Brazilian higher education institutions have broken paradigms regarding sustainability, creating a privileged space for reflections and for sustainable practices development that are being incorporated in the academic curriculum and, thus, the exercise of ecological awareness has been the main protagonist in the sustainable solutions that have already been implemented.

In the courses that involve the administrative area, in particular, the environmental theme incorporation proposes the need for the training of professionals capable to undertake sustainable actions in management activities, besides of transforming the student himself into a conscious, ethical and responsible consumer (Lima et al., 2016; Salinas-Cabrera, 2016; Silva et al., 2013).

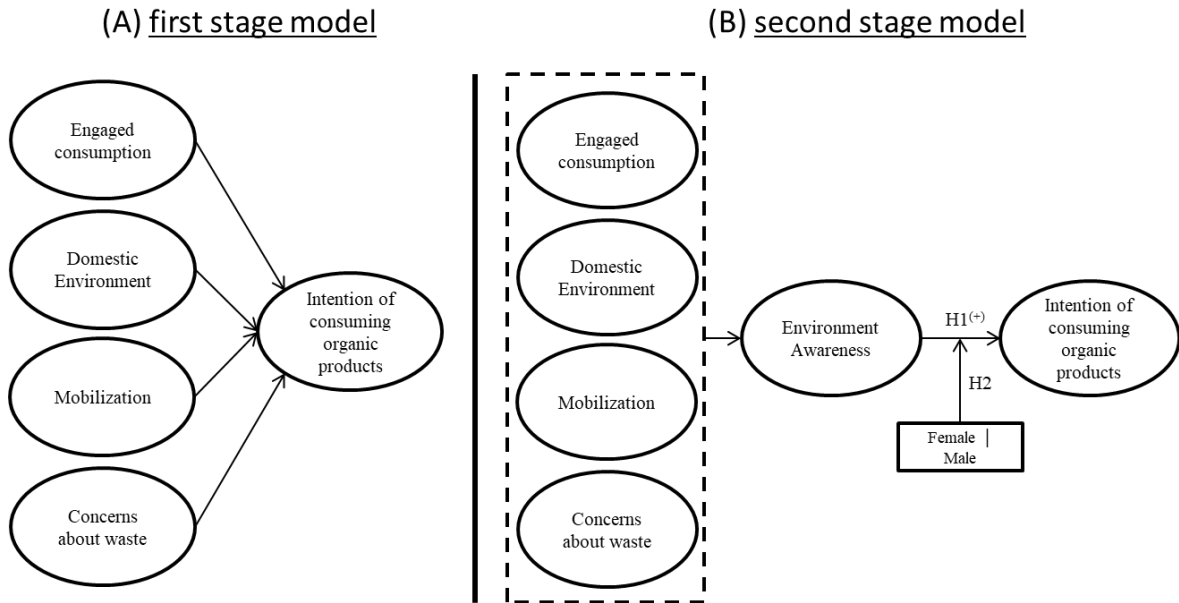
Hereafter, we present the methodological aspects used as an aid to achieve the objective of this study.

### **3 METHODOLOGICAL ASPECTS**

The empirical research was developed through quantitative methodology, with the use of multivariate data analysis. According to suggestions from Hair et al. (2017), we opted for the use of Partial Least Squares-Structural Equation Modeling (PLS-SEM) in order to identify degrees of prediction and explanation of presented constructs. Also, this model presents one hierarchical latent variable, where environment awareness is a second order construct (High Order Constructs – HOCs) constituted by first order constructs (Low Order Constructs – LOCs) (Hair et al., 2018). In this case, relations between the HOC and the LOCs do not portray dependence, but hierarchy (Becker et al., 2012; Sarstedt et al., 2019), since the HOC does not exist without the LOCs. Due to the conceptualization and operationalization of the hierarchical model, our research model is classified as a model of hierarchical latent variables of a reflexive-formative type (Chin, 1998; Becker et al., 2012; Sarstedt et al., 2019). The LOCs constructs are reflexive, while the HOC construct is formative and it mediates completely the influence of the LOCs in the Intention of consuming organic products construct.

Model's parameters were estimated by the two stages approach (Becker et al., 2012; Hair et al., 2018; Sarstedt et al., 2019). In the first stage (Figure 1-A), the latent variable scores of LOCs were obtained in a model that did not consider the HOC. In the second stage (Figure 1-B), the latent variable scores obtained in the first stage were used as indicators for the HOC construct. The two stages approach has the advantage of estimating a more

parsimonious model, since there is no need to represent LOCs (Hair et al., 2018; Sarstedt et al., 2019), besides being more adequate when the researcher's interest lies only on the relationships stating in the HOC (Becker, et al., 2012; Sarstedt et al., 2019), which is the case of our model. Figure 1 presents the research model, showing the two stages. Visual representation facilitates understanding of the theoretical model proposed (Whetten, 1989).



**Figure 1.** Conceptual model of the research

The research was conducted in a non-probabilistic way and with a convenience sample, through personal interview with 213 university students. To evaluate the sample size and statistical power of the analysis, an evaluation with the G\*Power 3.1 software (Faul et al., 2009) was conducted and based on the recommendations by Chin and Newsted (1999), Cohen (1988), and Hair et al. (2017). Considering four predictors, a significance level of 5%, a statistical power of 0.8, and an average effect size ( $f^2 = 0.15$ , which is equivalent to  $r^2 = 13\%$ ), the minimum size of the sample required is 77. As the final sample used comprised 213 people, it is suitable for estimation by Partial Least Squares Path Modeling (PLS-PM). The analyses a posteriori (post hoc) for the sample obtained indicate that: (a) any  $r^2$  higher than 5.42% would be detected as significant, keeping the power of 0.8 and the significance level of 5%; and (b) to the average effect size the power is of 0.998, which is well above the value 0.8, recommended by Chin and Newsted (1999).

The Software SmartPLS 3.0 M3 (Ringle, Wende, & Becker, 2015) was used to calculate and validate the statistical tests, developed using the technique of structural equation by multivariate analysis.

#### 4 RESULTS DESCRIPTION AND ANALYSIS

A first step in the empirical analysis involves the evaluation of measures included in the conceptual model. The measurement instrument was adapted from Gonçalves-Dias et al. (2009), but some questions were prepared by the authors. Confirmatory Factor Analysis (CFA) was used to evaluate the psychometric properties of constructs, with SmartPLS 3 software (Ringle et al., 2015). All measures were tested in the same model and were restricted to load on their respective factor (Brady & Cronin, 2001). CFA results and descriptive



statistics are presented in Table 1. The construct concern with waste had no indicator eliminated, while the other constructs had at least one indicator reduced.

**Table 1.** Standardized CFA path loadings and descriptive statistics

Questions	Standardized path loading	Critical ratio	P-value	Mean	Standard deviation
<b>Domestic environment <sup>a</sup></b>					
(DE1) I avoid taking time to shower	0.672	10.91	0.000	0.669	0.062
(DE2) I avoid having the refrigerator open for long	0.766	15.876	0.000	0.765	0.048
(DE3) I avoid letting the lights on in environments that are not used when I'm at home	0.711	10.644	0.000	0.703	0.067
(DE4) I avoid leaving the tap open while I brush my teeth	0.755	12.148	0.000	0.752	0.062
<b>Engaged consumption <sup>a</sup></b>					
(EC1) I have paid more for environmentally correct products	0.682	15.711	0.000	0.681	0.043
(EC2) Procuero comprar produtos feitos de material reciclado	0.697	14.615	0.000	0.698	0.048
(EC3) I avoid using a product manufactured by a company that pollutes the environment	0.778	23.647	0.000	0.776	0.033
(EC4) I try to buy products made from recycled material	0.612	11.532	0.000	0.608	0.053
(EC5) I have already convinced others not to buy products that harm the environment	0.783	31.493	0.000	0.783	0.025
(EC6) Concerns about the environment interfere with my purchase decision	0.861	44.752	0.000	0.862	0.019
(EC7) I read the label carefully before deciding to buy	0.584	10.435	0.000	0.582	0.056
(EC8) I try to reduce my consumption of scarce natural resources	0.651	13.78	0.000	0.65	0.047
<b>Mobilization <sup>a</sup></b>					
(MB1) I talk about the importance of the environment with other people	0.871	48.173	0.000	0.872	0.018
(MB2) I mobilize people for the conservation of scarce natural resources	0.878	43.86	0.000	0.878	0.020
(MB3) I have already denounced actions that were harmful to the environment	0.643	12.31	0.000	0.642	0.052
(MB4) I catch the attention of people throwing paper on the floor	0.578	7.671	0.000	0.576	0.075
<b>Concerns about waste <sup>a</sup></b>					
(CW1) When there is no bin near by, I keep the paper I do not want in my pocket anymore	0.868	18.498	0.000	0.861	0.047
(CW2) I avoid throwing paper on the floor	0.907	25.851	0.000	0.901	0.035
(CW3) I help keep the streets clean	0.567	7.020	0.000	0.569	0.081
(CW4) I do not play empty beer cans or soda on the floor	0.686	6.771	0.000	0.674	0.101
<b>Intention of consuming organic products <sup>b</sup></b>					
(ICOP1) Fruits, vegetables and herbs	0.709	13.849	0.000	0.709	0.051
(ICOP2) Tubers and grains	0.761	17.362	0.000	0.755	0.044
(ICOP3) Nuts and nuts	0.728	15.928	0.000	0.725	0.046
(ICOP4) Herbs, Seasonings and Teas	0.814	28.972	0.000	0.813	0.028
(ICOP5) Cereals, salts and meal	0.765	15.909	0.000	0.759	0.048
(ICOP6) Oils and vinegars	0.668	9.442	0.000	0.659	0.071
(ICOP7) Cosmetics and personal hygiene	0.585	8.089	0.000	0.579	0.072

<sup>a</sup> Likert scale responses from 1 (totally disagree) to 7 (totally agree). The students responded how much they agreed with the statements.

<sup>b</sup> Likert scale responses from 1 (never) to 7 (oftentimes). The students responded regarding the probability of consuming the following categories of organic products.

The next step in the empirical exercise concerns the analysis of the conceptual model. Our framework presents one second order indicator and one reflective indicator. Thus, the model was tested by the structural equation modeling (SEM) technique, since traditional SEM techniques are adequate to test hierarchical models (Brady & Cronin, 2001).

The internal consistency, composite reliability, convergent validity and discriminant validity of the reflective construct (intention of consuming organic products) were evaluated with SmartPLS 3 software (Ringle et al., 2015). Internal consistency was assessed by Cronbach's alpha and values between 0.70 and 0.90 are considered satisfactory for studies in more advanced stages (Fornell & Larcker, 1981; Hair et al., 2017; Nunally & Berstein, 1994). The composite reliability assesses whether the indicators associated with each construct actually represent them (Bagozzi & Yi, 1988). The composite reliability values should be at least 0.70 to indicate that the items are sufficient to represent their respective constructs (Hair et al., 2017). The average variance extracted (AVE) is one of the criteria for testing the convergent validity of a construct (Fornell & Larcker, 1981). AVE values higher than 0.50 are acceptable to indicate that a large amount of the mean variance of the indicators is captured by each factor and not by the measurement error (Hair et al., 2011). All the mentioned values are within the ones established by the authors (Table 2).

**Table 2.** Summary of the evaluation of measurement models

Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Intention of consuming organic products	0.868	0.893	0.512

The convergent validity, collinearity, statistical significance and relevance of the formative construct (environment awareness) were also evaluated with SmartPLS 3 software (Ringle et al., 2015). This analysis is already part of the second stage. The convergent validity was estimated from the value of the formative construct's path coefficient. Path coefficient values greater than 0.8 provide support for the convergent validity of the formative construct (Hair et al., 2017). The value of the second-order level construct path coefficient, environment awareness, was 0.853, supporting the convergent validity of the construct. The value of the variance inflated factor (VIF) was used to assess the collinearity of the construct. If  $0.2 < VIF < 5$  the collinearity of the construct is adequate (Hair et al., 2017). The VIF values for all first-order level constructs were within the acceptable range.

To evaluate the statistical significance of the entrepreneurship supportive university environment construct, the bootstrapping technique was used. Initially, the relative importance (outer weight coefficient) of each item was analyzed. When the relative importance is significant, there is empirical support for keeping the indicator in the model (Hair et al., 2017). Following the recommendations of Hair et al. (2017), all items were retained in the model.

The structural model was evaluated to provide consistent evidence that the environment awareness is positively related to intention of consuming organic products. The criteria used to evaluate the structural model were: collinearity, significant factor loadings, structural coefficients and coefficient of determination of the model ( $r^2$ ).

To evaluate collinearity, the values of the variance inflated factor (VIF) for each subpart of the structural model were analyzed. All values are within the range established by Hair et al. (2017), being below 5. The values of the significant factor loadings and the structural coefficients were obtained by the bootstrapping technique. For this, Student's t-statistical analyzes the hypothesis that the significance of path coefficients is equal to zero. Values of T-value higher than 1.96, at a significance level equal to 5%, reject the hypothesis

and indicate that the path coefficients is significant (Efron & Tibshirani, 1998; Hair et al., 2017). Table 3 presents the T-values for the relationship in the model.

**Table 3.** Coefficients of the structural model – between constructs

Path	Sample Mean	Standard Deviation	T-Statistics	P-Values
Environmental Awareness -> Intention of Consuming Organic Products	0.413	0.051	7.601	0.000

Results indicate that the relationship between environment awareness and intention of consuming organic products is significant, supporting hypothesis 1. This result confirms the proposal of Pinheiro et al. (2018), in which the authors argue that the affective attachment of the individual to nature, whether through small attitudes in the domestic environment or through manifestations in favor of the environment foment the consumption of organic products, especially in relation to food choices.

In another example, Sharma and Kelly's (2014) research aimed at discovering attitudes of perceptions about sustainability education in management students. More than half of them had no knowledge about sustainable development until they entered in higher education. The study also revealed that the students suggest an improvement in environmental debates, since some teachers only deal with subjects such as recycling, making the class repetitive. The same students had positive results regarding education for sustainability, contemplating the need to change unsustainable habits for the future maintenance. The students also pointed out the lack of practical content with real examples claiming several flaws in the subjects of education for sustainability, a fact defended in Sousa Filho et al. (2015) study, who defend the need, first, the educator awareness.

In order to test if there are differences between the relationships according to the gender, multigroup analyzes were performed, according to the suggestions of Hair et al. (2018). Table 4 presents the analysis' results of the constructs' significant relationships among groups of respondents.

**Table 5.** Analysis of relationships according to gender

Path	Path Coefficients - difference (Female - Male)	P-Values
Environmental Awareness -> Intention of Consuming Organic Products	0.176	0.050

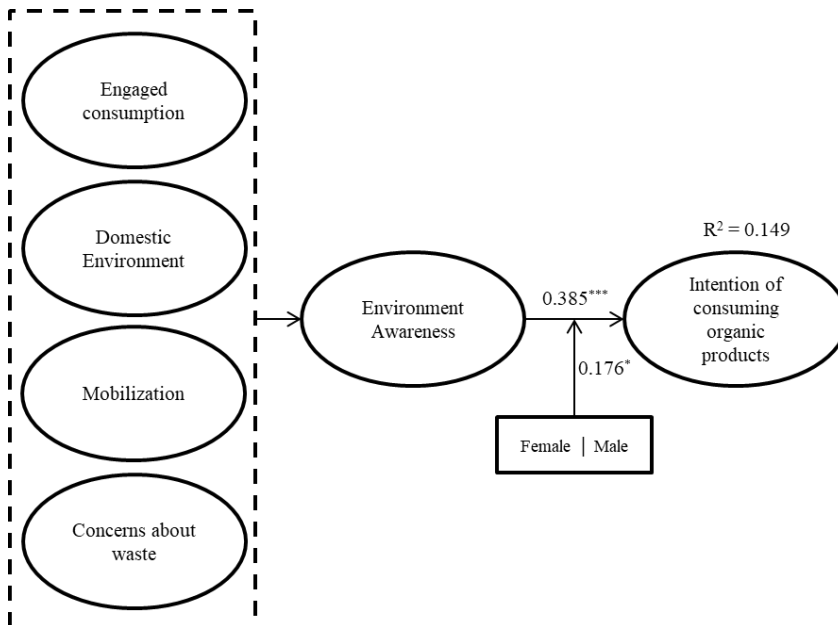
According to the results (Table 4) it is possible to affirm that there are significant differences in the relationships between the constructs depending on the gender, supporting hypothesis 2. The effect of environment awareness in intention of consuming organic products is more strongly positively in female group than in the male group.

The results obtained here are related to the study conducted by Gorni, Gomes and Dreher (2012), who quantitatively analyzed the gender difference among university students in relation to behavior, discourse and practice on sustainable consumption and, as a result, women are more concerned about this issue and, in general, the students interviewed show little personal effort towards behavior change.

To evaluate the coefficient of determination ( $r^2$ ) we based our analysis on the studies of Cohen (1988) and Faul et al. (2007), which determine that  $f^2$  values equal to 0.02, 0.15 and 0.35 are considered, respectively, as small, medium and large effects. These values of  $f^2$  represent values of  $r^2$  equal to 2%, 13% and 25%, respectively. According to the analyses, the

intention of consuming organic products construct presented an  $r^2$  of 0.149, considered medium.

The complete model resulting from our empirical approach is presented in Figure 2.



**Figure 2.** Complete empirical model

Note 1: \* = significant at 5%; \*\* = significant at 1%; \*\*\* = significant at 0.1%; NS = not significant

The synthesis of the study hypothesis tests is presented in Table 6.

**Table 6.** Synthesis of the study's hypothesis tests

Hypothesis	Description	Result
H1	Environmental awareness positively influences the intention on buying organic products	Confirmed
H2	There are differences in the relationship between environment awareness and intention on buying organic products regarding gender	Confirmed

## 5 FINAL REMARKS

The next and final section addresses the final considerations of this study, which confirmed the relation between the environmental awareness dimensions influence and the intention to buy organic products that is also influenced according to the consumers' gender. In this case, it was verified, from the validation of a theoretical model, that there is a more positive effect and intensity in the organics' purchase by women.

As mentioned, the research was conducted with young graduates in Management. Thus, it is worth noting that although the students are from the same course and university, as there are many elective subjects, it is possible that their perception of environmental awareness in the classroom is different. In addition, today's young people are protagonists of the consumerist era and, therefore, there are not many references about their vision facing sustainability.

Based on the theoretical framework, it was possible to identify that, despite environmental awareness being in its initial stage and having different opinions and forms of

interpretation, sustainable education is the only way to base a sustainable future, being promising for the change of feelings, senses and values (Pitanga, 2016).

Although the innumerable researches that use the relationship between human and nature as a study object, there is still a gap between the debate and the environmental awareness, which must be integrated in moments of consumption (Dalmoro, 2018). In this sense, the present study collaborates theoretically with a deeper understanding about the dynamics between the factors that can guide the choice for organic products, besides providing a greater theoretical and empirical support for futures the researches in the area. Therefore, the results obtained here identify the factors that motivate the intention on buying organic products in the Brazilian context and can serve as a contribution to the managerial strategies formulation in order to increase the value perceived by the customer in relation to the consumption of these products.

Despite the zeal and methodological rigor in its elaboration, this research has limitations, as the non-probabilistic nature in addition to the use of the convenience sample, factors that do not allow the generalization of the results. Moreover, the dimensions of environmental awareness proposed here do not include all of the motivators about the organic consumption. Therefore, it is suggested to apply the measurement instrument used in this study in other cultural contexts, even in different Brazilian locations, including other dimensions, in order to compare the differences between the influences on the conventional and organic products purchase.

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