**Effect of organic food-related lifestyle on attitude and purchase intention towards organic food: evidences from Brazil**

## 1. Introduction

There is an ongoing trend towards organic food in many countries that stimulates food producers and marketers to know the determinants of its consumption (Janssen, 2018). Previous empirical research on organic food has broadly analyzed the purchasing decision process, seeking to access the key attributes evaluated by consumers, as well as the benefits and barriers to organic food consumption (Radman, 2005; Paul & Rana, 2012; Sangkumchaliang & Huang, 2012; Aschemann-Witzel & Aagaard, 2014; Ergönül & Ergönül, 2015; Qendro, 2015).

Whereas organic food market involves both regular consumers and those who consume these products occasionally (Hughner, McDonagh, Prothero, Shultz, & Stanton, 2007; Rana & Paul, 2017), the comprehension of different consumer groups and their attitude towards organic food is a greater challenge, especially in emerging countries as in the case of Brazil (Thøgersen, Barcellos, Perin, & Zhou, 2015). This is because the access to those foods is still limited and the price materializes as one of the main barriers to consumption in general (Rödiger, Plaßmann, & Hamm, 2016; Konuk, 2017; Watanabe, Alfinito, & Hamza, 2020).

Studies that aim to identify the factors of the food-related lifestyle that correlate to the attitude, purchase intention of organic food will bring relevant theoretical contributions. It will make it possible to predict trends and guide production, distribution and promotion systems more precisely (Vera, Pérez, Puig, & Montero-Vicente, 2016).

There is a lack of empirical studies examining the relationship among food-related lifestyle, attitude towards organic food and purchase intention. To fill this gap, the purpose of this empirical study is to analyze the effect of food-related lifestyle factors on the the attitude and purchase intention towards organic food for Brazilian consumers.

Under the economic prism, the Brazilian market despite the timid movement, when compared to the largest organic consumer countries, has been showing both an increase in value, as well as an increase in production and in the number of producers, factors that positioned the country in 2018 as the largest market for organic products in Latin America (IFOAM, 2018). Moreover, this research also contributes with managerial implications, recommendations, and opportunities for the organic food industry.

## 2. Literature review

Many empirical studies have been conducted in order to understand why consumers buy or do not buy organic food and to identify drivers of organic food consumption (Hughner, McDonagh, Prothero, Shultz, & Stanton, 2007; Aertsens, Verbeke, Mondelaers, & Huylenbroeck, 2009; Rana & Paul, 2017; Janssen, 2018).

The literature review, which gave rise to a bibliometric study led to the selection of four factors or variables of food related lifestyle that, hypothetically, would be more related to organic consumption. In this article, these variables will be used to compose a second order construct, here called organic food related lifestyle, whose impact on the atitude and purchase intention of organic will be analyzed. The present section summarizes the state of the art of those organic food-related lifestyle variables and presents the hypotheses of the study.

### *2.1 Organic Food-related lifestyle*

The second-order construct organic food-related lifestyle (latent variable) is composed of four variables, extracted from the food-related lifestyle (FRL) scale, developed by Grunert, Brunsø and Bisp (1993; 1995) with the purpose of segmenting consumers according to their eating habits, attitudes and associated values (Grunert, 1993).

Lifestyle defines the pattern of consumption that reflects an individual's choices on how to spend their time and money, choices that play a fundamental role in defining the consumer's identity and their interaction with the environment in which they live. In the case of foods, the constructs intends to measure consumer attitudes towards food, shopping and consumption processes in different contexts, seeking to characterize people by the functions that food plays in their lives and reach the desired consequences (Pérez-Cueto, et al., 2010).

The FRL scale was originally composed of 69 items, distributed in 23 factors, framed in the five dimensions of the food lifestyle: ways of shopping, quality aspects, cooking methods, consumption situations, and purchasing motives.

To develop the research model of this paper, four factors were chosen to compose the OFRL, based on the literature review, that postulated the importance of those factors for organic consumption. That will be explained in the next section.

### *2. 1.1 Importance of product information*

The literature indicates that the term "organic" is interpreted in different ways, since many consumers are not yet familiar with the patterns and practices of organic production (Chryssochoidis, 2000; Harper & Makatouni, 2002; Vukasovic, 2013). In addition, there is a wide variety of contexts, whereas consumers do not have the same geographical, demographic, psychographic and behavioral characteristics, besides that the interpretations of the term by producers and regulators may differ from those of consumers (Zanoli & Naspetti, 2002; Aertsens, Verbeke, Mondelaers, & Huylenbroeck, 2009).

This miscomprehension ends up accentuating the variety of meanings, beliefs and confusions about the concept (Chryssochoidis, 2000; Harper & Makatouni, 2002; Vukasovic, 2013). One of the alternatives to solve the gaps generated by the multiple beliefs and confusions related to the organic term is to encourage access to information, a function of extreme importance to stimulate demand, since consumers seek an increasing volume of information about products to support their purchasing decisions (Sangkumchaliang & Huang, 2012; Lim, Yong, & Suryadi, 2014).

In this sense, food labeling is an important strategy to assist consumers during the food choice process and can be an ally for organic market development (Prada, Garrido, & Rodrigues, 2017). Furthermore, it is proposed to intensively communicate the high value and ethical attributes of organic food to consumers since, for the majority of consumers, the price-performance ratio rather than price alone appears to be decisive (Piqueras-Fiszman & Spence, 2015; Rödiger, Plaßmann, & Hamm, 2016).

The presence of labels on packaged foods, which carry nutritional information and health claims, strongly influences consumers' buying attitude and intentions (Rana & Paul, 2017), as consumers are increasingly interested in reliable information and the easy comparison between organic and non-organic products (Gottschalk & Leistner, 2012).

### *2.1.2 Price criteria*

The premium price of organic food over conventional foods has been of great interest to researchers, since the price consideration criterion plays a significant role in the decision-making process and express one of the most relevant barriers to organic food consumption (Hughner, McDonagh, Prothero, Shultz, & Stanton, 2007; Aertsens, Verbeke, Mondelaers, & Huylenbroeck, 2009; Gottschalk & Leistner, 2012; Rödiger & Hamm, 2015; Shin, 2018).

The concept of willingness to pay refers to the maximum amount of money that an individual is willing to pay for a product or service (Homburg, Koschate, & Hoyer, 2005). In the context of organic food, the willingness to pay has been explored by several studies (Brown, 2003; Achilleas & Anastasios, 2008; Essoussi & Zahaf, 2008; Mondelaers, Verbeke, & Huylenbroeck, 2009; Gonzalez, 2012; Gerrard, Janssen, Smith, & Padel, 2013), since the price

of organic food is frequently higher than conventional counterparts due to the unavailability of economies of scale and additional costs in the production process (Aertsens, Verbeke, Mondelaers, & Huylenbroeck, 2009; Konuk, 2017).

However, the often-reported result that organic food prices are an important barrier to purchase is only conditionally useful for professionals, as the market volume is growing and the results of the price-quality relationship indicate reasonable opportunities for future organic markets in the light of consumer behaviour trends (Rödiger & Hamm, 2015).

In more developed regions, especially in Central Europe, Eastern Europe and Asia, the economic growth and cultural issues led to the prevalence of ecological consumers, known internationally as "green consumers" (Zepeda & Li, 2007; Zakowska-Biemans, 2011; Rana & Paul, 2017). They are willing to pay more to consume foods considered "purer" and, therefore, free from health risks (Hughner, McDonagh, Prothero, Shultz, & Stanton, 2007; Rahnama & Rajabpour, 2017).

On the one hand, it has been reported that organic food prices are an important barrier to purchase; on the other hand, the market volume is growing and the consumer behavior trends toward the quality-price ratio indicates reasonable opportunities for organic markets (Rödiger & Hamm, 2015). So, it is importante to analyze the impact of the price in the formation of the attitude and in the intention of organic purchase.

### *2.1.3 Health*

There is a consensus that the demand for organic food has increased substantially in the past two decades due to changes in consumer perception of food, which are no longer just a means of satisfying hunger, but have gained multiple dimensions due to consumer concerns about health-related issues (Oroian, et al., 2017). When making decisions related to the choice of food, consumers consider the potential health benefits that the product can provide, due to the growing importance of this factor (Yazdanpanah, Forouzani, & Hojjati, 2015).

It was observed that health-conscious consumers demonstrate a preference for organic food (Ergönül & Ergönül, 2015; Hemmerling, Hamm, & Spiller, 2015). This growing interest in health-related issues stimulates consumption, because the choice of organic food versus conventional foods is influenced by the perception of the health benefits caused by them (Paul & Rana, 2012; Yazdanpanah, Forouzani, & Hojjati, 2015).

Another highlight is the growing concern of families with the health and nutrition of their children, a factor that encourages the consumption of foods with higher nutritional values, less addictive and derived from natural production methods (Hughner, McDonagh, Prothero, Shultz, & Stanton, 2007; Aertsens, Verbeke, Mondelaers, & Huylenbroeck, 2009).

Thus, consumer concerns related to health and the positive perception of consumers in relation to the benefits caused by the consumption of organic food would be an important factor that affect the buying behaviour of organic food and are able to predict the purchase intention (Ergönül & Ergönül, 2015; Yazdanpanah, Forouzani, & Hojjati, 2015).

### *2.1.4 Convenience*

Whereas consumers are looking for healthier alternatives, they also hope to facilitate the purchase, preparation and consumption processes, looking for alternatives that maximize their productivity in terms of time and spending during all stages of the food choice process (Reid, Li, Bruwer, & Grunert, 2001).

Changes in lifestyle patterns has shown that consumers started to reduce their time to plan and prepare meals, rising the demand for convenience in food (Rana & Paul, 2017; Oroian, et al., 2017). Convenient food are defined as partially or fully prepared items in which preparation time, cooking skills or physical efforts have been significantly transferred from the consumer to the food processor or distributor (Capps, Tedford, & Havlicek, 1985)

With the growth of organic market, the need to make organic products available in the marketplace is also considerable, since availability leads to sales and attracts new customers (Gottschalk & Leistner, 2012). However, increasingly looking for convenience demands more than fresh organic food, considering that consumers are looking for health and practicality. So, it is important for offering organic foods, with a mix of these three elements.

Considering the relevance of the dimensions exposed for measuring the FRL related to the consumption of organic food, it was been created a second order construct that combine the described variables, named Organic Food-related Lifestyle (OFRL). The following hypothesis was constructed to verify the way the ORFL affect the attitude toward organic food.

**$H_1$:** The organic food-related lifestyle affects positively the attitude towards organic food.

In addition to being related to the attitude towards organic food, it is assumed that the OFRL consequently is related to the purchase intention of these foods. Hence it is important to assess whether the organic food-related lifestyle is as a good predictor for purchase intention, as hypothesis **$H_2$** assumes.

**$H_2$:** The organic food-related lifestyle affects the purchase intention of organic food.

### *2.2 Atittude*

Most contemporary definitions of attitude refer to the cognitive and affective organization, both with respect to an object as well as a predisposition to act (McBroom & Reed, 1992). In the research on consumer behavior, studies were developed on the causal sequence of belief-attitude-intention hierarchy, which underpinned the development of several theories, among which stood out due to their popularity the Theory of Rational Action (Ajzen & Fishbein, 1973), and its successor The Theory of Planned Behavior (TPB) (Ajzen, 1991). TPB assumes that behavioral intention is determined by attitude, subjective norm, and the perception of behavioral control (Ajzen, 1991).

In the case of consumption of organic food, TPB seems to be consistent, reporting a significant positive relationship between the attitude towards organic food and the purchase intention of these foods (Tarkiainen & Sundqvist, 2005; Al-Swidi, Huque, Hafeez, & Shariff, 2014; Kuran & Mihic, 2014; Meyer-Hofer, Olea-Jaik, Padilla-Bravo, & Spillera, 2015; Yadav & Pathak, 2016).

Attitude is one of the most important predictors of the intention to buy organic food (Wirth, Stanton, & Wiley, 2011; Chen & Lobo, 2012), and some studies have confirmed that consumers in general have a positive attitude towards these foods (Harper & Makatouni, 2002; Radman, 2005; Aertsens, Verbeke, Mondelaers, & Huylenbroeck, 2009; Vukasovic, 2013), due to two issues: increasing attention to quality and food safety, showing an increase in the demand for healthy, nutritious and safe foods and the development of social responsibility affecting their purchasing behavior (Savelli, Murmura, Liberatore, Casolani, & Bravi, 2017)

Based on the statements presented, the following hypotheses were constructed in relation to the attitude in the context of organic food, presented below.

**$H_3$:** The attitude towards organic food affects the purchase intention of these foods.

## 3. Methods

According to the hypothesis, a conceptual framework was developed and depicted in Figure 1. In this model, organic food-related lifestyle determinants are formed by importance of product information, price criteria, health, and convenience, in order to propose food-related lifestyle determinants and attitude as antecedents of purchase intentions towards organic food.

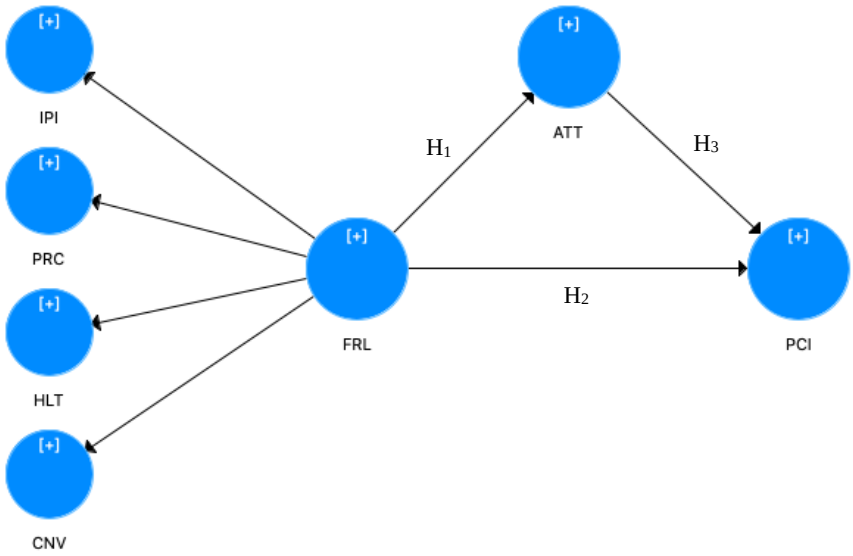



**Figure 1 -** A conceptual model

### *3.1. Participants and data collection procedure*

The surveys were undertaken from May 5 to May 30, in 2019, using *Google.forms* to collect the answers. The population of interest to reach the objectives proposed by this study were the Brazilian consumers of food in general, consumers or not of organic food, due to the different levels of consumption, caused by factors such as lifestyle, attitude and purchase intention.

For the sample calculation, following the recommendations of Ringle, Silva and Bido (2014), the G * Power 3.1 software was used, adopting the specifications determined by Hair et al. (2014b), with an Average Effect Size (0.15) and Test Power equivalent to 0.95. From these premises, the sample calculation resulted in a minimum number of 107 respondents, sufficient to detect the desired effects of Structural Equation Modeling with the Partial Least Square Method (Partial Least Square - PLS). In total, 669 people were selected by non-probability sampling method, resulting 651 valid questionnaires. The filter question referred to the age of the interviewees, since all participants should be 18 year old or older and be interested in participating in the study. The selected individuals had different demographic characteristics including age, gender, education, ethnicity and income.

### *3.2. Measures and procedures*

The scale item used in this study were adapted from previously validated scales (Grunert, Brunso, & Bisp, 1995; Nuttavuthisit & Thogersen, 2017; Konuk, 2017). The application uses a Likert scale with seven points for agreement/disagreement, where 1 (one) stands for total disagreement and 7 (seven) represents total agreement.The final scale, after the adjustment of the model is in the Appendix.

To testing and evaluating the internal consistency of the proposed model, a Structural Equation Modeling (SEM) was performed using the SmartPLS 2.0 software. The analysis of the structural model was fundamentally based on two stages: evaluation of the measurement model, which specifies how the latent variables (constructs) are measured, and evaluation of the structural model, which demonstrates how these latent variables are related to each other (Bido & Silva, 2019).

## 4. Results

### *4.1.Sample characteristics*

After data screening, with missing cases verification and multivariate outliers' exclusions the final sample reached 651 valid cases. Regarding the participants' characteristics, the sample was composed primarily of women (73.6%) and the age groups between 25 and 54 years old correspond to about 66.36% of the sample. In addition, in educational terms, it is observed that most respondents have at least Higher Education (89.86%) and approximately 63.44% of the sample is engaged in some paid professional occupation.

Considering the organic food purchase habits, 48 percent indicated buying organic food at least once a week (the other 52 percent in a lower frequency), 49 percent stated buying food from supermarkets, specialized stores or directly from the producer and 41 percent indicated they buy organic products at open markets.

### *4.2. Data analysis: measurement model*

In order to test construct validity, convergent and discriminant validity of the constructs were analyzed. Convergent validity was analyzed using the Average Variance Extracted (AVEs). In the first round of the PLS Algorithm, the analysis revealed that only the VL Atitude had a value <0.50. In this case, by eliminating the VO's with the lowest factor loads (<0,50), in VL Atitude (ATT_5, ATT_6, ATT_8, ATT_9 e ATT_10) and running the program again, the quality criterion was reached, with all AVEs> 0.50, ensuring convergent validity (Hair Jr, Hult, Ringle, & Sarstedt, 2014). The final results are shown in .

**Table 1.** Validity and reliability analysis

| Discriminant Validity (Fornell-Larcker criterion) | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Importance of product information | **.831** | | | | | |
| 2. Price criteria | .347 | **.800** | | | | |
| 3. Health | .595 | .262 | **.810** | | | |
| 4. Convenience | .239 | .112 | .280 | **.782** | | |
| 5. Attitude | .316 | .206 | .492 | .104 | **.736** | |
| 6. Purchase Intention | .469 | .211 | .617 | .118 | .638 | **.872** |
| | | | | | | |
| Cronbach's Alpha (CA) | .775 | .721 | .737 | .683 | .790 | .843 |
| Composite Reliability (CR) | .870 | .842 | .851 | .825 | .855 | .905 |
| **Average Variances Extracted (AVE)** | **.691** | **.640** | **.656** | **.612** | **.542** | **.761** |

To evaluate the discriminant validity, that indicates the extent to which constructs or latent variables are independent of one another (Hair Jr, Hult, Ringle, & Sarstedt, 2014) were used the criteria of Chin (1998) and by the criterion of Fornell & Larcker (1981). The evaluation of the discriminant validity (DV) using the Chin (1998) criterion, proved that the latent constructs or variables are different from each other, since all the indicators (or observable variables) presented higher factor loads in their respective VL (or constructs) than in others. By the Fornell and Larcker's criterion (1981 ) the discriminant validity was proved too: the square roots of the AVE values of each construct are greater than the correlations (of Pearson) between constructs (or latent variables), as shown in .

The analysis of internal consistency (Cronbach's alpha - AC) and of composite reliability - CC (Dillon-Goldstein´s ρ - rho), showed that the sample is free of bias and the answers - as a whole - are reliable, because the values of AC are greater than 0.60 and the CC values are greater than 0.70, (Hair Jr, Hult, Ringle, & Sarstedt, 2014), as shown in .

### *4.3. Data analysis: Structural equation model*

After the measurement model analysis and the necessary adjustments, the adjusted model was confirmed. Figure 2 presents the structural model with the values of the correlations between VO and VL; shows the value of $R^2$ and shows the path coefficient of linear regression between VLs.Then, the proposed hypotheses were tested with a structural equation model using maximum likelihood estimation.

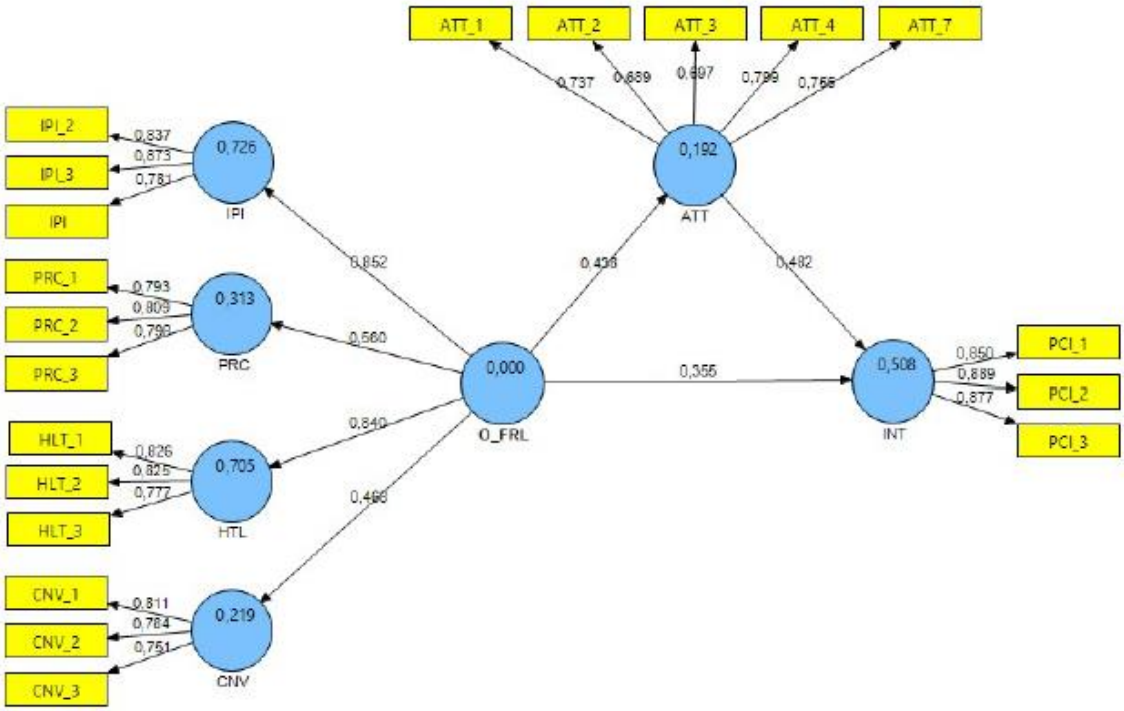



**Figure 2 –** Adjusted research model

The adjusted model presents good structural quality: $R^2$ with values of 19% (attitude) and 51% (purchase intention), as shown in table 4. For research carried out in the areas of social and behavioral sciences, it is suggested R Square coefficients equal to 2% be classified as a small effect, 13% as a medium effect and 26% as a large effect (Cohen, 1988).

Predictive validity, an indicator of the model's quality of fit, was assessed using the Stone-Geisser indicator ($Q^2$). The values obtained are greater than zero (HAIR et al, 2014a), so the quality of adjustment was proven (*Table 2*).

**Table 2.** $R^2$ adjusted model

| | R Square | Q2 | f2 |
|---|---|---|---|
| **IPI** | --- | 0,512 | 0,377 |
| **PRC** | --- | 0,200 | 0,286 |
| **HTL** | --- | 0,467 | 0,314 |
| **CNV** | --- | 0,133 | 0,237 |
| **ATT** | 0,192 | 0,097 | 0,316 |
| **PCI** | 0,508 | 0,355 | 0,496 |

The analysis of the effect size, using the Cohen Indicator ($f^2$), showed that all constructs are useful for the model adjustment, as they all present values indicated as medium (≥ 15%)

and great effect (≥ 35 %), as shown in table 6. Values of 0.02, 0.15 and 0.35 are considered small, medium and large, respectively (HAIR et al, 2014a)

To assess the general fit of the model, a model adequacy index (GoF - Goodness of Fit) is used, which is the result of the geometric mean (square root of the product of two indicators) between the average R2 (adequacy of the structural model ) and the weighted average of the strokes (adequacy of the measurement model) (RINGLE; SILVA; BIDO, 2014). However, Henseler and Sarstedt (2012) showed that it has no power to distinguish between valid and invalid models. Thus, Ringle, Silva and Bido (2014) suggest that the indicator should not be used to assess the adequacy of the model.

The results of SEM with the maximum likelihood estimation indicate that the hypothesized model fits the data well.

### *4.4. Data analysis: hypothesis test*

The path coefficients (Γor β of the linear regression lines) indicate how much one construct is related to another (Ringle, Silva, & Bido, 2014). The coefficient values vary between -1.0 and +1.0, indicating strong positive or negative relationships when very close to these extremes (+1.0 and -1.0). Values close to zero indicate weak relationships (Hair Jr, Hult, Ringle, & Sarstedt, 2014).

The significance of the relationships (correlations and regressions) between the variables was performed through resampling (bootstraping). The reference value for analysis is t ≥ 1.96 and the technique is the Student's t test (Hair Jr, Hult, Ringle, & Sarstedt, 2014). In all relationships, the values are greater than 1.96, so it can be said that the correlations and regression coefficients are significant.

**Table 3.** Hypothesis test

| Hypothesis | | VIF | Path coefficient (*β*) | t-value | p-value | Conclusion |
|---|---|---|---|---|---|---|
| OFRL → ATT | H1(+) | 1.000 | .438 | 12,317 | <.001 | supported |
| ORL → PCI | H2(+) | 1.238 | .355 | 10,677 | <.001 | supported |
| ATT → PCI | H3(+) | 1.238 | .482 | 14,768 | <.001 | supported |

*Table 3* evidences that the structural model is adjusted, as it meets all the evaluated criteria. All values of Student's t-test (t-value) are higher than 1.96 and thus significant (p <.001) are less than 5%, confirming the significance of the al the relashionships tested.

## 5. Discussion

The construct “importance of product information” presented a Cronbach's alpha of .775 and produced the highest path coefficient with the organic food-related lifestyle construct (.852). This result corroborates previous studies which indicate that consumers associate the consumption of organic food with a high degree of involvement with the food experience and a growing interest in all aspects of food purchase, mainly with the product information (Grunert, Brunso, & Bisp, 1993; Grunert, Brunso, & Bisp, 1995; Ryan, Cowan, McCarthy, & O'sullivan, 2004; Fang & Lee, 2009).

This result is in line with previous studies carried out with consumers of other nationalities, which indicated that the identification and communication of the functional

characteristics of organic food, through labels and stamps, are actions capable of stimulating consumption (Gottschalk & Leistner, 2012; Sangkumchaliang & Huang, 2012; Lim, Yong, & Suryadi, 2014). In other words, access to information stimulates the demand for organic products, as consumers increasingly seek a greater volume of information about products and easy access to them (Aertsens, Verbeke, Mondelaers, & Huylenbroeck, 2009).

The construct "price criteria" produced a path coefficient of .560 and a Cronbach's alpha of .721. In the context of organic food consumption, this dimension is important for the general model tested due to the premium price of these products. Therefore, measuring the consumers' willingness to pay is crucial for understanding the market (Essoussi & Zahaf, 2008; Mondelaers, Verbeke, & Huylenbroeck, 2009; Gonzalez, 2012; Gerrard, Janssen, Smith, & Padel, 2013; Rödiger & Hamm, 2015).

The low path coefficient of this variable compared to the other variables that compound the OFRL construct reflects the scale adopted, that measures the search for promotions and the attention given to possible price variations. At first glance, it could be assumed that such behaviors would not be compatible with the consumption of organic food. However, it can suggest a behavioral trend, named "trading up/trading down", which leads middle class consumers to seek for cheaper products or brands in low engagement categories, so they can spend more on products and brands in high engagement categories (Silverstein, Fiske, & Butman, 2008).

That trend would explain that it is possible to be price sensible form some categories and not to be for another one. Based on that trend, the similar behavior in the consumption of organic food could be hypothesized. So, the organic consumer could be engaged with food and willing to pay more to have healthy food. Thus, the behavior of seeking promotions and paying attention to price variations could indicate the possibility of making substitutions, for example, spending less on household cleaning items, to spend more on healthier foods. Therefore, it cannot be concluded that the price criterion is a barrier to organic consumption.

The dimension "health" presented a high path coefficient (.840) in relation to the other dimensions of the organic food lifestyle construct and a Cronbach's alpha coefficient of .737. Along with the "importance of product information", the "health" helps in the formation of a food-related life style capable of predicting the attitude and intention to purchase organic food. That is because health-conscious consumers tend to demonstrate a greater preference for these foods (Hemmerling, Hamm, & Spiller, 2015; Rödiger & Hamm, 2015; Oroian, et al., 2017).

Finally, the dimension "convenience" presented the lowest value of the path coefficient (.468) and the lowest Cronbach's alpha coefficient (.683). Even treated in a reverse way, as it presents a sense opposite to the consumption of organic food, the convenience scale was not very efficient as a lifestyle dimension to shape the attitude and intention to purchase organic food.

Based on these results, and in the confirmation o the H1 (t-value of 11,975 and a path coefficient of .438), it was possible to propose an improvement of the price and the convenience scales.

The hypothesis $\mathbf{H_2}$ suggests that organic food-related lifestyle affects the intention to purchase organic food. Whereas all the dimensions chosen to compose the OFRL are related not only to the attitude, but also to the intention to purchase these foods, it is important to assess whether the organic food-related lifestyle is a good predictor of the intention to purchase of those foods. The relationship between the two variables has a t-value of 10,351 and a path coefficient of .355, indicating a significant relationship between the constructs, for the same reasons mentioned in the previous hypothesis.

Hypothesis $\mathbf{H_3}$ establishes that the attitude towards organic food affects the intention to purchase these foods. The relationship between the two variables has a t-value of 14,471 and a path coefficient of .482, indicating a significant relationship. The Hypothesis $\mathbf{H_3}$ was

confirmed, it also indicates that the attitude affects the intention to purchase organic food, corroborating the results of previous studies in the Brazilian context (Tarkiainen & Sundqvist, 2005; Al-Swidi, Huque, Hafeez, & Shariff, 2014; Kuran & Mihic, 2014; Meyer-Hofer, Olea-Jaik, Padilla-Bravo, & Spillera, 2015; Yadav & Pathak, 2016; Watanabe, Alfinito, & Hamza, 2020). In other words, the more favorable the consumers' attitude towards organic food, the greater their purchase intention.

The literature presents that develop awareness of benefits of organic food, especially those related to health, given the growing concern of consumers with issues related to this aspect, tend to reinforce the attitude towards these foods (Ergönül & Ergönül, 2015; Oroian, et al., 2017).

## 6. Conclusion

The main objet of this article was to analyze the effect of organic food-related lifestyle determinants on the the attitude and purchase intention towards organic food for Brazilian consumers. The results presented evidences that the organic food-related lifestyle, with the dimensions “importance of information about the product”, “price criterion” and “health”, mediated or not by attitude, are determining elements of the intention to buy organic food in the Brazilian context.

In addition, the results confirmed the relationship between the attitude and the purchase intention showing that the more favorable the consumer's attitude towards organic food, the greater their purchase intention. Thus, stimulating consumption also depends on the awareness of the benefits of organic food, which tend to reinforce the attitude towards these foods. In turn, the theory indicates that the awareness made possible by communicative processes is a component of the formation of attitudes, which reinforces the conclusion before.

The results highlighted the importance of information about the product in the process of decision and purchase of organic food. This result is in line with previous studies carried out in other contexts, but in the Brazilian market this is even more important, because the organic segment is still a niche and the consumer has more doubts, than certainties about the production process and the advantages of organic food. Expanding the scope of these results, it can be inferred that marketing communication is a variable that gains relevance in the marketing-mix of organic food. This research revealed the fundamental role of information in the organic food-related lifestyle and in the formation of a attitude towards the consumption of organics, within the Brazilian context. Thus, the results suggest a great opportunity for the chain to unite and work on institutional communication more effectively.

Despite the care and methodological meticulousness adopted in conducting the research, it presents limitations: firstly, its nonprobability convenience sampling technique, preventing the generalization of the results. Concerning this limitation, the sample is concentrated in female consumers, therefore, future research can be addressed with a more heterogeneous sample, allowing to identify the stability of the observed results.

This paper suggests that future studies analyze, comparatively, different categories of organic food, in order to assess whether the impact of the dimensions of organic food related lifestyle, especially importance of product information and health, on the attitude and the intention of purchase are repeated in all types of food or if they vary by category. In that context, another relevant aspect is to assess whether consumers have different levels of attitude and purchase intention in relation to the different product macro categories, focusing mainly on the distinction between fresh and processed organic food.

Also based on the results, it is suggested that future studies explore the marketing communication process, with the purpose of identifying awareness-determining elements in the case of organic foods. In this sense, it is suggested, the inclusion of other factors such as confidence in organic food and the recognition of the Brazilian organic label, investigating the

effects of these elements on the attitude and its ability to explain the intention to purchase those foods. Those elements, if confirmed their importance, could be used by professionals to generate more accurate and efficient communications.

There are two main theoretical contributions that emerged from this study. The first one is the originality of the proposal. The study is the first to propose a multidimensional construct to measure the organic food related lifestyle in the Brazilian context and their impact in the attitude and purchase intention of that food, introducing a conceptual structure and modeling the constructs, through structural equations.

The second theoretical contribution is the validation of scales to measure the constructs organic food-related life style (importance of product information, price criteria, convenience and health), attitude and purchase intention of organic food, in the Brazilian context. This brings the possibility to be used in other studies, in specifics products categories, in cross-cultural analysis, for example.

Also, the paper provides some managerial implications. This research revealed the fundamental role of information in the organic food-related lifestyle and in the formation of a attitude towards the consumption of organics, within the Brazilian context. Expanding the scope of these results, it can be inferred that marketing communication is a variable that gains relevance in the marketing-mix of organic food. Thus, it appers to be a great opportunity for the chain to unite and work on institutional communication more effectively. This finding is important to stimulate the growth of the organic food market in Brazil, which is still embryonic.

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**APPENDIX**

**Measurement Model:** Scales used to measure constructs of adjusted model and factor loadings

| Construct | Label | Item | Factor loadings |
|---|---|---|---|
| Importance of Product Information (IPI) | IPI_1 | To me product information is of major importance. I need to know what the product contains. | .781 |
| | IPI_2 | I compare labels to select the most nutritious food. | .837 |
| | IPI_3 | I compare product information labels to decide which brand to try. | .873 |
| Price Criteria (PRC) | PRC_1 | I always check prices, even on small items. | .793 |
| | PRC_2 | I notice when products I buy regularly change in price. | .810 |
| | PRC_3 | I watch for ads in the newspaper for shop specials and plan to take advantage of them when I go shopping. | .798 |
| Health (HLT) | HLT_1 | I prefer to buy natural products, ie products without preservatives. | .826 |
| | HLT_2 | To me the naturalness of the food that I buy is an important quality. | .826 |
| | HLT_3 | I try to avoid food products with additives. | .777 |
| Convenience (CNV) | CNV_1 | I use a lot of frozen foods in my cooking. | .811 |
| | CNV_2 | We use a lot of ready-to-eat foods in our household. | .784 |
| | CNV_3 | I use a lot of mixes, for instance baking mixes and powder soups. | .751 |
| Atittude (ATT) | ATT_1 | Organic food is produced in a way that is better for the environment. | .719 |
| | ATT_2 | Organic food is natural. | .671 |
| | ATT_3 | Organic food is free from pesticides. | .694 |
| | ATT_4 | Organic food is healthier. | .783 |
| | ATT_7 | Organic food tastes better. | .739 |
| Purchase Intention (PCI) | PCI_1 | I am willing to buy this organic food in the future. | .849 |
| | PCI_2 | I plan to purchase this organic food. | .890 |
| | PCI_3 | I will make effort to buy this organic food. | .877 |