

The role of trust obtained by seals and certificates in mediating the relationship between the perceived effectiveness of the consumer and the intention to purchase organic products.

O Papel da confiança obtida por selos e certificados na mediação da relação entre a efetividade percebida do consumidor e a intenção de compra de produtos orgânicos

El papel de la confianza obtenida por sellos y certificados en la mediación de la relación entre la eficacia percibida del consumidor y la intención de comprar productos ecológicos

Jonas Alves Cavalcanti – Universidade Federal de Pernambuco – UFPE-Campus CAA

Programa de Pós-Graduação em Gestão, Inovação e Consumo

Av. Marielle Franco, s/n - Km 59 - Nova, PE, 55014-900

 <https://orcid.org/0000-0001-6889-0802>

e-mail: jonasalvesca@gmail.com

Eline Moraes Pinheiro – Universidade Federal de Pernambuco – UFPE-Campus CAA

Programa de Pós-Graduação em Gestão, Inovação e Consumo

Av. Marielle Franco, s/n - Km 59 - Nova, PE, 55014-900

 <https://orcid.org/0000-0002-1030-3326>

e-mail: eline_morais_@hotmail.com

Cristiane Salomé Ribeiro Costa - Universidade Federal de Pernambuco – UFPE-Campus CAA

Programa de Pós-Graduação em Gestão, Inovação e Consumo

Av. Marielle Franco, s/n - Km 59 - Nova, PE, 55014-900

 <https://orcid.org/0000-0002-9327-9164>

e-mail: cristiane.costa@ufpe.br

Marconi Freitas da Costa - Universidade Federal de Pernambuco – UFPE-Campus CAA

Programa de Pós-Graduação em Gestão, Inovação e Consumo

Av. Marielle Franco, s/n - Km 59 - Nova, PE, 55014-900

 <https://orcid.org/0000-0001-9888-8359>

e-mail: marconi.fcosta@ufpe.br



Abstract: *This research aimed to investigate the mediation role of trust based on official labels and certificates on the relation between perceived consumer effectiveness (PCE) and organic products buying intention. Thus, quantitative method of researching was developed, and an on-line survey strategy was adopted using a structured questionnaire for collecting data. In total, 124 answered questionnaires were considered acceptable. The theory model was analyzed by multiple linear regression and Hayes Method. The results showed the proposal of this study was confirmed, holding the main hypothesis of the mediation role of trust based on official labels and certificates on the relation between PCE and organic products buying intention. The direct relation between PCE and organic products buying intention was also confirmed, but the influence of PCE on trust was not confirmed. The study contributed to the develop the research of organic products buying intention when related variables which had not been investigated together by prior studies, and, at the same time, confirmed the direct and individual predictor role of the variables on shape consumer's decision. Thus, the results strengthen the importance of PCE, and trust based on official labels and certificates in leading consumers' products perception and in the following consumers' decisions.*

Keywords: *Trust Based in Official Labels and Certificates. Perceived Consumer Effectiveness. Organic Products.*

Resumo: Esta pesquisa se propôs a investigar o papel de mediação exercido pela confiança derivado de selos e certificados na relação existente entre a efetividade percebida do consumidor (EPC) e a intenção de compra de produtos orgânicos. A pesquisa foi desenvolvida a partir de uma abordagem quantitativa descritiva, utilizando-se a aplicação de uma *survey online* enquanto estratégia de coleta de dados e com o desenvolvimento de um questionário estruturado. No total, 124 questionários respondidos foram considerados válidos. A relação das variáveis foi analisada com base na análise de regressão linear múltipla e a mediação por meio Método Hayes. Os resultados encontrados confirmaram a proposta deste estudo, sustentando a hipótese da mediação exercida pela confiança obtida pelos selos e certificados na relação entre a EPC e a intenção de compra de produtos orgânicos. A relação direta e individual da EPC e da confiança também foram sustentadas, porém, não foi encontrada relação entre a influência da EPC sobre a percepção de confiança. O estudo contribui com avanço da pesquisa sobre intenção de compra de produtos orgânicos ao relacionar dois construtos que não haviam sido investigados em conjunto por estudos anteriores, ao mesmo tempo que confirma a posição individual e direta de cada um deles em prever a intenção de compra dos indivíduos. Dessa forma, os achados reforçam a importância da EPC e da confiança em selos e certificados sobre a percepção dos produtos e na consequente escolhas dos consumidores.

Palavras-chave: Confiança em Selos e Certificados. Efetividade Percebida do Consumidor. Produtos Orgânicos.

Resumen: Esta investigación tuvo como objetivo investigar el papel mediador de la confianza basada en etiquetas y certificados oficiales sobre la relación entre la efectividad percibida del consumidor (PCE) y la intención de compra de productos orgánicos. Por lo tanto, se desarrolló un método cuantitativo de investigación y se adoptó una estrategia de encuesta en línea utilizando un cuestionario estructurado para la recolección de datos. En total, 124 cuestionarios respondidos se consideraron aceptables. El modelo teórico fue analizado por regresión lineal múltiple y método de Hayes. Los resultados mostraron que la propuesta de este estudio fue confirmada, sosteniendo la hipótesis principal del papel mediador de la confianza basada en etiquetas oficiales y certificados sobre la relación entre PCE e intención de compra de productos orgánicos. También se confirmó la relación directa entre el PCE y la intención de compra de productos orgánicos, pero no se confirmó la influencia del PCE en la confianza. El estudio contribuyó a desarrollar la investigación de la intención de compra de productos orgánicos cuando se relacionan variables que no habían sido investigadas conjuntamente por estudios previos y, al mismo tiempo, confirmó el papel predictor directo e individual de las variables en la forma de la decisión del consumidor. Por lo tanto, los resultados refuerzan la importancia de la ECF y la confianza basada en etiquetas y certificados oficiales en la percepción de los productos de los consumidores y en las siguientes decisiones de los consumidores.

Palabras Clave: Confianza Basada em Etiquetas y Certificados Oficiales. Efectividad Percebida del Consumidor. Productos Ecológicos.

Introduction

The growing demand for organic products has motivated the academic community to investigate the variables that may influence (motivating factors) purchase intention, in order to better understand the phenomenon (Kushwah, Dhir, Sagar & Gupta, 2019). In this regard, a previous study conducted by Hughner, McDonagh, Prothero, Shultz, and Stanton (2007) suggests that the different factors that can influence—either motivating or acting as a barrier to—the purchase intention of this type of product fall upon the presence or absence of trust in the product. In fact, when discussing the consumption of organic foods, many of the attributes that define them may not be perceptible to the consumer at the time of purchase (Branco, Wantanabe & Alfinito, 2019).

The lack of information about origin, production methods, cultivation, and environmental protection, for example, may lead to consumer uncertainty about the product and negatively moderate the relationship between motivating factors and purchase intention (Giannakas, 2002; Teng & Lu, 2016; Nuttavuthisit & Thøgersen, 2015). This uncertainty may be reduced with the presence of seals and certifications (Janssen & Hamm, 2014; Souza, Melo & Melo, 2016). Seals and certifications provide credibility to the information conveyed by the agents involved in this process, as they reduce uncertainty and lower purchase barriers by proving that a product actually has the promised attributes (Anderson & Narus, 1990; Doney & Cannon, 1997; Teng & Wang, 2015). In this sense, the trust established by seals and certifications has been seen as a mediator of the relationship between motivating factors and the intention to consume organic products (Teng & Lu, 2016).

On the other hand, when analyzing the factors that drive organic product consumption, it is observed that many of them are still strongly associated with consumer attitudes toward health and food safety, with an emphasis on individual well-being (Lombardi, Moori & Sato, 2004; Trevizan & Casemiro, 2009; Hughner et al., 2007; Schleenbecker & Hamm, 2013). This trend is confirmed by more recent studies, such as those by Jakubowska et al. (2024) and Qi et al. (2023), which highlight health as the main motivation, albeit in diverse cultural and economic contexts. However, there are still limited studies linking these attitudes to engagement with environmental sustainability as a determining factor in choosing organic products (Linderman & Vaananen, 2000; Campos & Qi, 2024). Environmental factors that could lead consumers to opt for more sustainable alternatives should be more carefully considered, especially in a context where intrinsic motivation and the symbolic value attributed to responsible consumption are gaining ground (Yilmaz, 2023; Buil & Mata, 2024).

Based on the literature on sustainable consumption behavior, consumers' intentions to consume more environmentally responsible products also depend on their perception of the effectiveness of their own actions. This concept, known as Perceived Consumer Effectiveness (PCE), was proposed by Hughner, McDonagh & Prothero (2007) and has been revisited in recent investigations that highlight its influence on consolidating more conscious purchasing habits (Nifatova et al., 2025). Thus, understanding PCE becomes essential to articulate communication campaigns that expand motivation for organic consumption beyond individual health, incorporating the collective and environmental value of this practice.

Consumers need to perceive that their actions are effective in solving the problem. Those who believe that consuming organic products will improve their quality of life while simultaneously contributing to environmental protection are more likely to develop stronger purchase intentions for these products (Ellen, Wiener & Cobb-Walgren, 1991). This is because some individuals believe their actions will yield positive and lasting results. Others, however, have a lower perception of their ability

to produce any chance of environmental change, which may alter purchase intention (Brochado, Teiga & Oliveira-Brochado, 2016).

Potentially, trust in a purchase situation can positively influence the relationship between PCE and purchase intention in the context of organic product consumption. When trust is fostered through seals and certifications, individuals may have a stronger perception of the effectiveness of their actions toward sustainability when purchasing these products. Thus, it seems possible to establish the link between trust, PCE, and organic purchase intention, based on the understanding that trust mediates the relationship between PCE and consumer purchase intention.

Therefore, this study aims to investigate the relationship between trust established by seals and certifications, perceived consumer effectiveness, and purchase intention of organic products, with the following research question: **How does the relationship between perceived consumer effectiveness and purchase intention of organic products occur, considering trust through the presence of seals/certifications as a mediating variable?**

Theoretical Elements of the Research

Purchase Intention of Organic Products

Purchase intention can be understood as the likelihood that consumers plan a purchase or the degree of willingness of an individual to acquire a product at some future time (Wu, Yeh, & Hsiao, 2002). This intention is interpreted as a tendency derived from a personal attitude related to a brand or product, from the combination of individual interests and the possibility of purchase (Fishbein & Ajzen, 1975; Wang, Kao & Ngamsiriudom, 2017).

In a market where sustainability issues are being widely publicized, public interest in the negative effects on the environment has grown as important attributes considered in shaping purchase intention among consumers (Hughner, McDonagh & Prothero, 2007). As it is understood as food free of pesticides and other chemical products, established within sustainable agricultural and cultural practices with the purpose of promoting balance in the production system (Buainaim & Batalha, 2007, p.13), organic food fits within the context of products considered sustainable and beneficial to human health.

From the consumer's perspective, organic products are perceived as food produced in a clean manner, being healthier, more nutritious, and safer than industrially produced foods, which grants a positive view both to the product and to this market (Hoefkens, Verbeke, Aertsens, Mondelaers, & Camp, 2009). In this sense, Zakowska-Biemans (2011) affirms that consumers make their choice for organic food based on the association with health and safety, considering personal benefits, which is reinforced by Sangkumchaliang and Huang (2012), as well as environmental issues, such as appreciation for local production and reduced soil damage, considering the consequences on the external environment (Linderman & Vaananen, 2000), as variables of purchase intention.

However, for the association between organic products and their benefits to be effective, it is necessary for consumers to have a positive perception of the attributes of these products, which is directly linked to credibility and trust (Branco, Wantanabe & Alfinito, 2019). Thus, it is implied that the choice of organic products becomes stronger when the variables include trust derived from seals and certifications in the consumer's evaluation. This is supported by Teng and Lu (2016), who identify trust as playing a central role in consumer choice, and by the perception that, when buying the product, the consumer will in fact be contributing to the reduction and/or mitigation of

environmental damage, as pointed out by Hughner, McDonagh and Prothero (2007).

Trust Derived from Seals and Certifications

Studies on trust in the field of Marketing initially emerged from the work of Dwyer, Schurr & Oh (1987), with contributions from Morgan and Hunt (1994). According to these authors, trust is represented by the belief in the certainty that something will fulfill its function, often derived from appropriate knowledge or a significant source of information. In this sense, trust plays a central role in social relationships and in establishing relationships with consumers, from which organizations benefit through sustainable competitive advantages over their competitors and networks (Morgan & Hunt, 1994; Zaheer et al., 1998; Sassatelli & Scott, 2001).

In the field of sustainability, studies have shown that consumers tend to be skeptical when it comes to green products, including organic products (Sangkumchaliang & Huang, 2012; Teng & Wang, 2015; Teng & Lu, 2016). This skepticism arises mainly from uncertainty due to the lack of technical expertise to confirm whether products meet the production and cultivation criteria that distinguish an organic product, such as the absence of chemical inputs (pesticides) in production and the improved use and preservation of soil (Hoefkens et al., 2009; Branco, Wantanabe & Alfinito, 2019). Additionally, consumers may feel uncertain about organic products in relation to other issues, such as doubts about whether the product is suitable for consumption and whether it possesses nutritional value (Zakowska-Biemans, 2011).

Considering that trust is essential for consumers to purchase organic products (Fernqvist & Ekelund, 2014; Nuttavuthisit & Thøgersen, 2015), the lack of belief that products comply with the criteria that define this type of product has a negative effect on trust and may interfere with purchase intention (Chamorro, Rubio, & Miranda, 2015; Teng & Lu, 2016). For trust to exist and considering consumers' lack of expertise in organic food production (Verbeke & Roosen, 2009; Chamorro, Rubio, & Miranda, 2015), certain attributes must be present—such as seals and certifications. The presence of seals/certifications can provide accurate and reliable information (Kohlrausch, Campos & Selig, 2004), increase trust in organic farming by providing consumers with information about the origin and production processes (Truninger, 2013).

Studies in Brazil, such as those by Francisco, Moura, Zanon & Marinho (2009) and Rodrigues, Dalmarco, Aoqui & Marinho (2016), verified that seals and certifications have a significant impact on trust, as they function as a communication tool between producers and consumers, ensuring compliance and increasing the credibility of the production process. Furthermore, the presence of seals reinforces product quality and helps to discredit misleading environmental claims that lead to negative attitudes toward the purchase intention of organic products (Kjaernes et al., 2007; Silva, Melo & Melo, 2016). Thus, seals and certifications serve as a reference that results in positive effects on purchase intentions.

In addition to this scenario, recent government changes in the agribusiness and environmental sectors—for instance, Bill No. 6299/02, which relaxes the existing legal framework and facilitates the registration and commercialization of pesticides in the country—may destabilize consumer trust in industrial food production. This situation increases the demand for products with seals and certifications that guarantee the reliability of products produced through organic processes.

Within this context, the first hypothesis to be analyzed is:

H₁: Trust established by seals and certifications positively influences the purchase intention of organic products.

Perceived Consumer Effectiveness (PCE)

The concept of Perceived Consumer Effectiveness (PCE) was first defined in the article by Kinnear, Taylor, and Ahmed (1974). At that time, the authors sought to identify environmentally concerned consumers through numerous variables, and PCE was defined as “the extent to which a respondent believes that the individual consumer can be effective in pollution abatement” (Kinnear, Taylor & Ahmed, 1974, p. 21). Later, PCE was defined as a specific belief that an individual’s efforts can make a difference in solving a problem (Ellen, Wiener & Walgren, 1991). In the studies that followed Kinnear et al. (1974), PCE was considered an integral element of consumer attitude and was later modeled as a direct predictor of environmentally conscious behavior (Antil, 1984; Webster, 1975; Ellen, Wiener & Walgren, 1991).

In other words, people with a positive attitude toward green consumption, for example, tend to develop more green purchasing behaviors when they believe that by consuming such products, they are contributing to solving environmental problems (Vermeir & Verbeke, 2006; Cho, Thyroff, Rapert, Park & Lee, 2013; Lee, Kim & Choi, 2014). Thus, it seems reasonable to understand that consumers with a high perception of and confidence in the effectiveness of their actions tend to display more responsible behaviors in favor of the environment, considering the impacts their purchases may cause (Roberts, 1996; Hughner, McDonach & Prothero, 2007; Lee, Kim & Choi, 2014).

Therefore, when analyzing the consumption of organic products from the perspective of PCE, it seems possible to infer, from an empirical standpoint, that consumers with a positive attitude toward PCE believe that consuming organic products can directly and positively impact the environment—for instance, by supporting small producers, maintaining an ecosystem that preserves soil, and contributing to improved quality of life, among other factors (Hughner, McDonach & Prothero, 2007)—and that this influences their consumption intention.

Thus, the following research hypothesis arises:

H₂: PCE also exerts a positive influence on the purchase intention of organic products.

It should also be noted that public opinion regarding the self-efficacy of individual actions may have shifted due to massive media coverage of environmental disasters, leading consumers to have greater confidence that their actions will yield positive and lasting results. On the other hand, the same information may be interpreted by consumers with less credibility, as it may generate the perception that individual activity is insufficient to achieve positive outcomes for the environment, potentially altering the relationship between PCE and the intention to purchase organic products (Brochado, Teiga & Oliveira-Brochado, 2017). Considering the perspective of Teng and Lu (2016), it seems possible to establish a link between trust derived from seals and certifications as a mediator in the relationship between PCE and the intention to purchase organic products.

From this perspective, it is understood that trust derived from seals and certifications strengthens the credibility consumers place in organic product certification bodies, and that the intention to purchase organic products represents their belief in the positive consequences of their actions. Thus, it is considered that consumers believe that by purchasing certified/labelled organic products, they are directly contributing to the reduction of environmental damage caused by large-scale production

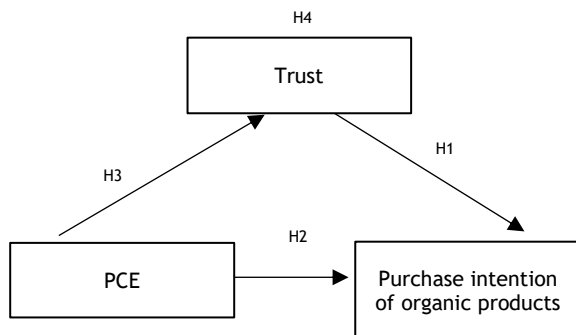
systems—a concern that motivates such consumption (Hughner, McDonach & Prothero, 2007; Verbeke & Roosen, 2009; Chamorro, Rubio, & Miranda, 2015).

Accordingly, the following hypotheses were developed:

H₃ – PCE positively influences trust derived from seals and certifications.

H₄ – Trust derived from seals and certifications positively mediates the relationship between PCE and the purchase intention of organic products.

Based on the theoretical approach presented in the previous section, the theoretical model of this study is outlined:



Theoretical model: authors, 2019.

Methodological Elements of Research

To address the objective of investigating the relationship between trust established by seals and certifications, perceived consumer effectiveness (PCE), and the purchase intention of organic products, this research was developed using a descriptive quantitative approach, aimed at describing the characteristics of a phenomenon and the relationships between variables (Gil, 2008; Sampieri, Collado & Lucio, 2013). For this purpose, two stages were conducted: in the first stage, a literature review was carried out through searches in the Science Direct, Scielo, and Spell databases to explain the variables and define the data collection method for the second stage of the research; in the second stage, field research was conducted through a survey, using a questionnaire applied online (Leeuw, Hox & Dillman, 2008).

Given that the consumer audience for organic products is broad and diverse, the chosen sampling process was non-probabilistic convenience sampling with a single cross-sectional design, since it was not possible to assume that all elements of the local population of organic consumers could be selected (Malhotra, 2019). The distribution technique used was snowball sampling, in which respondents referred to other respondents successively until enough responses were reached to meet the objectives of this research (Malhotra, 2019).

The questionnaire was used as the data collection instrument and was constructed based on the literature on the topic (Cervo & Bervian, 2002). To measure the construct trust derived from seals and certifications, the scale adapted from Silva, Melo & Melo (2016) was used; the construct perceived consumer effectiveness (PCE) was measured using the scale developed by Roberts (1996) and adapted by Hugner, McDonach & Prothero (2007), which sought to identify how consumers perceive the effectiveness of their actions and how this perception positively impacts attitudes and

behaviors, considering the effects their purchases may cause. The construct purchase intention of organic products, the dependent variable of this study, was measured through the elaboration of a single-item question in the questionnaire, developed by the authors themselves. The items for the variables were elaborated using a Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree).

After the questionnaire was created, a pre-test was carried out online with 15 consumers of organic products, selected conventionally by the authors. The aim of this stage was to identify potential problems related to translation, question comprehension, among others, and to correct them (Malhotra, 2006). Following the corrections — including repositioning and exclusion of questions, adjustments to the questionnaire link, and adaptation of the scales — the final form was created on the Google Forms platform for online distribution. The questionnaire contained only closed-ended questions, allowing respondents to indicate their level of agreement with the proposed statements (Hair Jr. et al., 2006). All completed questionnaires were considered valid and formed the final sample (n = 124).

Table 1 below presents the composition of the questionnaire items after the pre-test application.

The software SPSS was used to process and analyze the collected data, employing descriptive statistics of frequency, mean, and standard deviation to describe the sociodemographic profile of the sample. Cronbach's alpha test (with acceptable levels starting from 0.6) was applied to assess item reliability, and factor analysis was used to test the dimensionality of the scales, employing tests such as Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity (Hair et al., 2009). Finally, the hypotheses and the relationships between the variables established in the study were tested through multiple linear regression and mediation analysis using Hayes' Process Method (2018).

Table 1 - Scales Used in the Questionnaire

Construct	Scale	Items (dimensions and variables)	Code
Trust in Seals and Certificates (TSC)	Silva, Melo & Melo (2016)	Seals and certificates are important for my choice of organic products.	TSC01
		I trust products that have organic seals and certificates.	TSC02
		I trust and recommend companies that use organic seals and certificates to acquaintances.	TSC03
		I am willing to pay more for products that display seals and certificates on their packaging because I trust them.	TSC04
		I have confidence in products certified by institutions linked to the Brazilian government.	TSC05

Perceived Consumer Effectiveness (PCE)	Roberts (1996); Hugner, McDonach & Prothero, 2007)	When I buy products, I try to think about how my use affects the environment and other consumers.	PCE01
		The behavior of each consumer can have a positive effect on society by choosing products sold by socially responsible companies.	PCE02
		Since one person's actions do not have an effect on pollution and natural resource problems, it makes no difference what I do.	PCE03
		It is useless for the individual consumer to do anything about pollution.	PCE04
Purchase Intention of Organic Products (PIOP).	Author's Own (2019)	I am more likely to buy organic food products because I trust seals and certifications.	PIOP01
		My trust in seals and certifications increases my intention to purchase organic products.	PIOP02

Source: authors, 2019.

Presentation and Discussion of Results

In the initial stage of the analysis, the sociodemographic profile of the respondents was established through simple descriptive statistics. Most participants in the sample are female, accounting for 56.5% of the total. With respect to educational attainment, most respondents reported holding a postgraduate degree (41%). Given the scope of this investigation, it was also considered relevant to examine the frequency with which individuals purchase organic products in the sample. As shown, 37.1% of respondents indicated that they purchase organic products on a weekly basis. The data are summarized in Table 1.

Table 1 - Sociodemographic Profile – Frequencies

Frequency of Organic Product Purchases		Highest Level of Education Completed	
Never purchased	12,9%	No formal education	0,8%
Twice a year	16,1%	Elementary school	4,0%
Monthly	32,3%	High school	29%
Weekly	37,1%	Higher education / Undergraduate	32,3%
Daily	1,6%	Postgraduate	33,1%
Gender			
Female		56,5%	

Male	43,5%
------	-------

Source: Field research.

Table 2 summarizes the information regarding age, average monthly income, and number of people per household. In general, the average age of the participants is 32 years, while the average monthly household income is R\$ 4,995.00. As the average number of people sharing the household is 3, the per capita income for the sample is R\$ 2,216.19, a value calculated based on the quotient of the monthly household income and the number of people living in the residence.

Table 2 - Sociodemographic Profile (cont.) – Means and Standard Deviation

Variables	Mean	Standard deviation
Age	32,3	14,867
Average monthly income (household)	R\$ 4.995,00	R\$ 3.195,57
Number of people in the household	2,88	1,437

Source: Field research, (2019)

After presenting the sociodemographic profile of the sample, the scales were validated through an analysis of the dimensional consistency of the data.

Scale Validation

To verify the reliability of the items, Cronbach's alpha was measured for each construct forming the theoretical model of this research, considering acceptable levels from 0.6 onward (Hair et al., 2009). The results were considered satisfactory in the second round of evaluation of the trust scale's alpha, after removing item CSR06 to improve the outcome, resulting in 5 final items with an alpha value of 0.848. Regarding the EPC construct, two items were removed from the original scale, EPC01 and EPC02, to improve the result, obtaining an alpha value of 0.815.

After removing these items and evaluating alpha, the dimensionality of the scales was assessed using the KMO test and Bartlett's sphericity test. To facilitate understanding of the data, information on the alpha values and scale dimensionality is summarized in Table 3.

Table 3 - Reliability and Dimensionality of the Data

Variables	C.F.	KMO	Barlett			V.Exp.*	Cronbach
			Df	Qui ²	Sig		
TSC01 TSC02 TSC03 TSC04 TSC05	0,832 0,860 0,851 0,833 0,871	0,779	10	396,374	0,000	72,161	0,848
PCE03 PCE04	0,920 0,920	0,500	1	79,397	0,000	84,633	0,815

Source: Field Survey (2019).

*Expl. Var. = Explained variance.

The KMO index for the adequacy of the trust scale was extracted, showing a valid result of 0.779. The Bartlett test, in turn, presented a chi-square of 396.374, with 10 degrees of freedom and $p < 0.05$. Furthermore, the factor loadings of this construct indicated that all items loaded on a single factor. The Consumer Perceived Effectiveness (CPE) construct obtained a valid KMO index of 0.500, with 1 degree of freedom and a significance of 0.000. The factor loadings of this construct also loaded on a single factor. As can be seen in the table, the indicators showed satisfactory results, supporting the argument for the validity of the constructs.

Theoretical Model Analysis

After analyzing the validity of the constructs, the next step was to evaluate the theoretical model proposed in the study. Initially, descriptive statistics were conducted regarding the construct responses, shown in Table 3, considering the Likert scale from 1 (strongly disagree) to 7 (strongly agree), indicating that respondents showed higher levels of agreement with the statements across all constructs.

Next, the items comprising the constructs of the study were grouped as composite variables for conducting multiple linear regression. Table 4 summarizes the theoretical model. The R value, which corresponds to 0.633, indicates a correlation between the independent variables and the dependent variable. According to Fávero et al. (2009), this coefficient of determination can be interpreted as the proportion of the total variation in organic product consumption. In this study, the independent variables explain 40% of the consumption, as measured by R^2 . The adjusted R^2 value for explaining the relationships between the independent and dependent variables was 0.392, with a standard error estimate of 1.374, showing that the established relationships explain 39% of consumption, with $p < 0.05$. In this case, Model 2 explains the relationship between the variables better but has a significance value greater than 0.05. According to Model 1, both trust and perceived effectiveness positively influence purchase intention, confirming hypotheses H1 and H2.

Table 4 - Model Analysis

Model	R	R ²	Adjusted R ²	Standard error of the estimate		
1	0,634 ^a	0,402	0,392	1,374		
2	0,633 ^b	0,401	0,396	1,369		
Change Statistics						Durbin-Watson
Model	R ² Change	F Change	df1	df2	Significance of Change F	
1	0,402	40,691	2	121	0,000	
2	-0,001	0,175	1	121	0,677	1,675

Source: Field Research (2019).

Tables 5 and 6 present the detailed ANOVA values and coefficients, respectively, showing that the proposed theoretical model is statistically significant. This indicates that at least one of the independent variables is significant in explaining the behavior of the dependent variable, since the F-statistic, with a value of 81.761, suggests that the simultaneous test of each coefficient being equal to 0 (zero) was rejected.

Table 5 - ANOVA

Modelo		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	153,546	2	76,773	40,691	0,000 ^b
	Residual	228,293	121	1,887		
	Total	381,839	123			
2	Regression	153,217	1	153,217	81,761	0,000 ^c
	Residual	228,622	122	1,874		
	Total	381,839	123			

a. Dependent Variable:: PIOP

Predictors: (Constant), PCE, Trust in Seals and Certificates

c. Predictors: (Constant), Trust in Seals and Certificates

Source: Field Research (2019).

Table 6 - Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Standard Model	Beta			Lower Limit	Upper Limit
1	(Constant)	0,010	0,784		0,013	0,990	-1,542	1,561
	Trust in Seals and Certifications	0,921	0,104	0,640	8,861	0,000	0,715	1,127
	PCE	0,028	0,067	0,030	0,418	0,677	-0,105	0,161
2	(Constant)	0,226	0,586		0,387	0,700	-0,933	1,386
	Trust in Seals	0,911	0,101	0,633	9,042	0,000	0,712	1,110

and Certifications							
-----------------------	--	--	--	--	--	--	--

Source: Field Research (2019).

The table 5 presents the ANOVA results, showing that the proposed theoretical model is statistically significant ($F = 40.691$; $p < 0.001$ for Model 1, and $F = 81.761$; $p < 0.001$ for Model 2), indicating that at least one of the independent variables significantly explains the variance in the dependent variable (ICPG – Intention to Purchase Organic Products). In Model 1, both EPC (consumer perceived effectiveness) and trust in labels and certifications were included as predictor variables. In Model 2, only the variable “trust in labels and certifications” was retained.

Table 6 details the regression coefficients of the models. In Model 1, the variable “trust in labels and certifications” has a standardized coefficient (Beta) of 0.640 and is highly significant ($p < 0.001$), while the EPC variable shows a standardized coefficient (Beta) of 0.030 and is not statistically significant ($p = 0.677$). These results indicate that, individually, EPC is not capable of predicting purchase intention. In Model 2, where EPC was removed, the “trust” variable remains highly significant ($p < 0.001$), confirming its robustness in explaining consumer behavior regarding the intention to purchase organic products.

For the mediation test, the data were analyzed using Hayes’ method (2018), adopting EPC as the independent variable (X), trust as the mediator (M), and purchase intention as the dependent variable (Y), as established in hypothesis H4. The first step consisted of analyzing the relationship between EPC and trust. The results indicated a coefficient = -0.1503, standard error = 0.0568, and significance = 0.091 ($p > 0.05$), not confirming hypothesis H3, meaning there is insufficient statistical evidence to assert that EPC directly influences trust.

The lack of significance can be attributed to the fact that consumers already assign high value and credibility to labels and certifications, regardless of their perception of individual effectiveness (Verbeke & Ward, 2006). Thus, even if the consumer does not recognize their ability to impact society through their consumption actions, the presence of reliable certifications sustains their purchase intention.

The next step assessed the mediation effect. It was observed that EPC alone does not directly influence purchase intention (coefficient = 0.0280; standard error = 0.0670; $p = 0.6769$). However, when the variable “trust” is included in the model, it shows a significant impact (coefficient = 0.9211; standard error = 0.1040; $p < 0.001$) on purchase intention. These data confirm hypothesis H4, suggesting that trust positively mediates the relationship between EPC and purchase intention. This finding aligns with previous studies highlighting the mediating role of trust in shaping sustainable consumption behaviors (Verbeke & Ward, 2006; Fernqvist & Ekelund, 2014; Nuttavuthisit & Thøgersen, 2015; Teng & Lu, 2016), reinforcing its relevance in the context of organic product consumption.

Discussion

Trust established in consumer relationships is an intangible attribute (Fernqvist & Ekelund, 2014; Nuttavuthisit & Thøgersen, 2015), often materialized through the seals and certifications present on products available for consumption. In the case of organic products, where consumers cannot directly verify whether a product has been produced and cultivated to meet these characteristics, trust is considered an essential element for purchase, having the capacity to positively

influence purchase intention (Chamorro, Rubio, & Miranda, 2015; Teng & Lu, 2016) and to enhance perceived quality (Verbeke & Roosen, 2009), which was confirmed in this investigation.

Regarding Consumer Perceived Effectiveness (CPE), it is evident that CPE reflects a positive consumption action to the extent that consumers perceive the sustainable effectiveness of their actions, potentially driving proactive behaviors toward societal benefits (Vermeir & Verbeke, 2006; Cho, Thyroff, Rapert, Park, & Lee, 2013; Lee, Kim, & Choi, 2014). Thus, at the perception stage, consumers become more likely to purchase products with a positive environmental impact because they understand that by making such purchases, they are effectively helping their surroundings (Roberts, 1996; Hugner, McDonach & Prothero, 2007; Lee, Kim, & Choi, 2014). In relation to organic products, this behavior was identified in this research with statistically significant data supporting hypothesis H2, confirming the importance of CPE in influencing the purchase intentions for this product category and aligning with previous studies that identified this relationship (Vermeir & Verbeke, 2006; Hugner, McDonach & Prothero, 2007; Cho, Thyroff, Rapert, Park, & Lee, 2013; Lee, Kim, & Choi, 2014).

Even though there was no direct relationship between trust and CPE, the results suggest that when trust is combined with the existence of CPE, behavioral change is even more pronounced, and consumption choices are directed toward products less harmful to the environment. Initially, it was suggested that when consumers perceived the effectiveness of their actions, their perception of trust would be positively influenced. This previously hypothesized relationship between CPE and trust was not supported, which may be explained by the fact that both CPE and trust represent the consumer's perception of a particular consumption situation. In this context, the absence of more detailed information about the production and/or cultivation to ensure that a product is organic may not enhance the individual's perception of the effectiveness of their actions toward sustainability, consequently affecting trust perception. Additionally, the lack of specification regarding the type of organic product studied may have contributed to this result, as it relied on a more generalized perception of the consumption situation.

On the other hand, when both variables are present together in a purchase scenario, positive effects on consumers' intention to buy organic products are observed, a relationship confirmed by hypothesis H4. This indicates that even if CPE does not directly influence trust, trust ensures a significant positive effect of CPE on purchase intention when included in the relationship. From these findings, it is evident that when investigating the consumption of organic products, even though previous studies have identified trust as an essential element, the interactions established with other variables such as CPE may reveal previously unexplored dynamics, like the mediation confirmed in this study.

Thus, the theoretical-practical implications suggest that by first establishing trust with the consumer, producers and sellers of organic products can achieve significant behavioral changes in their audience, reinforcing the concepts of perceived effectiveness and increasing socio-environmental responsibility. Empirically, it is possible to understand that establishing solid and trustworthy relationships first is necessary so that deeper behavioral change actions can be effective and enduring, leading to more critical evaluations when purchasing or considering purchasing food products.

Conclusions

The present study aimed to investigate the relationship between Consumer Perceived Effectiveness (CPE), trust derived from seals and certifications, and the purchase intention of organic products. It was observed that CPE functions as an antecedent variable for the intention to purchase green products, a result also found for trust derived from seals and certifications when the direct relationship of each variable was analyzed. Additionally, the presence of trust in the relationship between CPE and purchase intention alters the direct relationship between the two variables, acting as a mediator in this relationship.

These findings provide important contributions to the study of consumer behavior in the context of sustainability. The study innovates by bringing together the variables of trust and CPE within the same consumption relationship, both of which are important factors stimulating sustainable behavior, increasingly highlighted in studies on the phenomenon, but not previously investigated together. Although trust has already been identified as a predictor or direct influencer of the intention to purchase organic products specifically, this research is original in presenting trust as a mediator in the existing relationship between CPE and the intention to purchase organic products.

This implies that, even considering a direct relationship of both CPE and trust on purchase intention, other variables may interfere in this process, potentially enhancing or diminishing the consumer's perception. In this study, trust was identified as a positive mediator in the relationship between CPE and purchase intention, confirming the previously proposed hypothesis. This highlights the need for further investigations incorporating additional elements to better understand consumer behavior concerning organic products.

Furthermore, the findings reinforce the idea that when consumers perceive that their consumption efforts contribute to environmental preservation, they tend to act proactively and beneficially, generating advantages not only for themselves but also for the surrounding ecosystem. Similarly, trust derived from seals and certifications provides assurance that organic products are indeed cultivated according to sustainability requirements and influences purchase intention. This finding corroborates the results of Verbeke and Roosen (2009) and Chamorro, Rubio, and Miranda (2015), demonstrating that external elements, such as seals and certifications, positively impact consumer behavior by increasing purchase intention.

Regarding practical contributions, the findings provide guidance for organic product producers, indicating that the presence of seals and certifications can increase purchase intentions and potentially boost the economic viability of these production systems. Strengthening marketing actions, particularly those related to communication about production systems, can positively influence consumers' perceptions that purchasing organic products contributes to environmental protection, society, and the improvement of their own quality of life, enhancing the perceived impact of their actions.

It is important to note some limitations of this study. First, although the study had an adequate sample size (Hair et al., 2005), the convenience sampling limits diversity and the generalizability of results, presenting a more homogeneous sample where approximately 65% of respondents had a high level of education, considering undergraduate and postgraduate levels together. Second, the lack of specification regarding the type of organic product led to more generalized results about consumer perceptions. Applying the model to a specific product or category could yield different results. Third, this study assessed consumer behavior using a cross-sectional approach rather than a longitudinal one.

For future research, it is important to first investigate the predictors of CPE that exert the greatest influence on the studied consumer behavior. Other trust-related factors could be explored in future studies, such as the point of sale or trust in the producer. Additionally, factors such as socially responsible consumption (CSR) or Consumer Citizenship Behavior could further help explain the research topic.

References

- Anderson, J. C., Narus, J. A. (1990). A Model of Distributor Firm and Manufacturer Firm Working Partnerships. *Journal of Marketing*, 54, 42-58.
- Andrade, L. M. S.; Bertoldi, M. C. (2019). Atitudes e motivações em relação ao consumo de alimentos orgânicos em Belo Horizonte – MG. *Brazilian Journal of Food Technology*, São Paulo, p. 31-40, maio. 2012. Disponível em: Acesso em: 10 jun.
- Antil, John H. (1984), "Socially Responsible Consumers: Profile and Implications for Public Policy," *Journal of Macromarketing*, (Fall), 18-39.
- Ba, S., Pavlou, P. (2002). Evidence OF the Effect of Trust Building Technology in Electronic Markets: Price Premiums and Buyer Behavior. *MIS Quarterly*. 26. 243-268.
- Barbieri, J. C. (2007). *Gestão ambiental empresarial: conceitos, modelos e instrumentos*, 2. ed. São Paulo: Saraiva, 2007, 382 p.
- Buil, T., & Mata, P. (2024). Intrinsic motivation and its influence in eco shopping basket. *Journal of Consumer Behaviour*, 23(6), 2812–2825. <https://doi.org/10.1002/cb.2373>
- Branco, T. V.C., Watanabe, E. A. M., Alfinito S. (2019). Consciência Saudável E Confiança Do Consumidor: Um Estudo Sobre A Aplicação Da Teoria Do Comportamento Planejado Na Compra De Alimentos Orgânicos. *Revista de Gestão Social e Ambiental*. V.13, n1.
- Brochado, A., Teiga, N., Oliveira-Brochado, F. (2016). The ecological conscious consumer behavior: Are the activists different? *International Journal of Consumer Studies*. 41. 10.1111
- Buainain, A. M., Batalha, M.O. (2007). *Cadeia produtiva de produtos orgânicos*. Ministério da Agricultura, Pecuária e Abastecimento. Secretaria de Política Agrária. Brasília, IICA/ MAPA, vol. 5, 108 p.
- Campos, B. C., & Qi, X. (2024). A literature review on the drivers and barriers of organic food consumption in China. *Agricultural and Food Economics*, 12, 18. <https://doi.org/10.1186/s40100-024-00312-y>.
- Cervo, A. L. Bervian, P. A. *Metodologia científica*. 5.ed. São Paulo: PrenticeHall, 2002.
- Chamorro, A., Rubio, S., Miranda, F. J. (2015). The region-of-origin (ROO) effect on purchasing preferences: the case of a multi-regional designation of origin. *British Food Journal*, 117(2), 820-839.
- Cho, Y. N., Thyroff, A., Rapert, M. I., Park, S. Y., Lee, H. J. (2013). To be or not to be green: Exploring individualism and collectivism as antecedents of environmental behavior. *Journal of Business Research*, 66(8), 1052–1059.

- Doney, P. M., Cannon, J.P. (1997). An Examination of the Nature of Trust in Buyer-Seller Relationships. *Journal of Marketing*, 61, 35-51.
- Dwyer, F. R., Schurr, P. H., Oh, S. (1987). Developing Buyer-Seller Relationships. *Journal of Marketing*, 51, 11-27.
- Ellen, P. S., Wiener, J. L., Cobb-Walgren, C. (1991). Environmental Problems And Marketing. *Journal Of Public Policy & Marketing* Vol. 10, No. 2, Pp. 102-117.
- Fernqvist, F., Ekelund, L. (2014). Credence and the effect on consumer liking of food e a review. *Food Quality and Preference*, 32, pp. 340-353.
- Francisco, E. S.; Moura, F. A. de; Zanon, R. S.; Marinho, B de L. (2009). O comportamento do consumidor na compra de produtos orgânicos. In XII Semead - Seminários em Administração
- Giannakas, K. (2002). Information asymmetries and consumption decisions in organic food product markets. *Canadian Journal of Agricultural Economics/Revue canadienne d agroéconomie* 50(1), 35–50.
<https://doi.org/10.1111/j.1744-7976.2002.tb00380.x>
- Hair, J. F., Jr.; Babin, B.; Money, A.; Samouel, P. (2005). *Fundamentos de Métodos de pesquisa em administração*. Porto Alegre: Bookman.
- Henion, K. E., Kinnear, T. C. (1976) *Ecological Marketing*. American Marketing Association, Chicago.
- Hoefkens, C.; Verbeke, W.; Aertsens, Mondelaers K.; Van Camp, J. (2009). The nutritional and toxicological value of organic vegetables: Consumer perception versus scientific evidence. *British Food Journal*, Bingley, v. 111, n. 10, p. 1062-1077.
- Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C., & Stanton, J. (2007). Who Are Organic Food Consumers? A Compilation and Review of Why People Purchase Organic Food. *Journal of Consumer Behaviour*. 6. 94 - 110.
- Kinnear, T. C., Taylor, J. R., Ahmed, S. A. (1974). Ecologically Concerned Consumers: Who are They? Ecologically concerned consumers CAN be identified. *Journal of Marketing*, 38(2), 20-24.
<https://doi.org/10.1177/002224297403800205>
- Kjærnes, U., Harvey, M., Warde, A. (2007). Trust and Food Consumption. In: *Trust in Food*. Palgrave Macmillan, London. https://doi.org/10.1057/9780230627611_2
- Kohlrausch, A. K.; Campos, L. M. Souza.; Selig, P. M. (2004). O comportamento do consumidor de produtos orgânicos em Florianópolis: uma abordagem estratégica. *Revista Alcance*, Florianópolis-SC, v. 11, n. 1, p. 157-177, jan./abr.
- Krischke, P. J., Tomiello, N. (2009). O comportamento de compra dos consumidores de alimentos orgânicos: um estudo exploratório. *Cadernos de Pesquisa Interdisciplinar em Ciências Humanas*, Florianópolis, v. 10, n. 96, p. 27-43, jun.

Kushwah, S., Dhir, A., Sagar, M., & Gupta, B. (2019). Determinants of organic food consumption. A systematic literature review on motives and barriers. *Appetite*, 143.

Lee, J-N.; Choi, B. (2014). Strategic Role of IT and Its Impact on Organizations. *Information & Management*, 51 (7), pp. 881-882.

de Leeuw, E. D., Hox, J. J., & Dillman, D. A. (Eds.). (2008). *International handbook of survey methodology*. Taylor & Francis Group/Lawrence Erlbaum Associates.

Lei Nº 10.831, De 23 De Dezembro De 2003. Dispõe Sobre A Agricultura Orgânica E Dá Outras Providências. *Diário Oficial Da União*. Brasília DF.

Lombardi, M. S.; Moori, R. G.; Sato, G. S. (2004). Um estudo exploratório dos fatores relevantes na decisão de compra de produtos orgânicos. *RAM -Revista de Administração Mackenzie*, 5(1), 13-34.

Maibach, Edward. (1993). Social marketing for the environment: Using information campaigns to promote environmental awareness and behavior change. *Health Promotion International*. 8. 209-224. 10.1093/heapro/8.3.209.

Malhotra, N. K. (2019). *Pesquisa de Marketing - Uma Orientação Aplicada* (7ª ed.) Porto Alegre: Bookman.

Morgan, R. M.; Hunt, S. D. (1994). The commitment-trust theory of relation-ship marketing. *Journal of Marketing*, 58(3), 20-38.

Nifatova, O., Bliumska-Danko, K., & Danko, Y. (2025). Packaging of organic food—the dilemma of consumers’ internal and external motives. *Frontiers in Sustainability*, 6, Article 1513954. <https://doi.org/10.3389/frsus.2025.1513954>

Nuttavuthisit, K., & Thøgersen, J. (2015). The Importance of Consumer Trust for the Emergence of a Market for Green Products: The Case of Organic Food. *Journal of Business Ethics*, 140(2), 323–337.

Pereira, B. N., (2005). O consumidor consciente e o impacto do argumento ecológico na atitude em relação à marca. *Responsabilidade social das empresas: A contribuição das universidades*, Volume 4. Editora Peirópolis LTDA, 1 de jun de 2005.

Perosa, J.M.; Moori, R.G.; Lombardi, M.F.S.; Perosa, B.B. (2009). O estímulo local e o consumo de produtos orgânicos em Botucatu, SP. *Revista de Estudos Sociais*, 2(22):59-77.

Projeto de Lei nº 6299/02. Altera os arts 3º e 9º da lei nº 7.802, de 11 de julho de 1989, que dispõe sobre a pesquisa, a experimentação, a produção, a embalagem e rotulagem, o transporte, o armazenamento, a comercialização, a propaganda comercial, a utilização, a importação, a exportação, o destino dos resíduos e embalagens, o registro, a classificação, o controle, a inspeção e a fiscalização de agrotóxicos, seus componentes e afins, e dá outras providências. Autor: Blairo Maggi. Relator: Deputado Luiz Nishimori. Disponível em <https://www.camara.leg.br/proposicoesWeb/prop_mostrarintegra;jsessionid=2FAC4C9386548A11ABE5E1BEDE068D1F.proposicoesWebExterno1?codteor=1654426&filename=Tramitacao-PL+6299/2002>. Acesso em: 08/06/2019.

Pussemier L, Piérard JY, Anselme M, Tangni EK, Motte JC, Larondelle Y. (2006). Development and application of analytical methods for the determination of mycotoxins in organic and conventional wheat. *Food*

Addit Contam. Nov;23(11):1208-18. doi: 10.1080/02652030600699312. PMID: 17071524.

Qi, X., Mou, J., Meng, C., Ploeger, A. (2023). Factors influencing consumers' organic food continuous purchase intentions during the post-pandemic era. *Foods*, 12(8), 1636. <https://doi.org/10.3390/foods12081636>

Ribeiro, J. A., Veiga, R. T. (2011). Proposição de uma escala de consumo sustentável. *Revista de Administração*, 46(1), 45-60.

Roberts, J.A., (1996). Green Consumers in the 1990s: Profile and implications for advertising. *Journal of Business Research*, 36: 217-231.

Rodrigues, D. B., Dalmarco, D. A. S., Aoqui, C., Marinho, B. L. (2016). The meaning of the organic certification label for the consumer: a cluster analysis. *Revista de Gestão*, 23(4), 316-325.

Sampieri, R. H.; Collado, C. F.; Lucio, P. B. (2006). *Metodologia da pesquisa*. 3. ed. São Paulo: McGraw-Hill.

Sangkumchaliang, P., Huang, W-C. (2012). Consumers' Perceptions and Attitudes of Organic Food Products in Northern Thailand. *International Food and Agribusiness Management Review*, vol. 15(01), pages 1-16, February.

Schleenbecker, R., & Hamm, U. (2013). Consumers' perception of organic product characteristics. A review. *Appetite*, 71, 420e429.

Santos, G. C., Montairo, M. (2004). Sistema orgânico de produção de alimentos *Alim. Nutr.*, Araraquara-sp, v.15, n.1, p.73-86, 2004.

Sassatelli, R., Scott, A. (2001). Novel food, new markets and trust regimes responses to the erosion of consumers' confidence in Austria, Italy and the UK. *European Societies - EUR SOC.* 3. 10.1080/146166901200543339.

Silva, J. S., Melo, F. V. S., Melo, S. R. S. (2016). Selo De Certificação De Produto Orgânico: O Consumidor Se Importa? *Revista Alcance*, vol. 23, núm. 4, 2016.

Tan, B-C. (2011). The Role of Perceived Consumer Effectiveness on Value-Attitude-Behaviour Model in Green Buying Behaviour Context. *Australian Journal of Basic and Applied Sciences*, 5(12): 1766-1771.

Teng, C-C., Wang, Y-M. (2015). Decisional factors driving organic food consumption: Generation of consumer purchase intentions. *British Food Journal*. 117. 1066-1081. 10.1108/BFJ-12-2013-0361.

Teng, C. C., Lu, C. H. (2016). Organic food consumption in Taiwan: Motives, involvement, and purchase intention under the moderating role of uncertainty. *Appetite*, 105, 95–105.

Trevizan, S. D. P., Casemiro, A. D. (2009). Consumidores de produtos orgânicos em Vitória da Conquista, Bahia. In: *International Workshop In Advances In Cleaner Production*, 2, São Paulo, 2009. *Anais...* São Paulo, ACP. Disponível em: www.advancesincleanerproduction.net. Acesso em: 08/06/2019.

Truninger, M. (2013). As bases plurais da confiança alimentar nos produtos orgânicos: da certificação ao 'teste da minhoca'. *Ambiente & Sociedade*, 16(2), 81-102.

Tucker, Jr., Lewis R. (1978). The Environmentally Concerned Citizen: Some Correlates. *Environment and Behavior* 10 (3) (1978): 389-417.

Verbeke, W., Roosen, J. (2009). Market differentiation potential of country-of-origin, quality and traceability labeling. *The Estey Centre Journal Of International Law And Trade Policy*, 10(1), 20–35.

Wang, S. W., Kao, G. H., Ngamsiriudom, W. (2017). Consumers' attitude of endorser credibility, brand and intention with respectto celebrity endorsement of theairline sector. *Journal of Air Transport Management*, 60, 10-17.

Webster, F. E. (1975). Determining the Characteristics of the Socially Conscious Consumer. *Journal of Consumer Research*, 2(3), 188–196. <http://www.jstor.org/stable/2489054>

Wu, P. C. S., Yeh, G. Y., Hsiao, C. (2011). The effect of store image and service quality on brand image and purchase intention for private label brands. *Australian Marketing Journal*, 19(1), 30-39.

Yilmaz, B. (2023). Factors influencing consumers' behaviour towards purchasing organic foods: A theoretical model. *Sustainability*, 15(20), 14895. <https://doi.org/10.3390/su152014895>

Zaheer, A., McEvily, B., Perrone, V. (1998). Does Trust Matter? Exploring the Effects of Inter-Organizational and Inter-Personal Trust on Performance. *Organization Science*. 9. 141-159. 10.1287/orsc.9.2.141.

Zakowska-Biemans, S. (2011). Polish Consumer Food Choices and Beliefs About Organic Food. *British Food Journal*. 113. 122-137. 10.1108/00070701111097385.