Consumption of Eco-Innovative Food in Brazil: a Test of the Values-Attitudes Hierarchy

Autoria: Marcia Dutra de Barcellos, Marilia Bonzanini Bossle, Marcelo Gatterman Perin, Luciana Marques Vieira

Propósito Central do Trabalho
Consumers’ awareness towards environmental concerns has increased and innovation in green products and eco-innovation are relevant strategies for enterprises for economic growth, and to comply with this aim of society. Although a greater environmental concern do not always turn directly into a greener consumer behaviour, conscious consumers see a direct relationship between their consumer behaviour and environmental or ethical problems, and believe in their strength to influence and companies. Considering the potential growth for a green market in Brazil, and the important role of food on people’s life, the aim of this paper is to investigate conscious consumption behaviour of eco-innovative food in Brazil, specifically, to verify the relationship among personal values, attitudes towards the environment and technology, and attitudes and consumer behaviour towards eco-innovative food. In that sense, this paper builds on a hierarchical values-attitudes model with the aim to examine the degree to which consumers’ purchase behaviour is jointly determined by a combination of consumers’ personal values and their general attitudes towards environment and nature and technological progress. Bearing in mind that sustainable consumption is a recent subject in Brazil, identifying the main characteristics of this market will benefit companies of the food sector, both industry and retailing. Furthermore, the increase of social, environmental and political awareness of young people in emerging countries, such as Brazil, may be carefully be taken into account by enterprises, since their civil engagement in protests and boycotts can move out of the virtual sphere and can in fact materialize.

Marco Teórico
The Organization for Economic Co-operation and Development (OECD) defines eco-innovation as “the development of products (goods and services), processes, marketing methods, organizational structure, and new or improved institutional arrangements, which, intentionally or not, contribute to a reduction of environmental burdens in comparison with alternative practices” (OECD, 2009, p. 2). To justify financial investments and to turn feasible to implement innovative environmental solutions, it is important that market and consumer’s awareness arises. Attitudes represent a disposition to respond favourably or unfavourably to an object, person, institution or event (Ajzen, 1988). Values are related to social norms (or behaviour rules), and reflect an internal reference to what has been considered good, beneficial, important, desirable. The model described below suggests an influence of values and consumer’s purchase of eco-innovative food. The contradiction between consumer’s concerns towards ethical, social and environmental issues and their demand for varied and affordable food, provides an important and relevant opportunity for further research on the relationship between attitudes towards the environment and nature (AtEnviro). Additionally, it is reasonable to infer that attitudes towards technology (AtTechno), that reveals consumer perceptions about the prevailing type of food supply in Western societies, e.g., industrial food production systems, should also influence (possibly negative) on consumer’s attitudes towards eco-innovative food. Elsewhere, it is of great importance to incorporate the study of consumer values (collective and individual) for analysing consumer’s attitudes, once values are the main antecedents of attitudes, and allows the creation of the hierarchical value-attitudes model. The research regarding this hierarchical model of values-attitudes is particularly challenging due to the fact that two constructs (attitudes towards the environment and nature, and attitudes towards technology) are naturally contradictory, and therefore should not correspond as
determinants of consumer attitudes towards foods with ecological / ethical / social appeals. For example, it is supposed to perceive environmental friendly food as the opposite of foods produced in intensive production systems, technology-driven. The model described in the paper aims to analyse in which level conscious purchase of eco-innovative food is joint affected of collectives and individual personal values and of attitudes towards the environment and nature, and attitudes towards technology. It is assumed that when jointly taken, these attitudes influence consumer’s purchase behaviour (frequency) of eco-innovative food (“AtEnviro – AtEcoI’’ and “AtTechno - AtEcoI’’ respectively). This assumption is particularly important from the strategic point of view for companies when developing new products, as it reflects the contradictory impact of the influence of consumers’ pro-cultural and pro-environment attitudes in relation to consumption of these foods. Preliminary studies indicate the validity of this model (Krystallis, Grunert, De Barcellos, Perrea, & Werbeke, 2012, for example), what motivates a partial replication of the same model in the Brazilian context.

Método de investigação se pertinente
A survey was conducted to analyse values, attitudes and buying behaviour of conscious consumers in traditional organic street markets in Porto Alegre, Brazil. We choose the organic fair by convenience, to ensure that the sample was composed by conscious consumers of eco-innovative food, e.g. organic food. Eco-innovative food was defined in the questionnaire as follow: “Eco-innovative food are those endowed with ethical/social/ environmental appeals, such as organic food, meat or eggs from free range animals, fair trade, family agriculture, among others”. Data collection was performed with personal interviews conducted by trained researchers, in-person in September 2013 in four organic street markets in the city of Porto Alegre. The final sample included 401 respondents. The questionnaire applied in this phase included the following sections: 1) first, an initial filter question, to ensure that the respondent was a conscious consumer; 2) second, a section to investigate personal values using the 21-item version (Portrait Value Questionnaire – PVQ) from Schwartz (1992), measured on a 6-point similarity scale with end-points 1 = “not like me at all” to 6= “very much like me”; 3) the third section refers to attitudes towards environment and nature (using a reduced 5-item version of the New Environmental Paradigm (NEP) scale by Dunlap, 2000), and technological progress (5 items by Beckmann, Brokmose e Lind (2001), measured on 7-point Likert-type agreement scales, with end-points 1 = “strongly disagree” to 7 = “strongly agree”; 4) in the fourth section conscious purchase behaviour towards eco-innovative food was asked using purchase frequency as its proxy. 5) Finally, respondents’ demographics were assessed. Attitudes are determined by a combination of personal values (egalitarian or selfish) and general views on environment and nature (affective attitude) and technological progress (cognitive attitude). The final data was analysed with SPSS (univariate statistics and Amos (multivariate statistics - structural equation modelling) and included 401 respondents, with an average age of 43.6, majority female (64.6%). The model fit indices were considered highly acceptable ($\chi^2 / df = 2.36$, GFI = 0.933, AGFI = 0.907, TLI = 0.915, CFI = 0.931, RMSEA = 0.058).

Resultados e contribuições do trabalho para a área
Results show that only the collectivistic values present a positive and significant effect on attitudes towards the environment and nature. Individualistic values did not show effects on attitudes towards technological progress or environment and nature. Both attitudes demonstrated effects on purchase frequency. However, attitudes towards the environment and nature were positively related to eco-innovative food purchase frequency, while attitude towards technological progress demonstrated a negative relationship with purchase frequency.
The survey indicates that consumers presented strong collectivistic values, such as benevolence and universalism, and very positive attitudes towards environment and nature. Additional findings points out towards a certain belief on behalf of the interviewed consumers that technology can be a determinant of relevant aspects of eco-innovative foods. Such result is of particular interest from a theoretical perspective, since conscious consumers from an emerging country like Brazil might consider technology not so good for sustainability in food products. In practical terms, companies and public policies can benefit from such knowledge, as in more traditional societies the radical environmentalists hold an ideology that exalts nature and opposes technology and this might have a negative impact on technological development. In our case, society seems to follow the same pattern. Our results also indicate that the frequency of consumption of eco-innovative food is ultimately influenced by both attitudes (AttEnviro and AttTech), meaning that those consumers who favour the environment and nature have a higher eco-innovative food purchase frequency. Like in developed countries, the less favourable consumers are towards technological progress, the more environmental friendly they are (Krystallis et al., 2012) Personal values on food consumption have been validated in other studies (Thøgersen & Beckmann, 1997) and in this Brazilian sample collectivistic values significantly influence on attitudes towards environment and nature, and consequently on the frequency of consumption of eco-innovative food. Although individualism did not impact on attitudes toward environment and nature there is a positive correlation between them, meaning that even consumers with selfish motives might favour the environment. For instance, even consumers who buy organic food aiming for their health are indirectly benefitting nature. In conclusion, our research showed that the consumption of eco-innovative food in Brazil is based on a model of values-attitudes hierarchy, confirming previous results found in the literature. It is also an important point that individualism registered a positive and significant correlation with purchase frequency of eco-innovative food. This could mean an alternative path from individualism to purchase frequency through another set of attitudes, like industrial production, for example. This research is of particular academic value, by adding empirical evidence about the relationships that rule how values and general attitudes influence the purchase of eco-innovative food in the Brazilian food consumption context. Practical implications of this research is related to the need for companies to remain competitive and profitable, and innovation and environmental sustainability can be used as alternatives to mitigate environmental risks derived from the company’s activities. Finally, it is important to state that this paper is part of larger ongoing international research project. Results from Brazilian sample will be compared with China and Europe in the near future.

Referências bibliográficas