Characterising the fruit and vegetables consumer ethnocentrism in a southern European Country: An assessment of the reliability and validity of the "CETSCALE" in Portugal

Luis Pedro Miguel [*], Susana Henriques Marques, Ana Patricia Duarte

Business Research Unit (BRU), ISCTE-IUL University of Lisbon, Portugal

ABSTRACT

The aims of this study were twofold: first, it sought to assess the validity and reliability of the Consumer Ethnocentric Tendencies Scale (CETSCALE) in a Southern European Country-Portugal; second, it aimed to characterize the level of consumer ethnocentrism (CE) regarding domestic food products amongst Portuguese consumers. The food products under consideration were fruit and vegetables, representing the largest sales in the major retail chains and are considered low-value products. Moreover, Portuguese consumption of fruit and vegetables is the highest considering European consumption.

For that aim, a quantitative study was developed with Portuguese consumers. Data were collected using a questionnaire applied through Computer Assisted Phone Interviews – (CATI) to the person responsible for the household food purchase in the two largest Portuguese metropolitan areas Lisbon and Oporto resulting in 700 valid responses. The questionnaire included the 10-item version of the CETSCALE as well as socio-demographic questions.

The results have confirmed the validity and reliability of the CETSCALE, showing that it is multidimensional with two factors being identified and named soft and hard ethnocentrism. As for the level of CE, the use of the CETSCALE pinpointed that the sample can be characterised as ethnocentric with a soft ethnocentrism prevalence.

As far as authors are aware, this is the first study conducted in Portugal validating the CETSCALE and considering CE regarding two specific food categories – fruit and vegetables. The present study contributes, therefore, to the ongoing debate on CE in a time of increasing globalisation markets.

1. Introduction

The political and economic liberalization of the European market with its regional integration led to a unified and open market for international firms and food producers (Saffu et al., 2010). As the international trade barriers diminish, the food market faces major competition from foreign countries which, most of the time, expand their markets to smaller countries (Balabanis & Siamagka, 2021). Food product surplus is directed internationally to protect domestic prices and expand markets. Due to this strategy, consumers are exposed to food products with both domestic and foreign origins. Applying to the "country-of-origin" effect has become one of the most common strategies adopted by the food market and a form of "protectionism" supported by central governments together with a food traceability strategy. One of the most enduring forms of non-tariff barriers is based

on consumer ethnocentrism (CE) (Shimp & Sharma, 1987) indicating that the more ethnocentric consumers are, the stronger their preference is for homemade products over foreign ones. Ethnocentrism appears as an act of self-defense reflex from local economies, producers' organizations or governments (Siamagka & Balabanis, 2015) against what is perceived as an outside "aggression" making ethnocentrism a pro-ingroup, as well as an anti-out-group construct (Balabanis & Diamantopoulos, 2004; Sharma et al., 1995).

Marketing research has long been concerned with consumer behaviour towards domestic products when opposed to foreign ones and if consumers are indeed predisposed towards a preference for country-produced food products. Empirical studies, seem to confirm the existence of a country-of-origin bias manifested by home-made products preference and buying intentions, from final consumers (Balabanis & Diamantopoulos, 2004; Josiassen et al., 2008; Steenkamp et al., 1999;

Verlegh & Steenkamp, 1999) to buyers (Moon & Oh, 2017), influenced by product category (Balabanis & Siamagka, 2017; Winit et al., 2014).

Research on CE is an important issue in the understanding of the way consumers compare home country products with foreign ones. Therefore, CE and country-of-origin effect on product evaluation by consumers' purchase behaviour have attracted significant research attention in the past decades. However, results show mixed or even contradictory results, possibly due to distinct combinations of samples, countries where the studies were conducted or even product categories (Durand, 2016; Kaynak et al., 2002). Most of the studies indicate that label references to country-of-origin of a product influence consumer perception regarding product quality (Balabanis & Diamantopoulos, 2004; Bilkey et al., 1982), although the intensity effects seem to depend on product category (Balabanis & Diamantopoulos, 2004; Sharma et al., 1995) and purchase decision (Tirelli et al., 2016).

With some exceptions like Chryssochoidis et al. (2007), Maksan et al. (2019), Orth and Firbasová (2003) or Jiménez-Guerrero et al. (2014) most of the research has been done on other than food products, such as automobiles or electronics. Food studies alone are rare although this is a major field where producers and retailers try to appeal to values such as tradition, national values or just economic protection (Chryssochoidis et al., 2007). The reason for this may lie on the fact that most of everyday food purchase is considered as not very involving or not engaging consumers into a great deal of information search and processing (Köster, 2009). Food product information, although very specific, is basically limited to the point of purchase and final decision is expected to be made based on price, packaging and product origin (Verlegh & van Ittersum, 2001).

It is generally agreed that food purchase habits are characterised by a limited rationality because of reduced information available and decisions are mainly made within a social context like family. They are also affected by individual factors such as experience and knowledge (Gorton & Barjolle, 2013), but mainly due to the influence of tradition (Vanhonacker et al., 2010) and cultural factors (Shepherd, 2001).

The importance to consider a product's category in analyses of the effects of consumer ethnocentrism has already been pointed (Akbarov, 2022; Fernández-Ferrín et al., 2018; Maksan et al., 2019). Additionally, it is widely accepted that some products are closely related to certain countries. For example, sparkling wine is linked to France or "Pata Negra" ham to Spain, even though these kinds of products could be found in other countries. The understanding of how consumers choose the current food products, which are not specialities holding some kind of official origin certification or are not even recognised as such, has been beyond the scope of most research. Mandatory "Country-of-Origin" labelling for specific commodities – beef, veal, fish and shellfish, wine, most fresh fruit and vegetables, honey, olive oil, and poultry meat – was introduced by the European Union in 2000 to assure consumers of the origin of the food and promote trust.

Portuguese consumers show growing attention to environmental concerns and to a healthy diet. According to a 2019 AC Nielsen report, 74 % of Portuguese consumers seek to eat healthier. Also, the "II Big Inquire on Sustainability" (2019) from the University of Lisbon's Social Sciences Institute pointed out that 51 % of the respondents mentioned the intention to reduce meat consumption and 45 % indicate the intention to follow a richer vegetable diet by consuming more fruits, vegetables and legumes. According to the 2018 study by ACNielsen study on purchase behaviour, 72 % of the Portuguese shoppers consider product origin on their purchase decisions. 31 % are willing to pay more if the product has Portuguese origin, but 60 % only choose national food products if at the same price.

The original value of the current research is in the fact that, as far as authors are aware, no research has yet been conducted on the ethnocentric tendency of Portuguese food consumers. Steenkamp et al. (1999) have reported some data on Portuguese consumers in cross-cultural research on the antecedents of consumer innovativeness, but, given the scope of their study, the cited authors did not produce a deep

characterization of the Portuguese consumers' ethnocentric profile. Moreover, the focus of the current study is on fruit and vegetables, two mainly generic food product categories with a high degree of credence character. Consumer ethnocentrism on fresh food purchase has received little attention and, most of it, towards meat products (e.g., Font i Furnols et al., 2011; Gellynck et al., 2012; Loo et al., 2014; Newman et al., 2014; Tirelli et al., 2016). From a managerial perspective, such research helps domestic managers and decision-makers understand the advantage of labelling their products, launching national campaigns or even creating new brands based on "Country-of-Origin". The focus of this study is on whether and to what extent ethnocentric tendencies influence food products purchased by consumers, following what was recommended by Luque-Martínez et al. (2000) and Jiménez-Guerrero et al. (2014). The work by Luque-Martínez et al. (2000) was carried out in Spain, which is a country with cultural similarities to Portugal, while Jiménez-Guerrero et al. (2014) used a German consumer sample. To characterize the level of CE amongst Portuguese consumers regarding fruit and vegetable purchase, the present study starts by assessing the validity and reliability of the Consumer Ethnocentric Tendencies Scale (CETSCALE) for the Portuguese population.

2. Literature review

2.1. Consumer ethnocentrism

Consumer ethnocentrism is a factor that influences the attitudes and preferences of consumers regarding national products when compared to foreign products. The importance of this construct is recognized in marketing practice and research (Chryssochoidis et al., 2007; Luque-Martínez et al., 2000; Makanyeza & du Toit, 2016; Shimp & Sharma, 1987). CE has been shown to have a significant impact on purchase behaviour in various food products from functional foods (Xin & Seo, 2020), vegetables (Jiménez-Guerrero et al., 2014), beer (Wanninayake & Chovancova, 2012) or wine (Maksan et al., 2019).

The term "Ethnocentrism" was first introduced in 1906 by William Sumner who defined it from a sociological point as the *"view of things in which one's group is the centre of everything, and all others are scaled and rated with reference to it"*. Later, Shimp and Sharma, (1987) introduced the economical version of this definition describing CE as a personality trait which represents *"the beliefs held by consumers about the appropriateness and morality of purchasing products originating in a foreign country"* (p.280). The same authors considered that CE explains why the preference for domestic products over foreign ones is not always objective.

Despite this discriminatory behaviour, ethnocentrism can also be analysed as in-group favouritism. Ethnocentric consumers tend to prefer domestic products even when there is no obvious reason for such preference. Balabanis and Diamantopoulos (2004) argue that CE leads consumer to prefer domestic products but not necessarily reject imported ones. Also, it has been found that consumer food choice is influenced by label and origin in an extend that depends on consumers' ethnocentric tendencies among various factors like trust and environmental concerns (Thøgersen et al., 2019).

Ethnocentric consumers tend to consume products from their home country as it is considered to help local production instead of promoting foreign economy avoid national unemployment (Verlegh, 2007) and promote the well-being of the local community (Newman et al., 2014). Those consumers believe that purchasing foreign products harms domestic economy, causes job losses, and can be understood as unpatriotic (Jiménez-Guerrero et al., 2020) even when products' quality is lower and the price is higher (Siamagka & Balabanis, 2015). This suggests that ethnocentrism positively impacts purchase of products that present some regional and traditional character apart from national origin (Fernández-Ferrín et al., 2018). Criteria such as nationality and ethnicity are common for in-group/out-group distinctions which help to explain the bias of believing in the superiority of one's group (products for this consideration) and the inferiority of others (Orth & Firbasová, 2003).

Various researchers point out several factors influencing CE. Product category and attributes (Sharma et al., 1995), development of consumers' country (Chryssochoidis et al., 2007), consumer characteristics such as age (Orth & Firbasová 2003; Chryssochoidis et al., 2007), gender (Sharma et al., 1995) or income (Sharma et al., 1995) are the most commonly referred.

Ethnocentric consumers perceive themselves and people in their groups as unique and better than others and treat people in the same in-groups better than they treat others. When identity is constructed on regional boundaries national food products represent the in-group and foreign products represent the out-group (Verlegh, 2007), purchasing national food includes promoting the well-being of the local community (Newman et al., 2014). The ethnocentric consumer tends to experience a reward sensation when purchasing domestic goods (Casado-Aranda et al., 2020). For this reason, the ethnocentrism concept is an important factor to consider as influencing behaviours related to domestic food purchases. CE is not only influenced by affective responses related to one's own country but also by normative pressures to buy domestic products which is a unique dimension of the CE (Olsen et al., 1993). A more recent aspect concerning CE is related to a new approach or adaptation of the concept. CE has usually been studied at the national level, although it has been seen that ethnocentric tendencies can be seen at the regional or local level (Bryła, 2019), with the political socio-psychological, economic, and demographic antecedents identified by Shankarmahesh (2006).

According to the last Portuguese Food Balance report (INE-Instituto Nacional de Estatística Portugal, 2017), from 2012 to 2016, the consumption of fresh legumes and fruit increased by 11 and 11,3% respectively and were the two highest increases during that period for food categories analysed. Despite this, another study from a Portuguese ecological association (Associação Zero, 2017) indicated after a survey of the 94 major retail chains, that 65 % of the vegetables and 50 % of the fruits available were produced in Portugal. As well, according to a EUROSTAD study (2017), Portugal was the second fruit consumer and the fourth vegetable consumer within the EU (81 % and 78 % of daily consumption, respectively).

The increase in consumption of food like fruit and vegetables is often perceived to be a "return to origins" trend as the concern about health issues increases among the young generations (Nielsen, 2019). This trend has been used by retailers to develop self-declaration labelling schemes based on origin, appealing to the "memory" of nationally grown products as a cue of tradition and quality.

Fresh fruit and vegetables are the two most important fractions of the food circle (together with dry fruits) and national consumption is rising slowly. Hence, there is a margin to grow in supplying national fresh products to the market and it is fundamental to first understand and evaluate consumers' ethnocentric tendencies related to those categories.

2.2. Measuring Consumer Ethnocentrism: the CETSCALE

The evaluation of CE implies the use of a suitable measure that provides valid and reliable grading of consumers' tendency to favour domestic products over foreign ones. Following their conceptualization of the construct, Shimp and Sharma (1987) have developed the much-used Consumer Ethnocentric Tendency Scale CETSCALE (Netemeyer et al., 1991). This instrument was designed to measure the tendencies of ethnocentric consumers across nations when facing purchase decisions towards domestic products. The scale was initially designed to represent the beliefs of American consumers about the appropriateness of purchasing foreign products, but it has been widely used for CE evaluations from electronics to cars and food products. It was created after a series of preliminary studies, pre-tests and purification techniques (Shimp & Sharma, 1987), resulting in 17 items. The items were measured on a 7-point Likert-type scale (strongly disagree = 1, strongly agree = 7), and the overall scale ranges from 17 to 119.

The CETSCALE is characterized as a measure of a tendency rather than an attitude as an attitude can be seen as having a greater degree of object specificity which is out of the scope of the scale. "Attitude" is more appropriately used when describing consumer feelings towards a specific product such as a particular brand. On the other hand, a "tendency" has to do with the general notion of a disposition to act in some consistent fashion toward foreign products in general (Shimp & Sharma, 1987).

The scale has proved reliability as well as convergent and discriminant validity in all samples to which it was administrated in four different geographic regions within the United States. In their original work, Shimp and Sharma (1987) also proposed a reduced 10-item scale version (without items 1, 3, 9, 10, 12, 14 and 15) which was used for the current study. This "short" version has been used as widely as the original 17-item scale, presenting equal high reliability and validity. Other adapted versions with 14, 11, 7, 5 or even 4 items can also be found in the literature (Jiménez-Guerrero et al., 2014). The values of the overall scale range between 10 and 70.

An important aspect is the dimensionality of the scale (e.g., Chryssochoidis et al., 2007; Evanschitzky et al., 2008; Jiménez-Guerrero et al., 2014; Luque-Martínez et al., 2000) as it is an essential requirement for generating good measures. The dimensionality of a scale means that a trait or construct – CE for this proposal – is the base of the set of items.

The original USA study has shown that the scale has a unidimensional factor structure across the region tested (Shimp & Sharma, 1987). The same one-dimensionality has been found in Netemeyer's (1991) study across the four countries studied. Many authors although confirming the internal consistency of the scale, do not confirm its one-dimensionality and others indeed support its multidimensionality in countries like Greece, Turkey, Hong Kong, China, the Netherlands, and India (for a complete review see Jiménez-Guerrero et al., 2014). Studies supporting the multidimensionality of the scale are argued to be due to sociodemographic aspects of the sample studied as terms of size, age and education can lead to differences in scale dimensionality (Bawa, 2004). However, this has not been confirmed by Jiménez-Guerrero et al. (2014). So, CETSCALE dimensionality is not a consensual issue, and it should be assessed when applying the scale to a given population. The dimensionality of the scale seems to be related to the countries it is applied in or to the sample size. Thus, it is recommended to take caution when a scale is employed in a different context or country where it is developed like the case of the CETSCALE (Douglas & Nijssen, 2003).

Although some criticism (Bawa, 2004), there is no doubt that the CETSCALE is the most used scale in CE studies. It has been validated in a wide range of studies presenting a high internal consistency. Despite this, little has been found in the literature that includes product category in the original item statements. The CETSCALE used to determine the level of ethnocentrism of each participant has been validated with various culturally different consumers like German (Jiménez-Guerrero et al., 2014), French, Italy or Japanese (Balabanis & Diamantopoulos, 2004; Evanschitzky et al., 2008), Spain (Luque-Martínez et al., 2000), South Africa (Pentz et al., 2013) or Malaysia (Ramayah et al., 2011). For this reason, the main purpose of this study is to fill a gap in the literature, validating the CETSCALE as a measure of Portuguese domestic fruit and vegetable consumers' ethnocentric tendencies, which have scarcely been analysed.

3. Method

3.1. Sample and procedures

The present study evaluates the psychometric characteristics of the CETSCALE developed by Shimp and Sharma (1987) in the context of a southern European country: Portugal, namely its construct validity and reliability. It also examines the level of ethnocentrism of Portuguese fruit and vegetable consumers and analyses its variation according to sociodemographic characteristics. To assess this, a questionnaire was presented by CATI (Computer Assisted Phone Interviews) to 700

individuals responsible for household food purchases randomly chosen in Lisbon and Oporto. The data were collected between June and July 2019. The samples' socio-demographic characteristics are detailed in Table 1.

These areas were chosen as they represent the major population concentration in Portugal with 18 % and 29 % of the total continental population, for Oporto and Lisbon, respectively. On the other hand, these metropolitan areas represent almost 50 % of the Portuguese NGP and are constituted by typical urban and rural districts, which can be seen as a representation of Portuguese consumer purchase behaviour.

The respondents were asked whether they purchase fruit and vegetables. Only the consumers who assumed to buy both product categories were considered for the present study.

3.2. Instrument

The version of the CETSCALE applied was adapted from the original 10 items considering explicitly the categories under analysis (i.e., fruit and vegetables). Due to the lack of previous studies which incorporate both food categories in the original version of the CETSCALE, our aim is to analyse whether this change in food categories influences the scale dimensionality. The 10-item scale was carefully translated and verified by a bilingual scholar and adapted to fit the Portuguese food market reality (Table 2). Higher scores on a 7-point scale (1 = strongly disagree, 7 = strongly agree) indicated greater consumer ethnocentrism.

4. Results

4.1. CETSCALE validation for Portuguese consumers

To assess the dimensionality of the CETSCALE, principal component analysis was conducted, and factor loadings and cross-loadings were compared in possible alternative solutions. The measures proposed in the conceptual model were checked for dimensionality and reliability using principal component analysis and Cronbach's alpha values, conducted in the statistical package IBM SPSS Statistics (Version 26), and confirmatory factor analysis based on AMOS software (Version 26).

4.1.1. Dimensionality and validity of the CETSCALE

The dimensionality of a scale is considered to be essential for the right measurements (Jiménez-Guerrero et al., 2014; Makanyeza & du Toit, 2016) and an essential requirement in summated scale is that the items are unidimensional, which means that the construct is based on a set of items strongly associated with each other and representing a single

Table 1
Sample's socio-demographic profile.

	n	%
GENDER		
Male	228	32,6
Female	472	67,4
EDUCATION LEVEL		
Elementary	241	34,4
High School	213	30,4
University graduate	241	34,4
REGION		
Oporto	258	36,9
Lisbon	442	63,1
MONTHLY INCOME		
≤ 560€	103	14,7
561-1000€	280	40,0
>1000€	216	30,9
AGE		
18–35	61	8,7
36–45	140	20,0
46–55	154	22,0
56–65	146	20,9
>65	199	28,4

Table 2
Factor loadings obtained in EFA.

Item	Factor 1	Factor 2
ITEM4 It is not right to purchase foreign fruit and vegetables, because it puts Portuguese workers out of jobs. / Não é correcto comprar frutas e legumes estrangeiros porque retira postos de trabalho aos produtores portugueses	**0.851**	0.365
ITEM7 The Portuguese should not buy foreign fruit and vegetables, because this harms portuguese companies and leads to unemployment. / Os Portugueses não devem comprar frutas e legumes estrangeiros, porque isso prejudica as empresas portuguesas e causa desemprego	**0.844**	0.366
ITEM10 Portuguese consumers who purchase fruit and vegetables produced abroad are responsible for putting their fellow Portuguese out of work / Os consumidores portugueses que compram frutas e legumes produzidos noutros países são responsáveis por colocar os seus concidadãos portugueses no desemprego.	**0.812**	0.256
ITEM5 A real Portuguese should always buy nationally produced fruit and vegetables. / O verdadeiro português deve comprar sempre frutas e legumes produzidos em Portugal.	**0.808**	0.476
ITEM6 We should purchase fruit and vegetables produced in Portugal instead of letting other countries get rich off us. / Devemos comprar frutas e legumes produzidos em Portugal em vez de ajudar a enriquecer países estrangeiros.	**0.751**	0.493
ITEM3 Purchasing foreign produced fruit and vegetables is not being a good Portuguese. / Comprar frutas e legumes estrangeiros não é ser bom português.	**0.744**	0.349
ITEM2 Portuguese produced fruit and vegetables, first, last, and foremost. / Frutas e legumes Portugueses, primeiro, último e acima de tudo.	0.481	**0.803**
ITEM1 Only those fruit and vegetables which are unavailable in Portugal should be imported. / Somente as frutas e legumes que não são produzidos em Portugal devem ser importados.	0.233	**0.773**
ITEM8 It may cost me in the long run but I prefer to support Portuguese fruit and vegetables. / Pode custar-me a longo prazo, mas eu prefiro apoiar as frutas e legumes portuguesas.	0.476	**0.698**
Explained variance (%)	51.24	12.37

concept (Hair et al., 2019). However, it is argued that no measurement instrument can be perfectly unidimensional (Jiménez-Guerrero et al., 2014).

Originally, the CETSCALE was found to present a unidimensional structure (Shimp & Sharma, 1987), even though many studies presented different results indicating possible multidimensionality of the scale (see Jiménez-Guerrero et al., 2014). As CETSCALE is widely used to measure the ethnocentric tendencies of consumers, it is assumed that its one-dimensionality can be measured by the means of the 10 items of the scale as proposed by the authors. Thus, for the present study, it was assumed that CE measured by the CETSCALE, could be explained by a single-factor model. In a single-factor model, the different items converge to represent a single construct, assuming that the whole variance is accounted for by the "Consumer Ethnocentrism" construct. The alternative hypothesis is the multidimensionality of the construct. This implies that the CE construct is represented by different dimensions.

Thus, to assess the dimensionality of the CETSCALE, a confirmatory factor analysis (CFA) by AMOS (version 26) was performed to examine the goodness of fit of the single-factor model to the data. The following criteria were considered to estimate the model's goodness of fit (Kline, 2016). The root-mean-square error of approximation (RMSEA) requires values equal to or below 0.08 to be acceptable. The goodness of fit index (GFI) needs to have values equal to or higher than 0.90 to be satisfactory. The comparative fit index (CFI) requires values equal to or higher than 0.90 to be acceptable. The Tucker-Lewis index (TLI) should have values equal to or higher than 0.90 to be satisfactory. Finally, the chi-square to degrees of freedom ratio (χ^2 / df) must have values below 2–3 to be acceptable. Considering these criteria, the results revealed that

the single factor model has a poor fit to the data ($\chi^2 = 353.281$ [2]; $p < 0.05$; $\chi^2/df = 10.094$; GFI = 0.901; CFI = 0.899; TLI = 0.870; RMSEA = 0,114), indicating that in the present sample this solution is not adequate and that probably a multidimensional structure is more adjusted.

Since, CFA results were not aligned with what was expected (i.e., one-dimensionality), the next step was to explore the multidimensionality of the scale performing exploratory factor analysis (EFA) using SPSS (version 26).

The results of the first EFA revealed that the 10 items were loaded in two factors. However, one of the items, namely item 9 "We should buy from foreign countries only those fruit and vegetables that we cannot obtain within our own country" had similar high loadings in the two factors with a ratio of 1.1 in this respective pair of loadings. As indicated by Hair et al. (2019), cross-loadings with ratios below 2 are problematic and the item should be eliminated to simplify the factorial structure. Hence, a second EFA was performed without item 9, again revealing two factors accounting for 63.6 % of the total variance (KMO = 0.899; Bartlet: 2801.372; $p < 0.001$; Communalities > 0.52).

Factor 1 contains six items and accounts for 51.2 % of the variance. It conceptually contains the items which express a strong nationally driven behaviour (items 4, 7, 10, 5, 6, and 3) with a clear disapproval towards purchasing foreign fruit and vegetables which causes economical damage to society (items 6, 7, and 10). Also, factor 1 reflects an attitude of

strong national beliefs against the import of foreign fruit and vegetables which "lets other countries get rich off us" (item 6) stating the "unPortuguese" behaviour of those who buy foreign fruit and vegetables (item 3) once a "real Portuguese should always buy Portuguese fruit and vegetables" (item 5). These almost radical statements of the CETSCALE reflect a strong social reaction towards the foreign food product market in Portugal. For this reason, factor 1 was named "*Hard Ethnocentrism*" (HE).

Factor 2 encompasses three items and explains 12.4 % of the variance. The items reflect a "moderate" feeling towards the presence of food products in the Portuguese market (Items 2, 1, and 8). Items like "Portuguese produced fruit and vegetables, first, last, and foremost" (item 2) or "It may cost me in the long run but I prefer to support Portuguese fruit and vegetables." (Item 8) for example, hardly rejects foreign products but emphasises the preference for the Portuguese food category under study. Thus, factor 2 was named "Soft Ethnocentrism (SE).

Factor loadings and cross-loadings obtained are displayed in Table 2. The chosen bi-dimensional solution obtained with EFA is in line with the results of several studies, including the ones by Luque-Martínez et al. (2000), Douglas and Nijssen, (2003), Chryssochoidis et al. (2007), Evanschitzky et al. (2008), Ramayah et al. (2011), Pentz et al. (2013) or Jiménez-Guerrero et al. (2014).

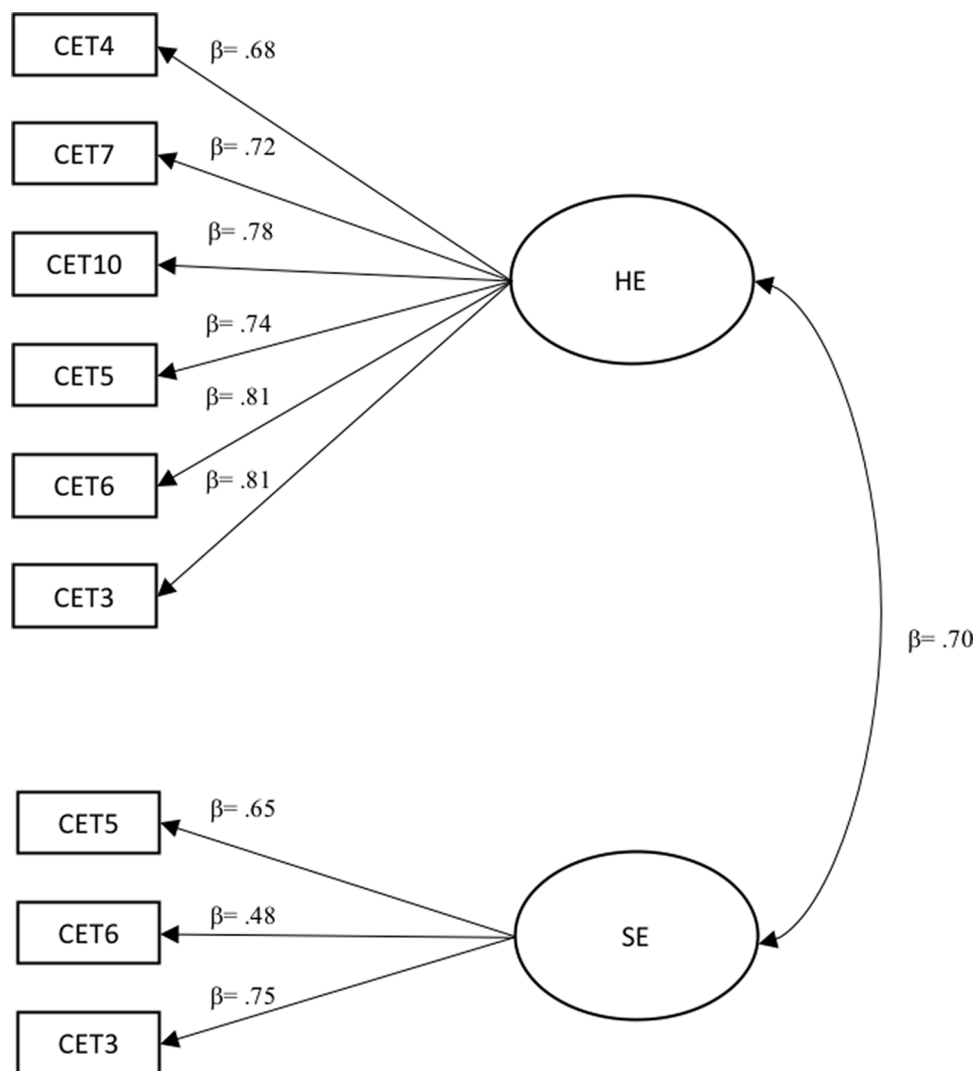To confirm the multidimensionality of the results proposed by the

Fig. 1. The two-factor model. Notes: HE = Hard Ethnocentrism; SE = Soft Ethnocentrism; β = standardized coefficients.

EFA, a new CFA analysis was performed, examining the goodness of fit of a bi-dimensional model composed of nine items. The results are presented in Fig. 1 for a two-dimension solution.

The analysis of the goodness of fit of the proposed two-factor model confirmed a good fit to the data (Table 3) and the lambdas were above 0.4 as recommended by Hair et al. (2019). As recommended in the literature, the goodness of fit of the two-factor model was compared with an alternative single factor model (Table 3). Observing the results and following Hair et al. (2019) recommendations, it was considered that the two-dimensional model provides a better fit to the data than the single-factor model. In addition, when the correlation between the two dimensions (0.70) is examined, the multidimensionality of the scale in the context of the sample analysed is also confirmed.

4.1.2. Reliability of the CETSCALE

According to Hair et al. (2019) and Malhotra and Birks (2007), reliability (also called, internal consistency) is the degree to which a set of indicators of a latent variable is consistent in its measurements, representing the extent to which a measurement reproduces consistent results if the process has to be repeated. The reliability is evidenced by Cronbach's alpha coefficient with values above 0.70 being recommended (Hair et al., 2019).

The internal consistency of the two factors of the CETSCALE was assessed using the Cronbach's alpha coefficients (Table 4). Hard Ethnocentrism reveals a very good level of consistency (α = 0.89). Soft Ethnocentrism presented a value below 0.70, but above 0.60 which is acceptable for exploratory research according to Hair et al. (2019). Given that this is the first study to explore Portuguese consumers' CE towards the purchase of fruit and vegetables, this was considerably acceptable. Moreover, Cronbach's alpha value is influenced by the number of items which characterises the factor (3) and it tends to decrease with the number of items on the scale (Field, 2009). Thus, it can be said that the presented value is somewhat expected. Overall, the factors were considered to have adequate levels of reliability.

4.2. Characterization of the level of CE amongst Portuguese consumers

Following the identification of the two ethnocentric categories, named Hard and Soft ethnocentrism, the profile of the consumers in each category was analysed. First, the level of soft and hard ethnocentrism for the total sample was computed. Then, a comparative analysis was performed to explore the existence of potential differences between respondents based on their socio-demographic characteristics, namely gender, region, education, age and income per month. The results obtained are summarised in Table 5.

Regarding the total sample, the results showed that the inquired Portuguese consumers have a high level of both HE (M = 4.94, SD = 1.27) and SE (M = 5.86, SD = 0.93), which could mean that consumers tend to prefer Portuguese-identified products when available, suggesting a prosocial behaviour in favour of domestic products as suggested by Siamagka and Balabanis, (2015). The ethnocentric beliefs consider that purchasing foreign products harms domestic economy, causes job losses, and can be understood as unpatriotic. In critical times, products from other countries are objects of contempt to ethnocentric consumers (Fernández-Ferrín et al., 2020).

Statistically significant differences have been exhibited when comparing both HE and SE means. It is verified that SE is higher than HE t(699) = 21.83, p <001), which can confirm the bi-dimensionality of the CETSCALE for the sample under analysis. Considering the socio-

Table 4
Cronbach's Alphas for both factors.

	Cronbach's alpha
Hard Ethnocentrism	0.89
Soft Ethnocentrism	0.62

Table 5
Means and statistically significant differences for consumer ethnocentrism levels.

	HARD ETHNOCENTRISM			SOFT ETHNOCENTRISM		
	Mean	SD	T test and *p* value	Mean	SD	T test and *p* value
Total Sample	4.94	1.27	t(699) = 21.83, p <001).	5.86	0.93	
Gender						
Male	4.79a	1.25	t(698) =	5.83	0.94	t(698) =
Female	5.01b	1.27	-2.13, p <.05	5.88	0.93	-.67n.s.
Region						
Lisbon	4.83a	1.11	t(616.56) =	5.84	0.98	t(603.40) =
Oporto	5.12b	1.34	3.1, p <.01	5.90	0.84	0.88. n.s.
Education						
Basic	5.36a	1.13	F(2,685 =	5.91	0.92	F(2,285) =
Secondary	4.96b	1.08	30.33, p	5.90	0.88	1.70. n.s..
University	4.50c	1.38	<.001	5.77	0.99	
Age						
18–35	4.29a	1.54	F(4,695) =	5.69d	1.02	F(4,695) =
36–45	4.61b	1.14	16.90, p	5.71d	0.84	4.72, p
46–55	4.70b	1.20	<.001	5.72d	0.90	<.001.
56–65	5.12c	1.13		6.05e	0.94	
>65	5.41c	1.22		5.98e	0.95	
Income per month (€)						
0–560	5.43a	1.15	F(2,685) =	5.97	0.92	F(2,595) =
561–1000	4.93b	1.23	9.56, p	5.78	0.88	1.84. n.s.
>1000	4.80b	1.27	<.001	5.89	0.95	

Note: Different letters identify statistically different mean values.

demographic variables, gender, region, education, age, and income, the positioning regarding Hard ethnocentric beliefs was more consistently affected by those differences than the positioning of Soft ethnocentric beliefs.

Regarding gender, there is a significant difference when HE is considered, with women being even more favourable to ethnocentric behaviour than men (*M* = 5.01, *SD* = 1.27, t(698) = −2.13, p <.05 and *M* = 4.79, *SD* = 1.25, respectively). These results are in line with studies presented by Sharma et al. (1995), Balabanis et al., (2001) and Chambers et al. (2007) who also studied gender as an antecedent of ethnocentrism. When looking at the SE, no statistically significant differences have been observed between men and women which might indicate that the reported gender effect is only noticed when hard ethnocentric tendencies are observed.

Research by Siamagka and Balabanis (2015), Yildiz et al. (2018) and Han and Nam (2019) show that ethnocentrism can be related to cosmopolitanism, i.e., cosmopolitan consumers tend to be less ethnocentric. Analysing the ethnocentrism level of consumers from Lisbon and Oporto regions, one more statistically significant difference was observed between these two regions in HE. Oporto consumers seem to present a significantly higher Ethnocentric level (M = 5.12, SD = 1.34) when compared with Lisbon consumers (M = 4.83, SD = 1.11). As for

Table 3
CFA results for an alternative structural model of the CETSCALE.

	X2	X2/*df*	GFI	TLI	CFI	RMSEA	Correlation between dimensions
Single factor model	271.07	10.04	0.92	0.88	0.91	0.11	
Two-factor model	156.62	6.02	0.95	0.94	0.95	0.09	**0.70**

the SE, despite the higher ethnocentric tendency among Oporto consumers, this difference is not statistically significant when compared with the tendency in Lisbon *(M = 5.9, SD = 0.84 and M = 5.84, SD = 0.98),* respectively. The reason for this difference might be in the fact that, once Lisbon is the capital of the country, it can be considered more cosmopolitan than Oporto.

Analysing differences between consumers with varying levels of education, it is clear that consumers significantly differ in their support of HE belief among the three levels of education under consideration. The ethnocentrism level decreases as the education level increases (M = 5.36, SD = 1.13 for Basic, M = 4.96, SD = 1.08 for Secondary and M 4.50, SD 1.38 for University). Similar results were also observed by Sharma et al. (1995), Prince et al. (2020) and Mockaitis et al. (2013). As for SE, no significant difference was observed among the three levels of education.

Analysing the age of respondents, statistically, significant differences were found in both HE and SE. The ethnocentric beliefs increase with the age of the consumers. The differences within HE are statistically significant among consumers according to their age. At the age of 18–35 years old (M = 4.29, SD = 1.54), they are less ethnocentric when compared to consumers between 36–45 and 46–55 years old (M = 4.61, SD = 1.14 and M 4.70, SD = 1.20, respectively) and those within the groups of 56–65 and >65 group (M = 5.12, SD = 1.13 and M 5.41, SD = 1.22, respectively*)*. Moreover, these three age groups are statistically different from each other. As for SE, there are also statistically significant differences among respondents. These can be divided into two statically different age ranges: 18–35 (M = 5.69, SD = 1.02), 36–45 (M = 5.71, SD = 0.84), 46–55 (M = 5.72, SD 0.90) years old, and older than 56–65 *(M = 6.05, SD = 0.94)* and >65 *(M = 5.98, SD = 0.95)* years old groups. The former presents lower ethnocentric levels. These results (Table 5) confirm the work of Shimp and Sharma (1987), Sharma et al. (1995), Balabanis et al. (2001), Javalgi et al. (2005), and Josiassen et al. (2011).

Finally, looking at consumers' income, once more, differences in the ethnocentrism level of the respondents are more consistent in the HE. Individuals with lower income of 0-569€ per month (M = 5.43, SD = 1.15) present statistically different values when compared with individuals with income of 561–1000 € per month (M = 4.93, SD = 1.23). For the SE no statistical differences were observed. These results are in line with work done by Shimp and Sharma (1987), Sharma et al. (1995), Balabanis et al., (2001) and Mockaitis et al. (2013). As summarised in Table 5, it can be argued that in the sample studied, hard ethnocentric consumers, are more likely to be older females with lower education and lower income, living in the Oporto region.

5. Discussion and conclusions

This study on ethnocentric tendencies of the Portuguese food consumers, in the two most populous regions in Portugal, showed a clear ethnocentric tendency among the food consumers analysed with an average value of 4.94 (hard ethnocentrism) and 5.86 (soft ethnocentrism) on a scale from 1 to 7. This is probably because the food categories analysed are seen as commodities and, most of the time, are not considered for their country-of-origin label alone. These findings are in line with what was presented by Verbeke and Roosen (2009) whose study indicated country-of-origin label to be the reason for purchase choice of food products only by 3.5 % of the sample analysed. However, an individual can present a high level of ethnocentrism concerning a specific food category and favourable purchase behaviour towards another category of products from a foreign country.

This study confirms the construct validity and reliability of the CETSCALE for measuring the ethnocentrism of Portuguese food consumers and reinforcing the use of this instrument for ethnocentric tendencies measurements. Furthermore, in the current study, the CETSCALE did not prove its one-dimensionality. These results are in line with the majority of the previous studies in different countries like

Chryssochoidis et al. (2007) with Greek consumers or Jiménez-Guerrero et al. (2014) with German vegetable consumers. Both authors also indicate a two-factor solution. The multidimensional aspect of the scale was presented by many authors (e.g., Bawa, 2004; Douglas & Nijssen, 2003; Ramayah et al., 2011), suggesting that this instrument, despite being the most widely used to analyse ethnocentric consumer behaviour, is composed of different dimensions when applied outside the United States. It can also be argued that the scale should be adapted to different market conditions, especially when considering international trade agreements. Also, it can be assumed that ethnocentrism means different things in different social contexts as the present study suggests. It also can be suggested that the CETSCALE dimensionality can be affected by the product category employed. As empirically expected, the two dimensions presented in this study, Hard and Soft ethnocentrism, are related to different regions within the country and further study on their characteristics should be carried out.

Consumer ethnocentrism is still a field of great importance in marketing research, especially nowadays when globalism threatens small markets and jobs, and internal consumption is heavily promoted. This study contributes to the growing discussion on increasing domestic consumption of Portuguese food products.

Since 2000, Portuguese agro-food imports have more than doubled according to Pordata, (2022). In a country with continuous issues to maintain jobs and people in the countryside and the pressure to increase production, campaigns to incentivize the purchase of nationally produced food products have been more common in the past years, with a special emphasis during the 2008 financial crisis and now during the current Covid-19 crisis. As for the food production sector, certain attempts are made to promote national food product consumption, stimulating consumers' "consciousness" of the importance to support national production through the choice of national labels in daily purchase decisions.

These aspects have led government authorities, producers' organisations, and retailers to be more attentive and products labelled to inform of food origin or with the purpose to appeal to values such as tradition and authenticity are promoted every day. Campaigns relating the consumption of domestic products to job continuity and national economic growth are common, but their efficacy has not been deeply studied.

A national strategy implemented to promote national production, is a long-time task and ethnocentrism with all its aspects must be validated.

5.1. Limitations and future research

Despite the interest in its findings, the present study has limitations that should be considered. The main limitation encountered in this study is related to the applicability of the CETSCALE within the Portuguese context. It was reported by the research company that assisted data collection that many respondents had some difficulty understanding the questions which might have created some bias in the given answers. Other studies should be carried out in order to allow a more direct comparison between the results in other parts of the world.

Due to the adopted sampling method, results cannot be immediately generalised to the Portuguese population, and a more representative sample including consumers from other regions and more rural areas should be collected. Additionally, respondents may have provided a socially desirable response and, consequently, a social desirability bias may have been present in some responses, increasing the reported level of CE.

The conclusions drawn from the present study are, thus, limited to the sample which did not include respondents from rural areas. The decision for this has been related to the notion that most of the rural residents produce their fruit and vegetables. However, the empirical evidence may serve as a basis for future studies. The CATI procedures only made the interview possible for people that could be reached by

phone which is more difficult to accomplish in rural areas where face-to-face interviews are more effective.

Consumer ethnocentrism is a dynamic process that changes over time. Therefore, follow-up studies are necessary to provide a fuller understanding of how this phenomenon may evolve. Also, the CETSCALE validity and reliability are product related which reinforces the need to study its applicability with more product categories allowing a more direct comparison between the various results.

The literature review indicates that the CETSCALE proved to have different results depending on where it is applied to lead to different approaches with adapted scales. It is important to obtain new empirical evidence on how the scale can be used in Portuguese reality and if all its items should be considered. For example, item 1: "Only those fruit and vegetables which are unavailable in Portugal should be imported", is likely to be seen as a protectionism measure, which is against EU regulations and thus its application is questionable. The scale's ecological validity, i.e., how their items apply to the present Portuguese market, should therefore be assessed.

Finally, once the current research has been carried out before the COVID-19 crisis, it would be interesting to repeat it to evaluate if the pandemic situation has produced any influence on the ethnocentric tendencies of the population under study.

5.2. Theoretical and practical contributions

Despite its limitations, the current study's results offer several contributions to practice and research. The level of consumers' ethnocentrism regarding fruit and vegetables is presented. Knowing the level of consumers' ethnocentric tendencies and the market segment to which they belong will enable an advertiser to evaluate whether it is appropriate for a communication strategy to include patriotic cues. The present study aims to contribute to producer and retail organisations' knowledge of the ethnocentric tendencies of the consumer. This study provides answers to the dimensionality of the construct of consumer ethnocentrism in Portugal and the extent of the ethnocentric tendencies of the surveyed Portuguese consumers. The reliability and validity of the CETSCALE in Portugal are also presented. The characterisation of a sample representing the population of the Lisbon and Oporto metropolitan areas can help to bring some knowledge on the ethnocentric profile of those consumers.

The present research advances the current body of consumer behaviour and marketing knowledge showing that, for the sample studied, the construct of ethnocentrism presented two dimensions, namely Soft and Hard ethnocentrism. Previous studies indicated mixed results concerning the dimensionality of the construct which was reported to be one-dimensional in various countries like Spain, the USA, France or Germany and multidimensional in countries like Zimbabwe, Poland, Ukraine, The Netherlands, Australia, or Chile (Jiménez-Guerrero et al., 2014; Makanyeza & Du Toit, 2016). Being the first study on consumer ethnocentric tendencies fully focused on the Portuguese case, it can be said that its findings set the baseline for future research. As mentioned before, Steenkamp et al.'s (1999) study on the antecedents of consumer innovativeness did not characterize deep consumers' ethnocentric profile as it applied only 4 items of the CETSCALE. The scale's validity and reliability for the Portuguese population were also not explored by these authors. The present study's findings also shed some light on organisational and communication decisions as well as the implementation of fair differentiation strategies and opportunities for premium pricing national labels with origin promotion, as Portuguese consumers seem to prefer Portuguese fruit and vegetables.

The extent of consumer ethnocentric tendencies must be quantified to determine the feasibility of such strategies. Thus, it is necessary to continue research on geo-ethnocentric dynamics and their implications on companies' and producers' strategic decisions. With this study, the first approach to present an ethnocentric Portuguese consumers profile is presented. Nevertheless, more studies are to be made to confirm

present results and to relate them with the characterisation of the sample region.

Consumer ethnocentrism, unless proven otherwise, is dynamic and changes over time are likely to occur. Sustainability concerns (Schmitt et al., 2017), organic consumption (Shahabi & Gorton, 2021) or economic crisis (De Nisco et al., 2020) are seen to influence the ethnocentric tendencies of consumers. Follow-up studies would provide useful insights into the extent and ways that consumer ethnocentrism may change and influence consumers' food preferences.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on reasonable request by contacting the corresponding author

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