When our senses get tricked:
A case about Country of Origin Effect and Ethnocentrism

By

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“The curious task of economics is to demonstrate to men how little they really know about what they imagine they can design.”

– Friedrich von Hayek
**Author’s Biography**

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Along with his professional career he started a Marketing Master’s Degree at FEP, having finished the curricular year in 2013. In September of 2013, under orientation of Raquel Meneses, PhD, started his Master’s thesis.

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Abstract

Throughout the world, capital and means of production have flown from developed countries to countries under development, with the first group being unable to reverse this tendency. Regardless of this scenario, there is a type of capital which is not able to move, Country of Origin Effect (COE). A product can be made anywhere in the World, but the perceptions created in each individual, are invaluable and inseparable. Related to this phenomenon is the way Ethnocentrism affects the perceptions of what domestic production and importations are.

This study focused on a specific segment, food. In particular, is analyzed the COE and Ethnocentrism effect on Olive Oil and Chocolate. This choice was based on the symmetrical prestige and notoriety of different origins: Portugal and Switzerland.

Following this approach, it is portrayed as opportune to study, not only what characteristics of both products that are valued most by the costumers, but also if thosevaluations vary with the COE of each product and the level of Ethnocentrism of the individual. The bibliographic review showed several limitations regarding the design of the studies done in this field, which were, for the most part, improved in this research.

A research model was developed and applied, in order to place a series of tests on the effect that subjective variables such as COE and Ethnocentrism had on objective variables regarding the product’s characteristics. Either kind of variable came from the literature review. The data collection was performed using a questionnaire and after each individual experienced each product, which resulted in 341 valid answers. The results were computed using a Structural Equation Modeling (PLS), for the Ethnocentrism effect and a Paired Sample t-test for the Country of Origin effect. Highlighted are the strong effects of COE and Ethnocentrism regarding Olive Oil.

Key Words: Country of Origin, Ethnocentrism, Olive Oil, Chocolate, PLS
Resumo

Por todo o mundo o capital e os meios de produção têm sido transferidos de países desenvolvidos para aqueles em desenvolvimento, com o primeiro grupo a não ter capacidade de inverter esta tendência. Apesar deste cenário, há um tipo de capital que não migra, o Efeito de Pais de Origem (EPO). Um produto pode ser feito em qualquer parte do Mundo, mas as perceções criadas em cada indivíduo são valiosas e inseparáveis. Relativo a este fenómeno é a forma como o Etnocentrismo afeta as perceções daquilo que é produzido domesticamente e do que é importado.

Este estudo foca-se no segmento da comida. Em particular, é analisado o EPO e o efeito do Etnocentrismo no Azeite e no Chocolate. Esta escolha teve por base o simétrico prestígio e notoriedade relativos a diferentes origens: Portugal e Suíça.

Seguindo esta premissa, é oportuno estudar, não só as características mais valorizadas de ambos os produtos, mas também as avaliações dessas mesmas características variam com o EPO, e com o nível de Etnocentrismo de cada individuo. A revisão da bibliografia revelou algumas falhas no design de estudos nesta área, que na sua maioria, foram melhorados nesta análise.

Para criar e aplicar um modelo de pesquisa, e efetuar uma série de testes ao efeito que variáveis subjetivas como o EPO e o Etnocentrismo têm em variáveis objetivas como as características físicas dos produtos. Ambos os tipos de variáveis advêm da revisão da literatura. A recolha de dados foi feita através de questionário, após cada individuo ter experimentado cada produto, tendo sido recolhidas 341 respostas validas. Os dados foram processados através de um Sistema de Equações Estruturais, para o efeito do Etnocentrismo e um Teste t para amostras emparelhadas para o EPO. Dos resultados sobressaem o EPO e o Etnocentrismo relativo o Azeite.

**Palavras-chave:** Efeito Pais de Origem, Etnocentrismo, Azeite, Chocolate
# Contents

Tables Index ................................................................................................................... VIII

Figures Index ................................................................................................................ IX

Graphics Index .............................................................................................................. X

1- Introduction ................................................................................................................... 1

2-Literature Review .......................................................................................................... 4

  2.1-Country of Origin Effect ....................................................................................... 4

  2.2-Ethnocentrism ....................................................................................................... 8

  2.3-Price-Quality ......................................................................................................... 9

  2.4-Hypothesis Framework ......................................................................................... 10

3-Methodology ................................................................................................................ 17

  3.1-Empirical Framework ........................................................................................... 17

  3.2-Questionnaire ........................................................................................................ 21

  3.3 Sample and Data Collection .................................................................................. 24

  3.4 Data Analysis ......................................................................................................... 24

4-Results and Discussion ............................................................................................... 36

  4.1 Descriptive ............................................................................................................. 36

  4.2-COE ........................................................................................................................ 38

  4.3-Ethnocentrism ....................................................................................................... 49

5-Conclusion ................................................................................................................... 61

6-Bibliography ............................................................................................................... 63

7-Attachments ................................................................................................................ 69

  7.1-Questionnaire – Adults .......................................................................................... 69

  7.2-Questionnaire-Children ........................................................................................ 77

  7.3-Moderation Spreadsheet ....................................................................................... 86

  7.4-Mediation Spreadsheet ......................................................................................... 86
Tables Index

Table 1- Senses analyzed with the evaluation of each characteristic.................................................23
Table 2- Symbols and respective meanings used in the graphical representation.................................28
Table 3-Adult’s Paired Sample T-test p-values ....................................................................................38
Table 4-Adults Means greatness ......................................................................................................43
Table 5-Adults Price confidence interval ............................................................................................44
Table 6-Children’s Paired Sample T-test p-values ..............................................................................44
Table 7-Children Means greatness ..................................................................................................48
Table 8-Price's confidence interval ....................................................................................................49
Table 9-Cronbach's Alpha Quality ....................................................................................................50
Table 10-Adults’ CETSCALE Validation ............................................................................................50
Table 11-Adults' Path Coefficient......................................................................................................51
Table 12-Adults' Moderation's t-statistics ...........................................................................................52
Table 13-Adults' Mediation's t-statistics ..............................................................................................54
Table 14-Children's CETSCALE validation .......................................................................................55
Table 15-Childrens' Path Coefficient .................................................................................................56
Table 16-Childrens' Moderation's t-statistics ....................................................................................57
Table 17-Children' Mediation's t-statistics ..........................................................................................59
Figures Index

Figure 1- Hypothesis Framework ........................................................................................................10
Figure 2- Graphical representation of Structural Equations ..........................................................28
Figure 3- Recursive and non-Recursive Models graphical representation .....................................29
Figure 4- Reflective and Formative Indicators graphical representation ......................................30
Figure 5- T-Statistics Formula ........................................................................................................32
Figure 6- Age Cluster Diagram .......................................................................................................34
Figure 7- Structural Model .............................................................................................................35
Graphics Index

Graphic 1- Mediterranean Basin Olive Oil Production .................................................................18
Graphic 2- Portugal Olive Oil Consumption, Export, Import and Production ................................. 18
Graphic 3- European Union Chocolate Per Capita Consumption .............................................. 20
Graphic 4- Sample’s Age ................................................................................................................. 37
Graphic 5- Sample’s Education Level ............................................................................................. 37
1- Introduction
The reason why the subject of this thesis portrays itself as so opportunistic, is due to the economic landscape worldwide: The strongest economic power in the world, United States of America had its government shutdown for seventeen days and several European Union (UE) members are struggling and/or being bailed out by the Troika (UE, European Central Bank (ECB) and the International Monetary Fund (IMF)) while there are countries whose Gross Domestic Product (GDP) is growing like never before.

This scenario is the platform for multiple discussions and opinions: from the side of the fastest growing economies, let’s take the BRIC’S (Brazil, Russia, India and China) as an example, they are the ones growing by leveraging on exportations, like China, who subsidies exports, India, or Russia whose percentage of exports on GDP excels 25%, and those whose production is mainly for domestic demand, like Brazil whose exports percentage of GDP does not surpass 12%, and taxes on importations are a big barrier for consuming foreign goods and services. The latter strategy for growth can produce results (4.2% expected growth for 2013) because of the size of the country and therefore leveraging on scale, but nothing compared with India and China, with an expected growth for 2013 of 6.9% and 8.6% respectively. (Exports of Goods and Services (% of GDP), 2013).

This being stated, it is wise to start thinking about what can Portugal do to turn the present recession around. Although, it has been broadly stated, at the peak of the recession that exports are the way for the economy to start recovering: “Exports will be the number one priority for this Executive in the next year” (Socrates, 2010), there has always been investment, from different Portuguese Governments, in order to promote the consumption of national goods by Portuguese consumers. In a small economy like the Portuguese one, where the effects of scale are minimum, if any, national consumption is followed by, in most cases, a higher price. Promoting domestic consumption will always have subsidies as a base, either to companies, or to consumers, but what if, and simply, our products do not have the perceived quality in order to be bought, or what if subsidies are granted to inefficient companies, with lack the know-how which compromises key success factors? Prescott (2000)
suggests that this phenomenon of misguided public investment was the main reason for Japan’s “Lost Decade” of the 90’s, since these inefficient producers will be responsible for a greater share of the total output, and subsidies tend to discourage investment, from the receivers, in efficiency improvements.

If the consumer were to be completely rational in his or her decision, there would be no room for national consumption if not at the highest value/price ratio, but the average consumer is not completely rational. Here falls the opportunity to study if the Country of Origin of a product (COE), in this case, our own, may influence the consumer’s purchase decision making and quality perceived of that product.

The need for the study of COE arises from the importance given by management to the demand-side variables in the product-life cycle, especially internationally. Launching a new product is not a one Way Street, when supply excesses demand. After taking into account if a product satisfies a need, it is mandatory to determine how we, as an/a organization/Brand, are seen in our market, and in the global market, as well.

Although an image is neither positive nor negative, it generates positive or negative comparative advantages in the export market. This image is influenced by one’s own culture and values as portrayed by Hofstede (1991).

The scenario above, of uncertainty regarding the future, that is posed to a wide range of nations, which has a real and important implications on the policies to implement towards the future, and towards economic recovery, was the main motivation to develop the present study.

This study has focused on two different, and characteristic, products from two different countries: Olive Oil and Chocolate from Portugal and Switzerland. The reason of choice towards these two products and countries, was the asymmetrical Country of Origin Effect than each one generates.

The main objective with this study is to recognize and understand, by choosing two well recognized and accepted products from different countries, if the Country of Origin of a
product has a significant effect on either perceived quality and on the value attributed to it. In order to do this, it will be examined the effect of the Country of Origin and Ethnocentrism on Perceived Quality, Price and Perception of both Suisse Chocolate and Portuguese Olive Oil.

The following thesis was design in three blocks, as follows: The first block including the first chapter, the literature regarding the main concepts used in this study will be reviewed, mainly “Country of Origin”, Ethnocentrism” and “Price”. Regarding the second chapter, in the second block, a practical framework regarding both Chocolate and Olive Oil will be portrayed, comparing each producer with the rest of the world and within Europe.

Chapter 1 and Chapter 2 were of great importance in order to, first, build the estimation model and then to analyze correctly and with relevance the results that were generated from it.

The third, and last block, containing chapter 3, 4 and 5, it will, respectively be presented the chosen methodology, the results, and provide the discussion from the results. It was created a questionnaire, based both on literature and on the author, to gather, from the chosen sample, the important data in order to run the created model. The model ran under the Structural Equation Model rules (PLS- Partial Least Square), since this will provide more robust values, given the characteristics of the model. Lastly it will be presented the conclusions of the study.
2-Literature Review
This chapter’s main objective is linked to a guarantee of comprehension of the field of investigation. Based mainly on academic literature, will grant the ability to relate and contrast concepts and theories.

It starts by presenting the concept of Country of Origin and its related dimensions, Country of Design, Country of Assembly and Country of Production and consequences, regarding all consumers, companies and countries. After this it will be presented the concept of Ethnocentrism and its implications on consumer choice.

2.1-Country of Origin Effect
For several years, the issue of Country of Origin Effect has been the most researched issue in international business.

The range of characteristics used by consumers in the process of quality evaluation, are both intrinsic and extrinsic, where intrinsic being the products features such as color, weight or shape, and extrinsic including the brand, the retail platform or warranty associated to the product (Cameron, 1994). In the extrinsic characteristics pool is the Country of Origin of the product (Thorelli, 1989), which is any effect, positive or negative, provided by the nationality of the manufacturer on the consumer’s decision making (Cameron, 1994).

This effect, COE, it is not a stable one: it varies with the country of origin’s level of development (Lalita A. Manrai, 1998), gender (Nes, 1982), education (Tsiros, Does Country of Origin Transfer Between Brands?, 1995), income (Terpstra, 1988) personality (Nes, 1982), promotion (Nes, 1982) and involvement (Alexander Josiassen, 2008) (Josiassen, 2010) which means that, although being broadly researched it is not broadly understood. As this discussion blossoms there are also cases of natives despising home production (Tan, 1989) and the multiple COE (Li & L. William Murray, 2000) (Josiassen, 2010) which emphasizes congruency or dissonance, since consumers average, instead of adding information, according to the Model of Information Integration (Andersson, 1971) (Andersson, 1981) (Andersson, 1991), but this effect has been characterized as more severe in low-end then high-end products (Koubaa, 2008) (Bruno Godey, 2012).
The COE can be modified over time and (Nagashima, 1970), in a globalized economy where countries compete for scarce capital investments, is important to understand if this effect is a natural barrier to international trade, since this effect differs widely between countries, majorly influenced by the cultural philosophy and values (John Fong, 2008), and what can, countries and corporations, do to change or minimize it, when it is a degrading one, or explore and strengthen, when it is a positive one (Levitt, 1983).

The COE has its source on the quality of specific products distributed by a firm of that specific country. This heuristic is called Product-Country images (Heslop, 1993) (Lotz & Hu, 2001) and is hypothesized to be rooted on product experience and advertising. Product-Country has the power to bias the consumer’s product beliefs about the features of it (Johny K. Johansson, 1985).

Intrinsic and extrinsic cues influence one another, (Narashimhan Srinivasan, 2004). The authors (Narashimhan Srinivasan, 2004) analyzed the extrinsic cues: production, manufacturing country, and distribution, brand country, of stereo radios and cars in developed (United States of America and Japan) and developing (Mexico and Malaysia) countries; and intrinsic cues: quality (technology and efficiency); with the objective of determining the stronger variable defining quality perceptions. Quality perceptions is mostly influenced by intrinsic quality, but the study also reveals that a more developed manufacturing country generates more perceived quality and that Japan has a more powerful Country Brand than the US. Price was also taken into account in this study, and, even if manufacturing and distributing a product in and as a developed country would generate a greater perceived quality, as strategic implication the study suggest that a product should be manufactured in a developing country, as a way for cost control, and branded with a
developed country to generate prestige. To access the power of the COE (Russel, 2006) studied the effect of positive and negative prompts towards cinema consumers in the United States and France. Taking into account the history between the two countries and the hegemony of Hollywood over the global film industry the authors classify a negative prompt as showing French consumers that the film is American and vice-versa. The results show that the COE is more powerful among French consumers, in this industry.

Also taking part on the COE there are three ranges of elements: the country’s economics and physical resources and industrial capabilities, its cultural values and institutional norms, and its national government policies (Sethi S. Prakash, 1999). These elements create competitive advantages or disadvantages to corporations, and manifest themselves on the strategy adopted in the internationalization process: as portrayed by (Luciano Ciravegna, 2013) small and medium enterprises (SME) in emerging economies tend to use school based networking to reach international markets, when compared with SMEs from developed economies that value serendipitous events to expand their network and their business.

The COE is also influenced by the technology fit between a country and the product produced, thus low technological capabilities perceived from a country impact the quality interpreted of a product with high technological attributes produced in that country. Although when high technological skills perceived from a country do not improve the fit between that country and a lesser technological attributed product, it (the product) sees its credibility improved in the market place (Story, 2005).

The distinction between these three COE components, COA, COP an COD, and their correlation has been widely studied with Chao (1993) concluding that design and quality are two different dimensions and Insch (1995) going further to say that COD evaluation depends of the level of wealth of the country of the buyer. The latter author also suggest that product familiarity enables consumers to incorporate better the Country of Origin cue in their quality evaluation.
After Dichter (1962) made a case about the “made in” effect, this cue, plays a more enduring role than a Brand (Tse, 1993), potentially damaging Brand Image (Myung Soo Jo, 2003), and molding the Brand Personality (Thakor MV, 1996).

Strategic Brand Alliances (SBA) are a mean for weaker brands to leverage on a stronger Brand’s Equity when entering in a new market (cross border SBA) (Christian Bluemelhuber, 2007). Key factors for a successful SBA are, not only product fit, class proximity between the promoted products (Bernard L. Simonin, 1998) and brand fit, similarity between brand image, but also Country of Origin fit, alignment of Product-Country Image (Christian Bluemelhuber, 2007). Further research (Jin K. Lee, 2013) have shown that when both Brands involved in a SBA have a positive COE, both of them see the attitudes towards them enhanced. Adding to this conclusion, the same authors postulate that when the hosting Brand has a stronger COE than the partner Brand, the latter absorbs this effect.

Consumer involvement into advertising claims are also influenced by the country of origin of the product, this being that highly benefiting claims about product with a COE with a poor Product-Country Image produces a fragile consumer involvement and vice-versa (Peeter W.J. Verlegh, 2005)

Several authors have proposed that the referred effect exists and that consumers tend to use Country of Origin to access product quality (Liefeld, 1993). Brands are told to try to leverage their brand equity on COE, and command premium prices, since consumers tend to be very sensitive to it (Keller, 1993), but several publications provide evidence that although this might work under laboratory conditions, it would not in the marketplace, excepting hedonic products such as fragrances and wine (Kamakura, 1999).

In recent years, several researchers have found that, using single extrinsic cued models generate many limitations in analyzing the Country of Origin effect. This realization provided the need to develop and apply more sophisticated models using multiple cues (Helop, 1993). The use of multiple cues, usually diminishes the power of the COE relative to other cues, being extrinsic and intrinsic. Another aspect of concern in this field belongs to the fact that COE tends to become weaker as the consumer transits from product
perception to attitude formation and behavioral intention (Kamakura, 1999). Multiple cued models are also being used to infer real objective quality of product or a bias towards it, based on a COE.

Several other extrinsic cues were found to be moderators of the Country of Origin Effect of products, i.e. warranty, brand or store image.

Related to this matter, Chao (1998) while manipulating the Country of Assembly, Country of Design and Country of Parts, of a television set demonstrated that negative Country of Assembly effect could not be compensated by a positive Country of Design. Non sensory attributes of a product are major influencers of the hedonic experience of consumption.

2.2-Ethnocentrism
Ethnocentrism is mainly described as being a range of attitudes either towards a belonging group or community, or towards a non-belonging group or community (Hammond, 2003). The root of Ethnocentrism is not a closed discussion: it can be educational, cultural, genetics or an aggregate of all of these factors. Ethnocentrism is known to enable individuals to contribute to the group’s common welfare at their own cost and is wise to know that in-group preference is not the same as out-group hate. In their thesis Hammond (2003) postulate that individuals engage in ethnocentric behavior even when there is no artificial incentive for it, revealing that ethnocentricity is organic. In the same experience, the authors pay close attention to the dynamics towards those who belonging to a group, by having a common characteristic, do not participate in the group’s common welfare.

Bender (2013) took a deep look into how guidebooks are created and especially into how the message in them differs when made by a foreign publisher. Analyzing Swiss guidebooks, semi-optically, the authors verify that when done by a foreign author, the use of stereotypes increases even when they are no longer true.

Group membership can be based on a variety of characteristics such as language or religion. Being such a strong attitude, Ethnocentrism, has led to innumerous conflicts but also influencing consumer choice.
The economics term “Transaction Cost”, suggests that, the more specific the investment more attention should be paid by the organization into safeguarding this investment against any opportunistic behavior (Williamson, 1985). Svendsen (2011) reveals that the more ethnocentric the market is the less foreign-specific investment it attracts and more home-specific investment is deployed.

Summarizing, Ethnocentrism, in the marketing literature (Shimp, 1984) is define as the “consumer beliefs in the superiority of their own country’s products, rooted in morality, consumer ethnocentrism is intended to capture the notion that some consumers believe that it is somehow wrong to purchase foreign made products, because it will hurt the domestic economy, cause the loss of jobs, and it is plainly unpatriotic”. Usually the lower level of income, and the lower level of education of individuals tend to promote consumer ethnocentrism, which is suggested to be based on fear of job losses from foreign competition (Shimp, 1984).

In a recent study, Philippidis (2011) found that ethnocentricity and neo-phobia play a significant role in the consumption of ethnic food in Spanish restaurants.

2.3-Price-Quality
Behavior theory suggests that consumers tend to prefer the lowest price for any given pool of similar products. Even so, empirical evidence (Burton, 1989), infer that consumers also extrapolate information from price, i.e. quality. Being this stated, higher prices decrease consumer’s utility, because they pay more for the products, but also increase utility since it induces higher quality (Krishman, 1985). Min Ding (2010), proposes a model based upon the following premises: consumers infer quality from a products price and consumers have a reference price from a given product.

Although this price-quality relationship is not univocal, integrative research finds that most consumers find this relationship positive. This pointed, is important to understand what causes a consumer to perceive value. Andreas Herrmann (2007) defines perceived value as the ratio of perceived benefits and perceived sacrifices. This definition is validated by Grewal (1998), who stated that perceived price downwards, and perceived quality upwards,
influenced perceived value. Moreover, Kime (2014), by manipulating catalog messages, Grewal (1998) also found that consumers tend to be more sensible to effective price changes, than to effective quality changes.

Zeithaml (1988), after several company interviews and focus groups, defines perceived quality, as being different from objective quality, mechanic and humanistic, since it represents the consumer’s judgment of a product or service. The author also suggest that objective quality does not since quality is always a perception made by someone. Min Ding (2010), proposes a model based upon the following premises: consumers infer quality from a products price and consumers have a reference price from a given product.

2.4-Hypothesis Framework

*Figure 1-Hypothesis Framework*

Source: the Author
Hypothesis under study

After having portrayed the theory regarding this field of investigation, it will be, in this chapter, selected several variables in order to build a model that will be the basis for this study. By selecting these variables it will be enounced the hypothesis that are going to be tested.

Country of Origin Effect (COE)

The Country of Origin of a product is taken into consideration by the consumer into his purchase decision process. It serves as a valid form of extrinsic information, influencing positively or negative the purchase intention (Cameron, 1994), (Thorelli, 1989).

Playing a role similar to the Brand name, the “Made in” effects are usually stronger in time, than the Brand’s, according to Tse (1993). Taking into consideration the stated above, it is considered that the Country of Origin, being it what is the labeled product by/with, has a significant impact on the price attributed to it, which leads us to the first hypothesis of our model

Consumer’s perception of a specific product can be greatly influenced by its Country of Origin (Johny K. Johansson, 1985). Also Liefeld (1993) suggests that the Country of Origin of a product is used by the consumer to infer the quality of that same product.

Using the theoretical base stated above, and believing that the Country of Origin has a significant effect on Perceived Quality, it is proposed the following hypothesis:

Country of Origin direct Effect

H1A: The Country of Origin has an effect on consumer’s perceived physical characteristics of each product

H1B: The Country of Origin has an effect on consumer’s perceived quality of each product

H1C: The Country of Origin has an effect on consumer’s price attribution for each product
COE-Moderation

The above stated hypothesis (H1A, H1B and H1C) are not stable and the theory states that they are influenced by several other independent variables. These variables are known as moderator variables, they affect the strength or direction of the stated hypothesis, according to their level. Moderator variables may be natural occurrences of the experiment, such as age or gender, or may be artificial/manipulated, like bad illumination or loud noises, (Ro, 2012).

The moderator effect is useful for the researcher to understand the inconsistency levels of the relationships that the moderator variable moderates, but it is not the main objective of the study (Kenny, 1986).

The range of factors affecting the above stated hypothesis H1A, H1B and H1C are beyond human calculation and consideration. Even so, the effect of the following will be moderated:

- Age, since it is long acclaimed that age has a different effect on the way the individual interprets and evaluates a foreign product. According to Schooler (1971), younger consumers tend to prefer better imported goods, in contrast with older consumers who, generally value better domestic produced goods.

- Gender has already been described as a major influencer for the preference of acquiring, or not, imported goods. Dornoff (1974) described women as being more permeable to the value represented by foreign goods, while men, are portrayed as being more patriotic and has valuing more domestic produced goods.

- Formal Education has not been left out of the equation when talking about influencers of the effect of the country of origin of a product. Cunningham (1972) has long described a scenario, where formal education has a significant role in moderating the country of origin effect. Formal education is a continuum effect: the greater the education, the greater the tendency for the individual to better value goods from another country.

Using the theoretical base stated above, that the Country of Origin has a significant effect on Perceived Quality, the following hypothesis are proposed:
Country of Origin Effect Moderators

H3A1: Age profile is a significant moderator of effect between Country of Origin and the Perceived Physical Characteristics of each product

H3A2: Age profile is a significant moderator of effect between Country of Origin and the Quality of each product

H3A3: Age profile is a significant moderator of effect between Country of Origin and the Price of each product

H3B1: Gender profile is a significant moderator of effect between Country of Origin and the Perceived Physical Characteristics of each product

H3B2: Gender profile is a significant moderator of effect between Country of Origin and the Quality of each product

H3B3: Gender profile is a significant moderator of effect between Country of Origin and the Price of each product

H3C1: Formal Education profile is a significant moderator of effect between Country of Origin and the Perceived Physical Characteristics of each product

H3C2: Formal Education profile is a significant moderator of effect between Country of Origin and the Quality of each product

H3C3: Formal Education profile is a significant moderator of effect between Country of Origin and the Price of each product

Although being inwards preference different from outwards hate, ethnocentrism is described by Hammond (2003) as the amplitude of attitudes either towards a belonging group or towards a non-belonging group, this including either people, places or products.

Ethnocentrism direct effect

H2A: Ethnocentrism has an effect on consumer’s Perceived Physical Characteristics of a given product

H2B: Ethnocentrism has an effect on the Price attributed to a given product

H2C: Ethnocentrism has an effect on the Quality attributed to a given product
Ethnocentrism-Moderator

Starting from what the previous research stated above, it is opportune to test the moderator effect of Age, Gender and Formal Education in all other hypothesis

H3A4: Age profile is a significant moderator of effect between Ethnocentrism and the Perceived Physical Characteristics of each product

H3A5: Age profile is a significant moderator of effect between Ethnocentrism and the Quality attributed to a given product

H3A6: Age profile is a significant moderator of effect between Ethnocentrism and the Price attributed to a given product

H3B4: Gender profile is a significant moderator of effect between Ethnocentrism and the Perceived Physical Characteristics of each product

H3B5: Gender profile is a significant moderator of effect between Ethnocentrism and the Quality attributed to a given product

H3B6: Gender profile is a significant moderator of effect between Ethnocentrism and the Price attributed to a given product

H3C4: Formal Education profile is a significant moderator of effect between Ethnocentrism and the Perceived Physical Characteristics of each product

H3C5: Formal Education profile is a significant moderator of effect between Ethnocentrism and the Quality attributed to a given product

H3C6: Formal Education profile is a significant moderator of effect between Ethnocentrism and the Price attributed to a given product
Ethnocentrism-Mediator

Understanding that Price is a function, and a quantification, of quality (value), it is important to this study to represent the relationship between Product Perception and Price, and since Product Perception is a function of the Ethnocentricity level of the consumer, it plays a mediator role in the relationship between Ethnocentricity and Price.

Mediator variables, such as these, add information and are portrayed as an active organism to the form of how the association, between the independent variable and the outcome variable, occurs (Ro, 2012). The mediator variable provides the study and the researcher a causal chain of effects (Kenny, 1986) and an explanation of how physical events impact internal psychological significance. In the present study, the way Ethnocentricity (independent variable) influences the proposed Price (outcome variable) for either Olive Oil or Chocolate through the Product Perception (mediator variable).

Accounting for the theoretical base above, it is found to be relevant to study the mediator effect of Perception on Price and on Quality through the following hypothesis:

**H4:** Perceived Physical Characteristics has a mediator effect on the Quality attributed to a given product, from Ethnocentrism

**H5:** Perceived Physical Characteristics has a mediator effect on the Price attributed to a given product, from Ethnocentrism

**Conclusion**

The chapter that now ends was dedicated to present the main concepts and definitions related to the Country of Origin Effect, Ethnocentrism and Price in order to establish a base of comprehension of the field of study.

It was presented the ways in which Country of Origin gets divided in to, from Country of Design to Country of Assembly through Country of Production, and how each one of these affects consumer behavior.
Also, was approached the fact that COE affects the consumer in different magnitudes varying with the social demographic, age, gender and education, of each individual.

Regarding consumer behavior this chapter has also described how Ethnocentrism interferes with human behavior and how it has an impact on preference regarding domestic products towards foreign countries.

Lastly it was analyzed the way that individuals infer quality by the price of a given product, and how value is perceived through a relationship between sacrifices and benefits.
3-Methodology
The methodology used for this study tried to reflect the way the research question is going to be answered. With this chapter is wanted to present the operationalization, step by step, of the way it was answered to if the Country of Origin and Ethnocentrism affect individual perceptions.

The data was collected through questionnaire, after proper experimentation of the product by the each individual, on several Educational Institutions with facilitated access, using the author’s academic and personal network.

This research is of a quantitative base and targets to test the hypothesis stated in chapter 2.4, using, to this, the Paired-Samples T-test and a System of Structural Equations.

3.1-Empirical Framework
The choice of products was based on the prestige and the recognition of the each one and on the fact that COE tends to be more severe in low-end products than in higher-end products, (Bruno Godey, 2012), but also on the ethical sense that it would be consumable by any individual without punctual health concerns. The second reason stated previously eliminated such products as wine, which is a well-known Portuguese product, but would not be able to be consumed by children, and by this diminishing the demographic availability. Since, as stated by Zampounis (2006), individuals acquire the taste for olive oil in childhood, and as pointed out by Francis Sunea (2002) children around the world tend to spend their pocket money, it was opted by Olive Oil and Chocolate.
Olive Oil

The Mediterranean Basin, which includes Portugal, gathers the agronomic and climatic factors that enables the development of a significant olive oil sector, (Zampounis, 2006)

Graphic 1-Mediterranean Basin Olive Oil Production

Source: (Oil, 2013)

Graphic 2-Portugal Olive Oil Consumption, Export, Import and Production

Source: (Oil, 2013)

Graphs 1 and 2 demonstrate the weight of Portugal in the world’s overall olive oil production. The country, aggregated with other Mediterranean Countries, has a 73% share of the world’s
whole production, (Zampounis, 2006). Consumers of local olive oil seem to value the origin of the olive oil and whether it is organic or not, according to Metta Santosa (2010).

Traditionally the biggest producers of olive oil are also the biggest consumers, and since that the aggregated four European Union (UE) countries weight a total of 62.38% in the world overall consumption, the industry is centralized in southern Europe (Zampounis, 2006). This fact is mainly explained by the unfamiliarity of this oil to other countries/cultures, since the taste of such strong flavor is acquired during the young years of an individual, and also by olive oil being more expensive than other vegetable oils (Zampounis, 2006).

Outside of the Mediterranean Basin, the United States are the largest consumer of Olive Oil, being the UK and Germany the biggest importers inside of the UE (Rubén Huertas-García, 2012). The growing consumption of olive oil is mainly motivated by health benefits and flavor (Metta Santosa, 2010).

As to what social factor concerns, consumers of olive oil there, tend to value family life and pleasure (Metta Santosa, 2010), and base their purchase decision on such aspects as brand, price, country of origin, quality and design. Extrinsic attributes, such as price, origin or variety are the most important attributes weighting in the purchase decision, (Rubén Huertas-García, 2012).

Putting in comparison against other vegetables oils, olive oil, has several setbacks: weights less than 3.5% in the world’s vegetable oil market; has its production climatically restricted to the Mediterranean Basin; is a cultivation endured by several years, and is labor intensive, in opposition to other vegetable oils; olive oil is the main reason for the plantation of the olive tree. On the contrary, other vegetable oils are the by-product of the main economic reason for their source.

Since olive oil production, which Switzerland has none, has a strong relationship with its geographical region, the Mediterranean Basin, which Portugal is part of, it presents itself as well adjusted product for our study.
Chocolate production started out as a cottage industry, where the whole production was planned and supervised by chemists (Richardson, 2002). The industry has come a long way, where nowadays half of the world production is concentrated in 17 companies (Fold N, 2001). Although there has been a radical change in the industry, in some parts of Europe, namely Belgium and France, artisanal production is still the method employed by several chocolatiers.

Chocolate consumption is motivated by various factors: indulgence, reduce anger, and stimulate joy, pleasure, euphoria and antidepressant. Besides the previous stated, health benefits of chocolate consumption have been highlighted in the literature (Ines Thamke, 2009).

Although the demographics in Europe are changing, all over the world the population is growing and the purchasing power of young people is growing as well. These statistics are important, due to the fact that across different cultures children spend their pocket money in similar ways: sweets, chocolates and cereal bars. It is assumed that, from a young age, around 7 years old, a child is able to describe foods attributes other than the looks of it. (Francis Sunea, 2002)

Chocolate is defined as a complex product, whose quality is a function of several aspects, ranging from brand perception and liking of taste (Viaene, 1999). From the same reason it
comes as no surprise that it is the manufacturing process that determines quality, and not raw materials (Alberts, 2006).

Small business owners, in a variety of fields, acting to promote product quality are increasingly using the connection between product and place. (Treager, 1998) (Parrott, 2002)

Alberts (2006), studied the definitions of quality along the cocoa-chocolate commodity chain, as an example of an industry where the inherent quality of the product is much related to the place where the raw materials are transformed rather than the place where it comes from. However, the relevance of the place of transformation, in this industry is such that was one of the matter of contention where states would only join the European Union if their demands were met. (Andrews, 1997) Besides this, and still in Europe, the misleading origin, by the picture of its wrap paper, of a chocolate bar made by Cadbury, an English chocolate producer, originated a law suit from the Swiss Chocolate Manufacturers. The judge considered right the allegations from the Swiss Chocolate Manufacturers where his ruling stated that place matters when it comes to the chocolate manufacture, which can be inferred that being or not being from Switzerland matters.

3.2-Questionnaire
For the data collection of this research, a questionnaire was created in order to test the model that was based upon the research findings, earlier in this thesis, in order to be able to access how is the effect of Country of Origin and Ethnocentrism impacting quality and physical perceptions, and price.

In order to be able to, collect significant data and go against the flaws pointed out to the studies done in this field (Nes, 1982), namely: the unrealistic scenarios where the products were not demonstrated to the individuals who participated in it; the Country of Origin was the only cue provided; instead of a country the cue given was a geographical area or the easiness that individuals felt in figuring out the objective of the study, this study was built with a design that tried to not being affected by the stated limitations.

Firstly it was provided the products, to the individuals, for experimentation, providing then, several cues about each product, which granted the respondents with a vast amount of
information regarding the products, and not only the Country of Origin. Next it was clearly stated the Country of Origin of all products, and not just the geographical area, and by doing this it can robustly be defined the influence that each Country has on the perceptions of its products, in this case Olive Oil and Chocolate. Lastly, and to get the most truthfully information out of each individual, the study was presented to the population not as a market research but as a help request from a local store, to not give the respondents the feeling of judgment, since the theory states that what is stated under questionnaire is usually not what the individuals really do (Kamakura, 1999).

All questions present in the questionnaire were developed to be a reflection of the variables of the model created, since these will be the inputs that will be the measuring of those same variables. Although most of the questions were elaborated by the author, there are several that were based upon already tested scales.

The questionnaire is formed by 76 questions, either multiple choice or Likert scaled questions and divided into five different sections.

Siskos (1995) found out that perceived quality, for both consumers and distributors, was linked to sensory properties such as taste, aroma, color, appearance and texture. Region of Origin, composed by local agronomic conditions, traditional human know how and raw product characteristics, but also influenced by PDO (Protected Denomination Origin) were a property linked to perceived quality found by Dekhili (2009). The same author found that price and the size of the container were major influencers of consumer choice.

The first and second section, were related to, respectively, olive oil and chocolate. Individuals were asked to answer several scale questions related to physical features of olive oil and chocolate, which, as stated by Cameron (1994), are categorized as intrinsic characteristics. These questions were about several physical characteristics which are considered to be objective, sensory based, when evaluation each products. In order to access the quality perceived from each feature, scale questions varied from 1 to 5 (1- Very Low; 2-Low; 3-Indeferent; 4-Significantly; 5- Very Significantly).
After the scale questions, given a reference price, the individuals were asked to attribute a price to the Portuguese sample of each product with an open ended question. To finalize each section several multiple choice questions regarding Branding and Packaging were asked. Although these final questions were not taken into consideration in our model, we found it to be interesting and related to our topic of study. In these sections of the questionnaire all the questions were elaborated by the author.

The fourth section is composed strictly by the Consumer Ethnocentric Tendencies Scale (CETSCALE) (Sharma, 1987), an internationally validated scale. In order to apply this scale in Portuguese and to rightly perform this measurement, the scale was translated by the author to Portuguese and then asked to a native speaker to translate it back to English, with the latter being very similar to the original version.

Along with the translation, the CETSCALE, as did the whole questionnaire, was also adapted when performed on the Children sample. This section Composed by 17 Likert questions varying as the previous section, from 1 to 5 (1- Completely Disagree; 2-Disagree; 3-Indifferent; 4-Agree; 5-Complety Agree), serves as a way to access Ethnocentrism of an individual.
Ethnocentrism is impossible to measure, but the CETSCALE measures, in different
dimensions, reflections of this attribute. Since this study hypothesizes an effect of
Ethnocentrism on consumer quality perception and price evaluation, it was found this to be
an appropriate scale to use.

3.3 Sample and Data Collection
Since our study requested the personal participation from each respondent, it was
tried to reach a population with an eased access for the author. Although the sample is
heterogeneous, the preference gave to students is justified only by the facilitated access:
exploring the author’s academic and personal network the study was performed at São João
da Madeira’s Senior College, Faculdade de Economia do Porto, at an Elementary and High
school of Santa Maria da Feira and on a Free Fair. No pre-requisites were imposed to the
individuals in order to participate in our study. Regarding under aged individuals, the
permission from the schools involved was requested and all the procedure took place under
the respective classes’ teacher presence. Being sensitive to the fact that the experiment would
be performed with under aged children, was decided to adapt the questionnaire to this target.
It was done so by, alongside with the teachers from the elementary school, simplifying some
of the vocabulary of the questionnaire. Structurally, the only change made when simplifying
the questionnaire was related to the question about the price, of both products: instead of
asking the respondent of the experiment for a specific price, it was asked if the compared
product should be more expensive, cheaper or of equal price. When the tasting was conducted
with this target, this took place in the classroom with the respective teacher always present.

3.4 Data Analysis
The data collected through the questionnaires was treated differently regarding the method
employed: while the effect caused by the Country of Origin on each product’s physical
characteristics perceptions and quality was analyzed using the Paired Sample T-test, the
effect of Ethnocentrism on physical characteristics’ perception, quality and price was
researched using a Structural Equation Model (SEM).
Paired Sample T-test

As it was stated in the introduction, this study is focused on analyzing the impact of the Country of Origin on the physical perceptions of two different products: olive oil and chocolate. The reason of choice, regarding this two products was the symmetrical Country of Origin Effect when related to Portugal: olive oil with a positive Country of Origin Effect and chocolate with a negative Country of Origin Effect. The Country of Origin Effect of this products is also symmetrical when related to Switzerland: olive oil is negative and chocolate is positive.

In order to understand the role played by the Country of Origin, is key to analyze, for every characteristic of each product, if the distribution of answers is independent from the Country of Origin.

To execute this analysis it will be used the Paired Sample T-Test. This test’s output enables the researcher to access if two paired samples have similar means (Maria Helena Pestana, 2008). Usually each observation in analyzed twice, forming paired samples, which differences are tested in order to understand if the result is equal to zero. This is the scenario portrayed in this study, since each observation, individual, tasted both the chocolate and the olive oil twice, but with different stimulus, regarding the Country of Origin.

The difference between each pair of observations, in this case the pair constituted by the score gave, to the same characteristics regarding different origins of the same product, by each individual, is calculated by \( d = X_{1i} - X_{2i} \).

This stated, the test hypothesis came as:

\[
\begin{align*}
H_0 & : \mu_d = 0 \\
H_1 & : \mu_d \neq 0
\end{align*}
\]
In order to calculate the t-value, the formula to employ is:

\[ T = \frac{(\bar{d} - \mu_d)/(s_d' / \sqrt{n})}{\sqrt{T_{(n-1)}}} \]

Where:

\[ \bar{d} = \frac{\sum d_i}{n} ; s_d = \frac{\sum (d_i - \bar{d})^2}{n-1} \]

Being \( d \)'s mean \( \bar{d} \) and \( d \)'s variance \( s'^2 \)

Ethnocentrism – (SEM)

After collecting all the data throughout the several institutions that cooperated with this study, it was necessary to estimate the model that would enable the analysis and process all the data. Below it will be discussed the estimation method and why it is appropriate for the model in study.

Next, it will described several Structural Equation Models (SEM), and the reason why it was chosen PLS (Partial Least Square)

Estimation Models of 1st and 2nd Generation

Structural Equation Models (SEM) is a generalized statistical technique used in order to measure and test the validity of theoretical models which is defined by hypothetical and causal effects between variables. (Marôco, 2014)

Regarding the 1st Generation models, Haenlein (2004) was the pioneer in referring that it has several limitations. The authors state that this kind of models are only applicable when the researcher have a research model with a simple structure, this being a model with only one dependent variable, and several independent variables. The same authors present another limitation of 1st Generation models, which is due to the fact that this kind of models assume that all the variables are measurable. This fact restricts any research model containing reflexive variables, since these are not measured directly and which measurement is made through reflections, manifestations. Also referred by the authors, is the lack of error measurement, when using 1st Generation models.
The 2nd Generation Models, especially Structural Equation Models (SEMs), present themselves as being superior when compared to 1st Generation ones, since they suppress the limitations point out above. Firstly they can incorporate simultaneously several dependent and independent variables, they are able to consider non-directly observed variables, and lastly consider and measure the estimation errors for the observed variables.

Distinction between observed and non-observed variables was presented by Marôco (2014), being observed variables the ones with direct measurement, and non-observed, or latent variables that manifest themselves through indicators.

The research model of this study is constituted by both observed variables and latent variables, and being so, 1st Generation Models can be excluded.

**Structural Equation Models**

LISRE (Linear Structural Relationship) is a Structural Equation Model (Karl G. Jöreskog, 1982), which analyzes the effects between both observed and latent variables (Marôco, 2014).

As stated before, one difference between 1st and 2nd Generation Models is the capacity that the later has to enable the researcher to include latent variables in his model. Latent variables are measured by a scheme of relationships of cause and effect. These relationships build a pool of both direct and indirect connections called paths, where each direct path is an equation.

Structural Equation Models is formed by the pool of equations present in the research model and divided between the measurement model and the structural model (Figure 3). The structural model is composed by the effects between the exogenous (ξ) and endogenous (η) latent variables, enabling to measure and identify the effects between them. The measurement models provide the effects between the latent variables and their indicators.
Structural Equation Models are estimated in two different ways, with two different algorithms:

- Covariance Structure Model – CSM - are run upon algorithms which describe the variance and covariance of each variable
- Partial Least Square – PLS – uses a formula which is focused on error minimization
Regarding these two ways for model estimation, there are four major differences. Firstly, Partial Least Square (Nobre, 2006) uses an interactive sequence of ordinary least squares (OLS), and analyzes one variable at a time. Using this process, it enables the minimization of the residual variance of all dependent variables by applying multiple linear regressions to the latent variables estimates (Tobias, 1995). The type of model that CSM and PLS can estimate is also different, recursive and non-recursive (Figure 4). According to Marôco (2014) in non-recursive models a variable can be both cause and effect and get effect of another variable, on the other hand, in recursive models a variable can either be cause or get effect by another variable, but never both.

Regarding this matter, Partial Least Square, has a limitation since it only can be used in order to estimate recursive models.

Figure 3-Recursive and non-Recursive Models graphical representation
The third difference between CSM and PLS is related to the effects supported by each type of variable, latent and manifest variables. Regarding the first type of effect, formative, latent variables are formed by manifest variables. These later variables can be positively or negatively correlated and do not have the need to be in the same conceptual dimension (Marôco, 2014). Another type of effect, reflective, latent variables manifest themselves on manifest variables. In reflective effects, a pool of manifest variables, being the manifestation of a latent variable, their correlation must always be positive, and is always in the same conceptual dimension.

Regarding this features, PLS presents one advantage over CSM since it allows easily both types of effects, contrasting with CSM which formative effects are harder to represent.

One fourth difference between CSM and PLS is related to the statistical tests, because while CSM requires parametrical assumptions, Partial Least Square does not. This means that there is no need for hypothesizing for the distribution of the observed variables. All statistical inferences are provided via Bootstrapping.

Choosing Estimation Model

In order to choose one type of model, there was a need to take into account the characteristics of the variables present in the research model. Since all variables present in the model are latent, immediately was chosen a 2nd Generation Model. After this, it was needed to understand how each algorithm works, to access which one would be more suited for this study.
Taking into account all the considerations provided previously, where it was provided the main characteristics and differences of both CSM and PLS. As matter of statistical rigor it was decided to choose a PLS model, since its algorithm takes just one variable latent into consideration at a time, which provides dependent variables with minimal residual variance when applying the multiple linear regressions to the latent variables.

**Moderation**

The field of study’s literature is rich in pointing out several moderators to the effect of Ethnocentrism and Country of Origin, ranging from age (Schooler, 1971), to education (Tsiros, 1995), through gender (Nes, 1982), which is worth to mention, contradicts the position took by Hammond (2003), who states that Ethnocentrism is innate. This state of the art enabled this study to seek moderation effects to several relationships of the Country of Origin effect and Ethnocentrism model proposed in figure 2. With this purpose, this study will not only seek for significant moderation effects but also for validation of the hypothesis stated in chapter 2.4 for different sub groups in the Adults and Children’s samples.

To access the significance of each moderator on the created model it was used Smart PLS and ran the model via bootstrapping, for each sub-sample in order to get the Path Coefficients. After knowing the results, are verified the statistical significance of the moderators by calculating the t-statistic, meaning this that there is rejection for the null hypothesis if the p-value is lesser than 0.05 for a significance level of 5%. The t-statistic is calculated using the formula below:
**Figure 5-T-Statistics Formula**

\[
t = \frac{Path_{\text{sample}_1} - Path_{\text{sample}_2}}{\sqrt{\frac{(m-1)^2}{(m+n-2)} \cdot S.E._{\text{sample1}}^2 + \frac{(n-1)^2}{(m+n-2)} \cdot S.E._{\text{sample2}}^2} \cdot \sqrt{\frac{1}{m} + \frac{1}{n}}}
\]

*Source: (Maroco, 2003)*

Where:

- \(Path_{\text{sample}_1}\) is the sample mean for sub-group 1
- \(Path_{\text{sample}_2}\) is the sample mean for sub-group 2
- \(S.E._{\text{sample}_1}\) is the standard deviation for sub-group 1
- \(S.E._{\text{sample}_2}\) is the standard deviation for sub-group 2
- \(m\) is the number of observations of sub-group 1
- \(n\) is the number of observations of sub-group 2

**Mediation**

Mediation variables try to better explain one relationship between one dependent and one independent variable. Rather than hypothesizing a direct effect between the dependent and the independent variable, the mediator analysis the direct effect between the independent variable and the mediator, and then the effect between mediator and the dependent variable. By doing this, the mediator explains better the nature of the effect between the independent and dependent variable, (Hair, 2009).

To access the significance of each mediator, it was used the Sobel Test (Marôco, 2014).

Similar to a t-statistic, the Sobel test will determine if a mediation effect is significant if the test absolute result is greater than 1.96 for significance level smaller than 0.05, and by then rejecting the null hypothesis of no mediation. The Sobel test value is a result of the formula below:
\[ t = (\alpha \beta) / SE \]

Where:

\((\alpha \beta)\) is the product of the weights between \((\alpha)\) the independent variable and the mediator and \((\beta)\) the mediator and the dependent variable.

\[ SE = \sqrt{(\alpha^2 \sigma^2 + \beta^2 \sigma^2)} \]

is the pooled standard error and \(\sigma^2 \beta\) is the variance of the weight between the mediator and the dependent variable and \(\sigma^2 \alpha\) is the weight variance of the independent variable and the mediator.

**Clustering**

The present study will be based upon two main groups of individuals: Adults and Children. Since the literature of this field of studies, County of Origin Effect and Ethnocentrism suggests that the impact of these effects vary with demographics, the analysis will follow the literature. This study, along with the main groups, will also be performed distinctively on, males and females of both groups, with this division being logic and natural. Regarding adults, the analysis will also be performed on college and non-college graduates, illustrating a difference level of formal education. Finally, the Adults group, will also have results gathered from different age clusters. These clusters were generated using a Two-Step algorithm using IMB SPSS, figure 6, and resulted in three clusters: Young Adults (122 individuals), Middle Aged Adults (30 individuals), and Old Aged Adults (43 individuals).
Conclusion

In this Methodology chapter that now ends, it was described every step took to answer our research question.

A questionnaire was created, constituted with questions both based on theory and created by the author, in order to test our research model. Regarding several considerations about which type of model would best fit our research model, figure 3, it was chosen PLS, since it would produce results statistically more relevant.
Figure 7 - Structural Model

Source: the Author
4-Results and Discussion
This chapter will aim to present the main results originated from the questionnaire employed.

The chapter will be divided as follows: a general portrait of the sample, based on its social demographic outlook proceeded by difference analysis of each questionnaire item using the Paired Sample T-test, and an estimation of the regression weights of the model created for this study as well as the statistical significance of its variables, moderators and mediators that impact several paths of the created model regarding Olive Oil and Chocolate.

4.1 Descriptive
The data collection, for this study, took place in different places, through 2014, in order to promote its heterogeneity.

The questionnaire was employed in an elementary school, high school, college, senior college and a free fair. The preference gave to students, is a matter only related to a facilitated access to this population.

Next it is presented the profile of our sample, in terms of gender, age, formal education and nationality.

Regarding gender, our sample was formed by 185 males, 57% of the sample, and 140 females, 43% of the sample.

Looking at the variable age, the respondents were distributed between 9 years old and 88 years old. The greatest concentration of respondents, by age bracket, was verified in 9-18 years old bracket, with 49% of the individuals belonging to this bracket.
Focusing on the Education level of the sample, it spreads along all grades, from elementary school to Doctorates. The greatest concentration of the individuals (33%) of the sample is of those with Bachelor Degree.

When analyzing nationality, this sample is majorly Portuguese with 97% of the sample, and with 3% of the individuals being born in other countries.
In this part of the chapter will be presented the results of our model regarding the major
effects impacting quality perception and price of olive oil and chocolate. The whole sample
was divided into two: adults and children. This division was made at 16 years old, being
anyone older than 16 years old considered and measured as an Adult, and anyone younger
considered and measured as a Child. It was chosen 16 years old as splitting point since, in
Portugal, this is considered to be the age where an individual is eligible to work (Chapter
IV, 2012), which infers greater maturity and cognition and imposes the need to analyze
differently.
From this point forward, all analysis will be divided between adults and children.

4.2-COE
The main purpose of this thesis was to evaluate in which way the Country of Origin effect
was going to affect the perceptions of the participants in the questionnaire.

For this analysis it was divided the sample in two groups: Adults and Children. After this
first division, it will be analyzing the data between males and females, age cluster and
between levels of education.

Adults-COE

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<th></th>
<th>Adults</th>
<th>Males</th>
<th>Females</th>
<th>College Graduates</th>
<th>non-College Graduates</th>
<th>Young Adults</th>
<th>Middle Aged Adults</th>
<th>Old Aged Adults</th>
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<td>.000</td>
<td>.000</td>
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<td>.023</td>
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<td>.000</td>
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<td>.000</td>
<td>.000</td>
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<td>.141</td>
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<td>.842</td>
<td>.052</td>
<td>.923</td>
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<td>.241</td>
<td>.635</td>
<td>.056</td>
<td>.676</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Source: the Author
When analyzing the adults sample as a whole for the effect of the Country of Origin on the perceptions of physical characteristics regarding the two products, it was found, for olive oil, that only Acidity and Spiciness registered a p-value greater than our significance level of 0.05, which accept the null hypothesis of no difference between the means of the two variables related to this characteristic.

Quality, with a p-value of 0.00, gets the null hypothesis rejected for the absence of difference between the means of the two related variables, and validates H1B.

The other variables, Bitterness, Density, Color and Smell, registered p-values of, respectively, 0.00, 0.03, 0.00 and 0.00, these results partially validate hypothesis H1A for Olive Oil.

Splitting the analysis in gender, and starting with males, is found a severe significance regarding the absence of difference between variable’s mean, with all variables, excepting Quality registering p-values greater than our significance level of 0.05, which makes a case for the acceptance of the null hypothesis, in this case H1A gets rejected.

Quality registered a p-value of 0.000, resulting in the rejection of the null hypothesis, and a validation of H1B.

The case for female individuals is similar to that of males, but Density also got the null hypothesis rejected, with a p-value of 0.023, meaning that the difference between the variable’s mean is different than 0. For this sub group all other variables regarding olive oil registered p-values greater than 0.05 which is the base for accepting the null hypothesis of no difference between the variable’s mean.

Quality, with a p-value of 0.000, also gets the null hypothesis rejected, representing a difference between the related variable’s mean. These results validate hypothesis H1B

These results make a case for the rejection of H1A for both genders.
Analyzing the sub-groups of college graduates and non-college graduates, both sub-groups reject the null hypothesis for Bitterness and Color, with, respectively, p-values of 0.023 and 0.003, 0.00 and 0.00. These results mean that there is a difference between the means of the variables regarding the stated characteristics. Adding to the previous stated results, for college graduates was found a base for rejecting the null hypothesis regarding Density and Smell, with p-values of 0.00 and 0.00 respectively, which makes Acidity and Spiciness, for this group, the only characteristics with no difference between the variable’s mean.

Quality, for both sub-groups got a p-value of 0.00, which makes a rejection out of the null hypothesis and a validation of hypothesis H1B

The stated reject hypothesis H1A for non-college graduates and partially validate hypothesis H1A for college graduates.

When the adults sample is divided by age, Young Adults found p-values smaller than the significance level of 0.05 for Bitterness, Density, Color and Smell, respectively, 0.001, 0.006, 0.000 and 0.002. On the other hand, for the same group with p-values of 0.443 and 0.145, respectively Acidity and Spiciness, got the null hypothesis validated for the absence of difference between the means of the respective variables. Regarding Middle Aged Adults, the only characteristic with the null hypothesis validated was Acidity, with a p-value of 0.774. All other characteristics, Bitterness, Spiciness, Density, Color and Smell, with p-values, of 0.043, 0.030, 0.038, 0.00 and 0.00, have the null hypothesis rejected which reflects the difference between the variables related to those characteristics. Finally, Old Aged Adults, have symmetrical portray, when compared to Middle Aged Adults, having just one characteristic, Color, rejecting the null hypothesis, with a p-value of 0.030, smaller than the significance level of 0.05. Acidity, Bitterness, Spiciness, Density and Smell, registered p-values of 0.333, 0.453, 0.323, 0.8 and 0.897, respectively, making the null hypothesis valid of no difference between the variables’ mean. The presented results validate hypothesis H1A for Middle Aged Adults, partially validate for Young Adults and reject for Old Aged Adults.

For Young Adults, Middle Aged Adults and Old Aged Adults, the null hypothesis got validated for the latter group, with a p-value of 0.080. The first two groups, both with a p-
value of 0.000 regarding Quality, reject the null hypothesis of absence of difference between the related variable’s mean.

Focusing on the chocolate’s characteristics the adults sample all together, registered only two variables, Brightness and MilkTaste, with p-values smaller than the significance level of 0.05, rejecting the null hypothesis of no mean’s difference between the variables related to those characteristics. All other variables, Melts, CocoaTaste, CocoaAroma, Density and Crispiness, registered p-values of, respectively, 0.411, 0.854, 0.143, 0.681 and 0.245, all greater than 0.05, our significance level, validating this way the null hypothesis of no difference between the means of the respective variables. These results completely reject hypothesis H1A for the adult sample, regarding chocolate.

Quality, with a p-value of 0.677, gets the null hypothesis validated for the absence of difference between the related variables, which makes rejection out of the hypothesis H1B.

Splitting the adults sample between gender, as was did before, males registered only one characteristic with a p-value smaller than the significance level of 0.05, Crispiness, this meaning a rejection of the null hypothesis of no difference between the variables’ mean related to this characteristic. All other characteristics, registered p-values greater than the significance level: Brightness, Melts, CocoaTaste, CocoaAroma, MilkTaste and Density with, 0.381, 0.929, 0.339, 0.178, 0.207 and 0.297 which makes the null hypothesis valid for the variables of these characteristics. Regarding the female sub-group all variables registered p-values greater than 0.05, validating for all of them the null hypothesis of no difference between the variable’s mean. Taking into consideration these results the hypothesis H1A is rejected for both genders.

Quality with a p-value of 0.084 for males, and 0.364 for females, validates the null hypothesis for no difference between the related variables, which lays the base do reject hypothesis H1B.

Taking a closer look into the adults sample and dividing the sample between college graduates and non-college graduates, the first group behaved similar to the adults sample as a whole rejecting only Brightness and MilkTaste with p-values of 0.007 and 0.010. All other
characteristics, Brightness, Melts, CocoaTaste, CocoaAroma, MilkTaste and Density, with p-values of respectively, 0.864, 0.935, 0.842, 0.755 and 0.241 validated the null hypothesis of no difference between the related variables’ mean. Non-college graduates, registered a similar scenario as did females, with p-values, for all characteristics greater than the significance level, 0.05, meaning this, the validation of the null hypothesis of no difference between the related variables’ mean. The results presented make the base for rejection of hypothesis H1A for both college and non-college graduates.

Quality, for both college and non-college graduates, with respectively p-values of 0.335 and 0.676, validated the null hypothesis for absence of difference between the related variable’s mean. These results reject hypothesis H1B.

Dividing the adults sample by age cluster, the young adults, regarding chocolate characteristics, present two characteristics with p-values smaller than the significance level, Brightness and Milk Taste, as did college graduates and the sample as a whole. Brightness with p-value of 0.11 and Milk Taste with p-value of 0.022 reject the null hypothesis, meaning a significance in the difference between the related variable’s mean. All other characteristics, Brightness, Melts, CocoaTaste, CocoaAroma, MilkTaste and Density, with p-values of 0.196, 0.366, 0.923, 0.331 and 0.56, respectively, validate the null hypothesis. Middle aged adults, show a similar behavior as females and non-college graduates, with all characteristics having a p-value greater than 0.05 and by this validating the null hypothesis. Old Aged Adults, portray two variables with p-values smaller than the significance level of 0.05, CocoaTaste and CocoaAroma, respectively 0.040 and 0.02, rejecting the null hypothesis of no difference between the related variables means. All other variables, Brightness, Melts, MilkTaste, Density and Crispiness, with p-values of 0.323, 0.762, 0.872, 0.772 and 1, all greater than our significance level validate the null hypothesis. Attending to these results H1A gets rejected for all three age clusters.

Regarding Quality all age clusters, Young Adults, Middle Aged Adults and Old Aged Adults validated the null hypothesis, with p-values of respectively, 0.8, 1 and 0.701. With these results H1B gets rejected.
Adults-COE-Price and Quality

There is no way to understand if more of one characteristic is necessarily better than more of another. The characteristics regarding our products are simply that, characteristics, neither good nor bad, that is why the objective of this study is to understand if the Country of Origin affects the perceptions regarding these characteristics. The only exception is Quality, which more Quality is necessarily better, and less Quality is necessarily worst.

Regarding Quality, the Paired Sample T-Test demonstrates the that there is a significant mean difference between the variables related to olive oil quality, for all sub-groups excepting Old Aged Adults, but does not show which is greater, if the Portuguese or the Swiss. Since olive oil was the product with more characteristics significantly different, our study shows on table 5 which mean is greater, using the difference between the samples’ mean, of both Portuguese olive oil and Swiss olive oil. The results show that for all cross sections, including Old Aged, although not significantly, Portuguese olive oil registers the greatest quality evaluation.

Since our values from the Paired Sample T-test regarding chocolate quality revealed no significant difference between the two samples the same analysis will not be performed.

The last paragraphs are the perfect transition to analyze the variable price. The reference price present in the questionnaire regarding Swiss olive oil was 5€. The table 6 shows the confidence interval with a confidence level of 95%, for the distribution of prices attributed to Portuguese olive oil, and portrays that, for all sub-groups, this interval contains the price for Swiss olive oil. This fact, contrasting with the table 5 shows that, although recognizing superior quality for Portuguese olive oil, individuals are not willing to pay more. This scenario is aligned with Kamakura (1999), when the individuals are affected by the COE but this effect is not materialized in different behaviors.
As already stated and showed before, there was no significant difference between Portuguese and Swiss chocolate quality, and since the analysis regarding quality was done, it is wise to relate those values with the price attributed to Portuguese chocolate. The absence of difference between chocolate’s evaluations contrasts with the difference on the price attributed to Portuguese chocolate. The reference price for Swiss chocolate, was 5.6€, and for a significance level of 95% the confidence interval for the whole sample, for College and non-College graduates, Young Adults and Middle Aged Adults, was always below the reference price, which once again might be extrapolated as an inability to significantly recognize the quality of the foreign product, but being willing to pay more for it.

**Children-COE**

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<td>.297</td>
<td>.003</td>
<td>.000</td>
<td>.221</td>
<td>.097</td>
<td>.362</td>
<td>.295</td>
<td>.362</td>
<td>.044</td>
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</table>

**Source: the Author**
As done with the adult’s sample, this study will also analyze the results regarding the difference between the variables related to all the characteristics of the two products used, olive oil and chocolate.

Considered for this study as Children, were every individual younger than 16 years old, (Chapter IV, 2012). The data was collected at different education establishments: at an elementary and middle school, due to facilitated accessibility. From this work resulted 134 responses but with 3 being withdrawal for not having responded to more than 10% of the questionnaire.

Starting with olive oil, table 11 shows that the children’s sample as a whole registered two characteristics with p-values greater than 0.05. In fact, Density and Smell, with p-values of 0.641 and 0.297, respectively validated the null hypothesis of no difference between the related variables’ mean. All other variables, Acidity, Bitterness, Spiciness and Color, registered p-values smaller than 0.05 which rejects the null hypothesis. These results make a case for a partial validation of hypothesis H1A.

Quality, with a p-value of 0.000 reject the null hypothesis for absence of difference between the related variable’s mean. These results plant the base for validation of hypothesis H1B.

Dividing the sample between genders, male children, registered for Spiciness and Color, p-values smaller than the significance level, respectively, 0.001 and 0.005, which makes a case for rejection of the null hypothesis and the absence of difference between the related variables’ mean. Acidity, Bitterness, Density and Smell, with p-values of 0.051, 0.745, 0.425 and 0.455 validate the null hypothesis. The female sub-group, within the children sample registered for Acidity, Bitterness and Color, p-values smaller than the significance level, rejecting this way the null hypothesis for the absence of difference between related variables’ mean. Spiciness, Density and Smell, with p-values of 0.146, 0.084 and 0.52 validate the null hypothesis. These values result in a rejection of hypothesis H1A for male children and a partial validation of the same hypothesis for females.
Quality with a p-value of 0.013 for males and 0.00 for females, reject the null hypothesis of absence of difference between related variable’s mean, which validates hypothesis H1B

Within the children’s sample, this study focused on different levels of education. Firstly the 4th graders, showed a p-value greater than the significance level for just one characteristic, Density. The stated variable, had a p-value of 0.918, which validates the null hypothesis. All other variables, Acidity, Bitterness, Spiciness, Color and Smell, with p-values of, respectively 0.000, 0.000, 0.012, 0.000 and 0.000, all lesser than 0.05, reject the null hypothesis of the absence of difference between the related variables’ mean. The 6th graders sub group, behaved symmetrically to the 4th graders with only one characteristic with p-value smaller than 0.05, Smell. With p-value of 0.022, Smell gets the null hypothesis rejected, which indicates a difference between the related variables’ mean. All other variables, Acidity, Bitterness, Spiciness, Density and Color, registered p-values greater than the significance level of 0.05, and by this validating the null hypothesis. Lastly 9th graders, showed a p-value greater than 0.05, the significance level, for Spiciness, Density and Smell, making the null hypothesis valid and the difference between the related variables’ mean absent. Acidity, Bitterness, and Color, with p-values of 0.012, 0.045 and 0.003, respectively, reject the null hypothesis. These results validate the hypothesis H1A for 4th graders, partially validate the same hypothesis for 9th graders and reject for 6th graders.

Regarding Quality, 4th graders and 9th graders, with p-values of 0.00 and 0.024 respectively, reject the null hypothesis which makes the difference between the related variable’s mean different than 0. Analyzing 6th graders, with a p-value of 0.693, gets the null hypothesis validated. These results partially validate H1B

Focusing this analysis on chocolate, regarding the children’s sample as a whole, Brightness and Crispiness are the only variables with p-values smaller than the significance level of 0.05, respectively, 0.000 and 0.044. These results reject the null hypothesis. All other variables, Melts, CocoaTaste, CocoaAroma, MilkTaste and Density, with 0.221, 0.097, 0.362, 0.295 and 0.362 being their respective p-value, validate the null hypothesis of no difference between the related variable’s mean. These results make a rejection out of hypothesis H1A.
Quality with a p-value of 0.003 rejects the null hypothesis for no difference between the related variables, which validates hypothesis H1B.

Within the children’s sample, and as was done with olive oil, the analysis will be focused on the sub-groups regarding gender. Starting with males, and as the sample all together, Brightness, with p-values of 0.000 got rejection for the null hypothesis. Along with the latter one, males also reject the null hypothesis for the absence of difference between the variables’ mean related to MilkTaste, with a p-value of 0.041. All other variables, with p-values greater than the significance level of 0.005, validate the null hypothesis. Female Children, with p-values of 0.01 and 0.02, reject the null hypothesis for Brightness and Crispiness. For Melts, CocoaTaste, CocoaAroma, MilkTaste and Density, female children reported a p-value of, respectively 0.49, 0.11, 0.47, 0.65 and 0.16, which by being greater than 0.05 validate the null hypothesis for the absence of difference between the related variables’ mean. These results reject hypothesis H1A for both males and females.

Related to quality, the behavior of both genders, was very different, while males with a p-value of 0.002 demonstrated absence of difference between the related variables mean, females with 0.24 as a p-value did not. These results, validate H1B for males, but not for females.

Addressing now the results related to the sub groups constituted by the 4th graders, only Brightness, with a p-value of 0.000 got rejection for the null hypothesis. All other characteristics, with p-values greater than the significance level of 0.05, Melts, CocoaTaste, CocoaAroma, MilkTaste, Density and Crispiness, validate the null hypothesis for the absence of difference between the related variables’ mean. On the other hand 6th graders showed a symmetrical scenario, by rejecting the null hypothesis for all variables, excepting MilkTaste. With a p-value of 0.208, greater than the significance level, the null hypothesis is validated, which states an absence of difference between the related variables’ mean. Lastly, 9th graders show a similar pattern to those observed already in other sub-groups by rejecting the null hypothesis for only one characteristic, MilkTaste. With a p-value of 0.001, smaller than the significance level, the null hypothesis is rejected, making different the related variables’
mean. All other variables, Brightness, Melts, CocoaTaste, CocoaAroma, Density and Crispiness, registered p-values greater than 0.05, validating the null hypothesis. The results presented above, reject hypothesis H1A for 4th and 9th graders, and accept it for 6th graders.

Regarding Quality, all three levels of education, get p-values below our threshold of 0.05 which makes a rejection out of the null hypothesis, making the difference between related variables different than 0. These results validate H1B.

**Children-COE-Price and Quality**

As already done with the adult sample, on table 12 and regarding children, there is the way in which quality differs. For olive oil, in all cross sections, significant differences in quality represent superiority of Portuguese olive oil, although for 6th graders, this difference is not significant. When chocolate is analyzed, quality superiority is towards Swiss chocolate, excepting for 9th graders.

<table>
<thead>
<tr>
<th>Table 7-Children Means greatness</th>
</tr>
</thead>
<tbody>
<tr>
<td>OliveOilQuality</td>
</tr>
<tr>
<td>PT</td>
</tr>
<tr>
<td>ChocolateQuality</td>
</tr>
</tbody>
</table>

As performed with the adult’s sample, next, quality perceptions will be matched with the price attributed to Portuguese products. As shown on table 12 for all cross sections of the children’s sample, Portuguese olive oil was rated as best regarding quality, but this fact contrasts with the price attributed to it by children, in table 13. Taken into consideration that children rated price as 1-Smaller, 2-Iqual and 3-Greater, and with a significance level of 95% the confidence interval shows that, with exception of 6th graders, who did not get significant difference, the price attributed to Portuguese olive oil was smaller than the Swiss reference price. This being stated might reveal again that although being able to recognize quality, children are not willing to pay for it.

Since children also validated differences for chocolate’s quality, contrasting with adults, the analyses is opportune. With exception for females, who did not get difference validated, and
9th graders, who rated Portuguese chocolate better, all cross sections rated Swiss chocolate better when compared to the Portuguese. These facts land the base to, again, relate perceived quality to price. With a significance level of 95% the confidence interval demonstrates than children as a whole, males and 6th graders, do not demonstrate willingness to value better Swiss chocolate, by stating that Portuguese chocolate should have the same price as the Swiss. The 9th graders sub-group was the only who although valuing Portuguese quality better, manifests that Portuguese chocolate should have a smaller price. 4th graders, is the only group in concordance by valuing Swiss chocolate better, manifest an opinion of a smaller price for Portuguese chocolate.

<table>
<thead>
<tr>
<th>Table 8-Price's confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upper OliveOilPrice</strong></td>
</tr>
<tr>
<td>Children 1.719</td>
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<tr>
<td><strong>Lower OliveOilPrice</strong></td>
</tr>
<tr>
<td>Children 1.478</td>
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<tr>
<td><strong>Upper ChocolatePrice</strong></td>
</tr>
<tr>
<td>Children 2.034</td>
</tr>
<tr>
<td><strong>Lower ChocolatePrice</strong></td>
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<tr>
<td>Children 1.845</td>
</tr>
</tbody>
</table>

Source: the Author

4.3-Ethnocentrism

Adults - Model – Validation

In order to statistically validate the proposed model, it is necessary to analyze and approve measures of internal consistency and reliability, regarding the used scale, CETSCALE. It was used the Cronbach’s Alpha (α) and Composite Reliability (CR) to estimate the reliability of the scale. Average Variance Extracted (AVE) is also used to measure the variance shared between the set of items that are a part of the used scale.

Cronbach’s Alpha is a robust indicator of the reliability of a scale. Varying between 0 and 1, is a function of the correlations between the items of the scale: the bigger the correlations, the bigger will the Cronbach’s Alpha will be.
Table 9- Cronbach’s Alpha Quality

<table>
<thead>
<tr>
<th>Cronbach’s alpha</th>
<th>Internal consistency</th>
</tr>
</thead>
<tbody>
<tr>
<td>α ≥ 0.9</td>
<td>Excellent</td>
</tr>
<tr>
<td>0.7 ≤ α &lt; 0.9</td>
<td>Good</td>
</tr>
<tr>
<td>0.6 ≤ α &lt; 0.7</td>
<td>Acceptable</td>
</tr>
<tr>
<td>0.5 ≤ α &lt; 0.6</td>
<td>Poor</td>
</tr>
<tr>
<td>α &lt; 0.5</td>
<td>Unacceptable</td>
</tr>
</tbody>
</table>

Source: the Author adapted from (Hair, 2009)

Regarding this study, with one scale, its internal consistency, measured by the Cronbach’s Alpha, is 0.8574, which Hair (2009) qualifies as “Good”. Continuing with consistency measures, the Composite Reliability is 0.8574, which according to Hair (2009) should be greater than 0.70, what positions this measure as robust.

Looking at the Average Variance Extracted (AVE), Hair (2009) points that it should be above 0.5. The AVE for this scale is 0.3064, which infers that for the Adults sample only 30.64% of the variance of the set of items that composes the CETSCALE is error free. Although a smaller value than accepted, regarding AVE, since the CETSCALE is an internationally validated scale, validated several times before in different studies, it will not suffer modifications.

Table 10- Adults’ CETSCALE Validation

<table>
<thead>
<tr>
<th>CETSCALE</th>
<th>AVE</th>
<th>Composite Reliability</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>CETSCALE</td>
<td>0.3064</td>
<td>0.8574</td>
<td>0.8352</td>
</tr>
</tbody>
</table>

Source: SmartPLS output

Adults - Regression Weights and Statistical Tests – Structural Model

Next on this chapter it will be shown the results that followed the estimation of our model, for Adults, using PLS algorithm.
On the right column of the table 11 are the t-statistics for each effect present on our model, which provide the ability to reject or accept the respective hypothesis. Taking into consideration a significance level of 0.1 the analysis must be done with values above 1.64 (Marôco, 2014). Analyzing the table 10, is portrayed that the effect of Ethnocentrism and Swiss olive oil Perception, and Perception Swiss chocolate and Quality Swiss chocolate are both statistically significant effects. In conclusion, hypothesis H2A and H6A got validated.

Since these results only partially validate our model, it will be now analyzed the effects of moderation by Age, Gender and Educational level.

**Adults – Moderation - Gender, Age and Education Level**

As stated before, it was divided the sample into three different sub-groups by gender, education level and age.

It will be used the previous stated moderators in all the relations of our model in figure 7 and validate which of them are significant and not significant.
Gender

Regarding the sub-groups of Gender, in the Adults sample, only the effect between Ethnocentrism and Swiss Chocolate Quality proved to be significantly moderated by Gender, where females tend to generate a greater effect between these variables than males. Regarding females this effect is positive, and the moderator has a t-statistic of 2.91 which by being greater than 1.64 makes the moderation significant.

When analyzing the hypothesis validated in the general model between Ethnocentrism and Portuguese Olive Oil Perception and Swiss Chocolate Perception and Swiss Chocolate Quality it was observed no significant moderation, although the later effect is significant for both genders.

Focusing only on males, it was detected significance for the effect linking Portuguese Chocolate Perception and Portuguese Chocolate Price with a t-statistic of 1.68.

Besides the one already stated, females have significant values related to Ethnocentrism and Swiss Chocolate Perception, Ethnocentrism and Portuguese Olive Oil Quality and Portuguese Chocolate Perception and Portuguese Chocolate Quality, with t-statistic of, respectively 1.68, 2.37 and 2.24.

Taking Education into consideration and after dividing the Adult sample between College Graduates and Non-College Graduates, there were no significantly moderated effects by Education: The relationship between Ethnocentrism and Portuguese Olive Oil and Swiss Chocolate Perception and Swiss Chocolate Quality, validated in the general model, proved not to be moderated by Education although this last effect was validated for both sub-groups.

**Table 12-Adults’ Moderation’s t-statistics**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age</th>
<th>Education</th>
<th>Ethnocentrism -&gt; OliveOilPerception</th>
<th>Ethnocentrism -&gt; OliveOilPrice</th>
<th>Ethnocentrism -&gt; OliveOilQuality</th>
<th>Ethnocentrism -&gt; ChocolatePerception</th>
<th>Ethnocentrism -&gt; ChocolatePrice</th>
<th>Ethnocentrism -&gt; ChocolateQuality</th>
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Source: the Author
Regarding each sub-group individually it was found, for College Graduates effects statistically significant for Ethnocentrism and Portuguese Olive Oil Price, t-statistic of 1.84, Ethnocentrism and Portuguese Olive Oil Quality, t-statistic of 2.26, and Portuguese Chocolate Perception and Portuguese Chocolate Quality, t-statistic of 7.59. These values validate the stated effects for College Graduates. Between non-College Graduates, the effect linking Ethnocentrism and Swiss Chocolate Quality, with a t-statistic of 1.93 also got validated.

Since by Age, this study divides the sample by three age brackets, it will be compared these three with each other.

**Young Adults and Middle Aged Adults**

Starting by analyzing the moderation between Young Adults and Middle Aged Adults, and regarding the effects validated in the general model, Ethnocentrism and Portuguese Olive Oil Perception and Swiss Chocolate Perception and Swiss Chocolate Quality only the later was validated for moderation, with Middle Aged Adults giving the greater weight to this effect. The first effect was not validated for neither group.

Regarding valid moderation, there were no other effect with t-statistic over 1.64.

Considering only Middle Aged Adults, four effects got validated for this sub-group: Ethnocentrism and Portuguese Olive Oil Price, Ethnocentrism and Portuguese Chocolate Price, Ethnocentrism and Portuguese Olive Oil Quality, and Ethnocentrism and Swiss Chocolate Quality, with t-statistics of 3.21, 1.70, 4.97 and 2.02 respectively.

For both groups, Young Adults and Middle Aged Adults, it was found several effects validated with t-statistics over the threshold of 1.64: Ethnocentrism and Portuguese Chocolate Perception (1.89 and 8.65, respectively), Ethnocentrism and Swiss Chocolate Perception (2.44, and 7.34 respectively), and Portuguese Chocolate Perception and Portuguese Chocolate Quality (5.56 and 9.04 respectively). None of these effects got moderated with statistical significance.
Young Adults and Old Aged Adults

Between these two groups there was no significant moderation validated, since all effects validated in both sub-groups did not present a t-statistic greater than 1.64, regarding the moderator.

Since it was already stated the validated effects for Young Adults, it will be skipped this parte and analyzed just Old Aged Adults

Validated effects were detected in this sub-group of Adults. In fact Old Aged Adults registered, positive, greater than Young Adults, with t-statistics over 1.64, on the effect between Ethnocentrism and Portuguese Olive Oil Quality, Ethnocentrism and Swiss Olive Oil Quality, Portuguese Olive Oil Perception, and Portuguese Olive Oil Price, with, respectively, 2.14, 2.77, 2.07 and 2.27 to what t-statistics is concerned.

Middle Aged and Old Aged Adults

There was no effect with significant moderation between these two sub-groups and since they were already analyzed above.

Mediation

Table 13 shows, after performing the Sobel test for Adults, the for each mediation variable of our model.

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Effect</th>
<th>Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT Olive Oil Perception</td>
<td>Ethnocentrism -&gt; Price Olive Oil PT</td>
<td>-0.1515</td>
</tr>
<tr>
<td>PT Chocolate Perception</td>
<td>Ethnocentrism -&gt; Price Chocolate PT</td>
<td>-0.3695</td>
</tr>
<tr>
<td>PT Olive Oil Perception</td>
<td>Ethnocentrism -&gt; Quality Olive Oil PT</td>
<td>-0.2831</td>
</tr>
<tr>
<td>SW Olive Oil Perception</td>
<td>Ethnocentrism -&gt; Quality Olive Oil SW</td>
<td>-0.4037</td>
</tr>
<tr>
<td>PT Chocolate Perception</td>
<td>Ethnocentrism -&gt; Quality Chocolate PT</td>
<td>0.3489</td>
</tr>
<tr>
<td>SW Chocolate Perception</td>
<td>Ethnocentrism -&gt; Quality Chocolate SW</td>
<td>0.4703</td>
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</tbody>
</table>

Source: the Author

After performing the Sobel Test for all paths of the created model with mediation variables, the results show, that there is no significant mediation for all mediation variables, since the
absolute values were always under 1.64. With this being, it will not validate neither for chocolate nor olive oil Hypothesis H4 and H5.

With this result in mind it can be suggested that any valid effect between Ethnocentrism on either Price or Quality is based mainly on pre conceived ideas, and never by actual perception of the product.

Children - Ethnocentrism Model – Validation

By the theory reported before and as performed with the Adults sample, for measuring internal consistency and reliability was used Cronbach’s Alpha (α), Composite Reliability (CR), as well as Average Variance Extracted (AVE) will be used to measure the variance shared by the set of items that are part of our scale.

In this study, the model studying children presents a Cronbach’s Alpha of 0.8496, which as presented before, is a “Good” value. Regarding Composite Reliability (CR), the present model has a value of 0.8769, which as presented earlier qualifies as robust value.

The Average Variance Extracted (AVE) of this model is 0.3329, which infers that only 33.29% of the variance of the set of items that composes the CETSCALE is error free. As was done with the Adults sample, and although the AVE value was not proper, the CETSCALE will be used, without any modification.

<table>
<thead>
<tr>
<th>Source: SmartPLS output</th>
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<tbody>
<tr>
<td>Table 14-Children’s CETSCALE validation</td>
</tr>
<tr>
<td>CETSCALE</td>
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<tr>
<td>0.3329</td>
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</table>

Children -Regression Weights and Statistical Tests – Structural Model

Following, it will be presented the results of the estimation of our model, for Children, using PLS algorithm.

As well as with the Adults Sample, on table 15, on the first column right, is the t-statistic for each effect present on the Children’s model. Taking into consideration a significance level of 0.1 it must, as was already done with the Adults model, be worked with values above 1.64.
Table 15 shows that the effect of Ethnocentrism and Quality Portuguese Olive Oil, Perception Portuguese Olive Oil and Price Portuguese Olive Oil, and Perception Portuguese Olive Oil and Quality Portuguese Olive Oil are all significant effects. These results validate hypothesis H2C, H6B and H6A.

<table>
<thead>
<tr>
<th>Table 15-Childrens’ Path Coefficient</th>
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<tbody>
<tr>
<td>Ethnocentrism (\rightarrow) PerceptionOliveOILSW</td>
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<tr>
<td>Ethnocentrism (\rightarrow) PerceptionOliveOILPT</td>
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<tr>
<td>Ethnocentrism (\rightarrow) PerceptionCHOCSW</td>
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<tr>
<td>Ethnocentrism (\rightarrow) PriceOliveOILPT</td>
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<tr>
<td>Ethnocentrism (\rightarrow) PriceCHOCSW</td>
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<td>Ethnocentrism (\rightarrow) QualityOliveOILPT</td>
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<td>Ethnocentrism (\rightarrow) QualityCHOCSW</td>
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<td>Ethnocentrism (\rightarrow) QualityOliveOILSW</td>
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<td>Ethnocentrism (\rightarrow) QualityCHOCSW</td>
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<tr>
<td>PerceptionOliveOILSW (\rightarrow) QualityOliveOILSW</td>
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<td>PerceptionOliveOILpt (\rightarrow) PriceOliveOILPT</td>
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<td>PerceptionOliveOILpt (\rightarrow) QualityOliveOILPT</td>
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<td>PerceptionCHOCPt (\rightarrow) PriceCHOCPt</td>
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<tr>
<td>PerceptionCHOCPt (\rightarrow) QualityCHOCPt</td>
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<tr>
<td>PerceptionCHOCSW (\rightarrow) QualityCHOCSW</td>
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</tbody>
</table>

Source: SmartPLS output

Children – Moderation - Gender and Education Level

To what the Children’s Sample is concerned it was found relevant to use Gender and Educational Level as moderators, as was done regarding the analysis towards accessing presence of COE, with the significance levels showed in table 16.
Gender

As was done with the general model, it was validated the effect between Ethnocentrism and Portuguese olive oil Quality, Portuguese olive oil Perception and Portuguese olive oil Price and Portuguese olive oil Perception and Portuguese olive oil Quality, for both genders, with t-statistics greater than 1.64. To what the two last effects is regarded the moderator effect was also significant, with the t-statistics being respectively 4.01 and 3.54, and with females having greater regression weights than males. When is taken into consideration the first effect, Ethnocentrism and Portuguese olive oil Quality although being for both genders an effect statistically significant, there is no validation for an effect of moderation. Related to males only, it was also validated the Effect between Ethnocentrism and Swiss chocolate Perception, Ethnocentrism and Swiss chocolate Quality and Ethnocentrism and Portuguese chocolate Quality, with t-statistics greater than 1.64.

Considering Females alone, it got validation of the effects between Ethnocentrism and Portuguese chocolate Perception, Ethnocentrism and Portuguese chocolate Price and Swiss olive oil Perception and Swiss olive oil Perception. All of these effects registered t-statistics above 1.65 and the effects were both positive and greater than male’s.

4th Graders and 6th Graders

As it was done with Age at the Adults sample, this study will be analyzing the three moderators related to education comparing the effect between each other.
Starting with the moderation between 4th graders and 6th graders, there was no significant value of moderation regarding the validated hypothesis of the general model, as to neither one of the other hypothesis. Although the previous stated, it was found a base to validate, regarding 4th graders, the effect between Ethnocentrism and Swiss chocolate Perception, Portuguese olive oil Perception and Portuguese olive oil Quality, with t-statistics of 1.94, and 2.86, respectively. The first is a case for a positive effect, greater for 4th graders than 6th graders, the second is a negative effect, being the 4th graders the greater in absolute terms.

Towards 6th graders solo, it got validation for two effects, being them Portuguese chocolate Perception and Portuguese chocolate Price and Portuguese chocolate Perception and Portuguese chocolate Quality. For both, the effect is greater for 6th graders than for 4th graders and are both positive.

Relating 4th and 6th graders, both validate the effect between Swiss Chocolate Perception and Swiss Chocolate Quality, with t-statistics greater than 1.64 and for both groups this effect is positive. Even though this effect was validated for both groups, there was no evidence of moderation.

4th Graders and 9th Graders

Moderating the effect between 4th and 9th graders, shows significance, with a t-statistic of 4.86, for one of the effects validated in the general model, Portuguese olive oil Perception and Portuguese olive oil Quality, with 4th grader with a t-statistic of 2.86 and 9th grader with a t-statistic of 7.59, and contrasting them 4th graders having a negative weight between the two variables and 9th graders having a positive one.

Since this analysis has already discussed the effects validated for 4th graders above, it will focus on 9th graders from now on. The sub-group formed by all the 9th graders of the initial Children’s sample validated all the effects of the general model, and also the effect between Ethnocentrism and Swiss olive oil Perception, with a t-statistic of 2.65, Ethnocentrism and Portuguese olive oil Perception, with a t-statistic of 3.16, Ethnocentrism and Swiss chocolate Perception, with a t-statistic of 4.33, Ethnocentrism and Portuguese olive oil Price, with a t-statistic of 1.90, Ethnocentrism and Portuguese chocolate Price, and Portuguese chocolate
Perception and Portuguese chocolate Price, with a t-statistic of 7.75. Both effects were positive and in both the weight of 9th graders was greater than 4th graders.

**6th Graders and 9th Graders**

To finalize the analysis of this moderator regarding Children, and since both groups’ significant effects were already stated, 6th graders and 9th graders registered significance moderation for the effect between Portuguese Chocolate Perception and Portuguese Chocolate Price, with the moderation having a t-statistic of 5.23. The weights of each sub-group have opposite directions, being the 6th graders’ positive and the 9th graders negative.

The same effect, Portuguese Chocolate Perception and Portuguese Chocolate Price, was statistically moderated between 4th graders and 9th graders, being greater for 9th graders.

Regarding the moderation between 6th graders and 9th graders, there was no effect significantly moderated between these two groups, and both have already been discussed separately above.

**Mediation**

The research model, only have one kind of mediator variable, although it is present in several paths of model: Perception. Related to both chocolate and olive oil, and to the Origin of the products, Portugal and Switzerland, Perception mediates all the relationships between Ethnocentrism and Price and Quality.

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<tr>
<th>Mediator</th>
<th>Effect</th>
<th>Children</th>
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<tbody>
<tr>
<td>PT Olive Oil Perception</td>
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<td>-1.2146</td>
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<td>Ethnocentrism -&gt; Quality Olive Oil SW</td>
<td>-0.709</td>
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<td>PT Chocolate Perception</td>
<td>Ethnocentrism -&gt; Quality Chocolate PT</td>
<td>-0.353</td>
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<tr>
<td>SW Chocolate Perception</td>
<td>Ethnocentrism -&gt; Quality Chocolate SW</td>
<td>-0.3075</td>
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*Source: the Author*

After performing the Sobel Test for all paths of the created model with mediation variables, the results show, that there is no significant mediation for all mediation variables, regarding
the Children sample, since the absolute values - table 17 - were always under 1.64. With this being, it will not validate neither for chocolate nor olive oil Hypothesis H4 and H5.

As hypothesized regarding Adults, it can be suggested that any valid effect between Ethnocentrism on either Price or Quality is based mainly on pre conceived ideas, and never by actual perception of the product.

**Conclusion**

The now ending chapter was dedicated to present the collected data through a descriptive analysis followed by the analysis of the proposed hypothesis.

The data collected provided comprehension of the dynamics of the Country of Origin effect between several groups and sub-groups that composed our sample, and both for Chocolate and Olive Oil. In fact, it was concluded that the more effect significant regarding Children, when compared with Adults. As to what the product is concerned, this effect was, generally, more significant for Olive Oil than for Chocolate.

Our general models, of both Adults and Children, although with some validation, showed to not provide significant values for our hypothesis: for the Adults sample H2A of Portuguese Olive Oil and H6A of Swiss Chocolate. The Children Sample validated H2C, H6B and H6A of Portuguese Olive Oil.

The scenario above, justified an exhaustive comprehension of the results regarding our moderators. By doing this it enabled the validation for several hypothesis of different sub-groups, which provide a portrait of distinct realities between genders, ages and education levels. On one hand some of these results were aligned with the state of the art of our field of studies, but on the other hand, a fraction of our results were not validated and require further research.
5-Conclusion

The present study, based on the Country of Origin effect, granted a general characterization of the international Olive Oil and Chocolate market, as of the Portuguese market. Focusing on Olive Oil, although far from the top producers, Portugal, with a privileged location, is a main global producer, exporter and consumer of Olive Oil.

Along with a previous stated, also, identification was found of several characteristics of each product which are impacted by the Country of Origin. Lastly it was identified and analyzed the impact of Ethnocentrism on Quality, Price and Perception on both products.

In general terms it was observed that the Country of Origin is important in the way that individuals perceive the product’s physical characteristics, but on those products that have a positive COE. This fact might justify, and should incentivize the use of a “made in” label since it adds value to the product, but at the same time, might place the product in a way, in the consumer’s mind that unable international trade. For those products with a negative COE, the previously reported effect, dilutes.

This research challenges that the idea that both quality and physical features of a product are intrinsic, since the way that each individual sees, smells, tastes and touches a product are influenced by both COE and Ethnocentrism.

On the other hand, this research strengthens the idea postulated by Kamakura (1999), that COE has a strong effect on physical perceptions, but that those perceptions not always are manifested on a higher price.

The results from this study, might have been biased due to the crises period, where individuals tend to protect their own, either individuals or products. This idea manifests itself on when a higher ethnocentric level leads the individual to purpose a smaller price, for both being well adjusted to demand and to enable trade.

This study’s sample was heterogeneous, but slightly biased towards college students. Is important to point out though, that in Portugal the schooling is now mandatory until the 12th
grade. Even though there are studies that reveal that the standard of living moderate both the effect of Country of Origin and Ethnocentrism. This study, the children’s sample was gathered in a private school, which might have a biased effect on the results. Also with a biasing effect on the results is the geographical area where the data was collected at the north of Portugal, (Porto, Santa Maria da Feira, São Joã o da Madeira and Paredes)

Another limitation is related to the type of products, since they were presented without neither brand nor package. On one hand, this fact enabled this study to refine the COE, but on the other hand creates an unrealistic scenario, where COE gains unrealistic strength.

Regarding future research, it would be interesting to repeat this study, with the same design using other types of products that incorporate more technology. All in all, the design of this study, that proposed to create a more realistic situation as possible, where the respondents had to experience the products that they were rating, implies that they would have to test and manipulate the products of future research, which mandates that the products used must be of easy manipulation, intuitive and must not raise ethical concerns. On future research the author also finds it interesting to adding to the data analysis moderated mediation, in order to analyze mediation within sub-groups.
6-Bibliography


QUESTIONNAIRE ADULTS

AZEITE

POR FAVOR OBSERVE, CHEIRE E PROVE AS DUAS AMOSTRAS DE AZEITE.

- Como classificaria o azeite português?

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- Como classificaria o azeite suíço?

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- O preço deste azeite biológico suíço é de 5€/0,5L. Por quanto é que acha que deveria ser vendido este azeite biológico português? _____________________

- Aconselha a que o nome da marca de azeite português tenha um significado em português? Sim [ ] Não [ ]

- Aconselha a que a marca do azeite português tenha referências patrióticas? Sim [ ] Não [ ]

- Aconselha a que a marca do azeite português deva estar escrita numa das línguas oficiais suíças (italiano/alemão/francês)? Sim [ ] Não [ ]

- Aconselha a que a marca de azeite português deva estar escrita em inglês? Sim [ ] Não [ ]

- Aconselha a que a embalagem de azeite português tenha imagens alusivas a Portugal? Sim [ ] Não [ ]

- Aconselha a que a embalagem do azeite português tenha imagens que, de alguma forma, lembrem a Suíça? Sim [ ] Não [ ]
CHOCOLATE

Por favor observe, toque, cheire e prove as duas amostras de chocolate.

- Como classificaria o chocolate português?

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- Como classificaria o chocolate suíço?

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</table>
Sabor: Intensidade do Leite

Densidade

Estaladiço / Crocante

- O preço deste chocolate suíço é de 5,60 € (valor excluído de transportes). Por quanto é que acha que deveria ser vendido o chocolate Português? ________

- Aconselha a que o nome da marca de chocolate português tenha um significado em português?
  Sim [ ] Não [ ]

- Aconselha a que a marca do chocolate português tenha referências patrióticas?
  Sim [ ] Não [ ]

- Aconselha a que a marca do chocolate português esteja escrita numa das línguas oficiais suíças (italiano/alemão/francês)?
  Sim [ ] Não [ ]

- Aconselha a que a marca do chocolate português deva estar escrita em inglês?
  Sim [ ] Não [ ]

- Aconselha a que a embalagem do chocolate português tenha imagens alusivas a Portugal?
  Sim [ ] Não [ ]

- Aconselha a que a embalagem do chocolate português tenha imagens que, de alguma forma, lembrem a Suíça?
  Sim [ ] Não [ ]
Questionário

Os dados fornecidos ao longo deste questionário são considerados confidenciais e em nenhum momento serão partilhados com nenhuma entidade externa à Faculdade de Economia do Porto e à organização que o promove.

O questionário terá uma duração esperada inferior a 5 minutos.

Por favor responda de forma consciente e verdadeira.

Responda às seguintes perguntas consoante o seu grau de concordância, em que 1-“Discordo totalmente”; 2-“Discordo”, 3-“Indiferente” 4- “Concordo” e 5- “Concordo totalmente”

Produção

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<tr>
<td>Saber que o produto foi produzido integralmente numa unidade fabril portuguesa é um fator importante que influencia <strong>positivamente</strong> a minha decisão compra.</td>
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<tr>
<td>Saber que todos os trabalhadores que produziram um produto são Portugueses influência <strong>positivamente</strong> a minha decisão de compra.</td>
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<tr>
<td>Saber que apenas matérias-primas portuguesas entram na composição de um produto influencia <strong>positivamente</strong> a minha decisão compra.</td>
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</table>
Embora sejam usadas apenas matérias-primas e trabalhadores portugueses na produção de um produto, o facto de a organização ser maioritariamente detida por estrangeiros influencia **negativamente** a minha compra.

### Design

|---------|------------|--------|---------------|------------|------------|------------|

O *design* de um produto é um fator importante que influencia **positivamente** a minha compra.

O facto de o *design* de um produto ter sido desenvolvido por portugueses influencia **positivamente** a minha decisão de compra.

Saber que o *design* foi produzido por uma organização portuguesa, mesmo que a atuar fora do país, influencia **positivamente** a minha decisão de compra.

### Marca

|---------|------------|--------|---------------|------------|------------|------------|

O facto de a Marca estar escrita em português influencia **positivamente** a minha compra.

As Marcas portuguesas devem fazer alusão a Portugal.
As Marcas portuguesas devem estar escritas em português

Se o produto for apenas para exportar, a marca não deve estar escrita em Português.

Por favor, demonstre o seu grau de concordância com as frases abaixo, numa escala de 1 a 5, em que 1-“Discordo totalmente”; 2-“Discordo”, 3-“Indiferente” 4- “Concordo” e 5- “Concordo totalmente”

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<tr>
<td>A população portuguesa deve comprar sempre produção nacional em vez de recorrer a importações.</td>
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<tr>
<td>Apenas os produtos que não são produzidos em Portugal devem ser importados</td>
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<tr>
<td>Compre produtos Portugueses. Mantenha Portugal a trabalhar.</td>
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<tr>
<td>Produtos Portugueses sempre.</td>
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<td>Comprar produtos a estrangeiros é antiportuguês.</td>
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<td>Não é correto comprar produtos ao estrangeiro porque isso põe a população portuguesa sem emprego.</td>
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<td>Um verdadeiro português deve sempre comprar produtos portugueses.</td>
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<td>Nós devemos comprar produtos produzidos em Portugal em vez de deixar que outros países fiquem ricos à nossa custa.</td>
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<td>É sempre melhor comprar produtos Portugueses.</td>
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<tr>
<td>Deve haver muito pouco comércio ou compra de bens de outros países, a não ser por necessidade.</td>
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<td>Deveriam ser impostos limites a todas as importações.</td>
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<td>Portugal não deve comprar produtos estrangeiros, porque isto fere as empresas Portuguesas e causa desemprego</td>
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Pode-me custar no longo prazo, mas eu prefiro apoiar os produtos portugueses.

Os produtos estrangeiros deviam ser taxados de forma pesada para reduzir a sua entrada em Portugal.

Os estrangeiros não deveriam ter permissão para colocar os seus produtos nos nossos mercados.

Apenas devíamos comprar a países estrangeiros os produtos que nós não conseguimos obter dentro do nosso próprio país.

Consumidores Portugueses que comprem apenas produtos que são feitos noutros países são responsáveis por pôr outros portugueses no desemprego.

Idade: ____________

Sexo:

Masculino □ Feminino □

Nível Educacional: ___________________

Nacionalidade: ________________
**QUESTIONNAIRE CHILDREN**

**AZEITE**

*Por favor observa, cheira e prova as duas amostras de azeite.*

- Como classificarias o azeite português?

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Como classificarias o azeite suíço?

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- Na tua opinião o azeite biológico português deveria ser mais caro ou mais barato que o Suíço? Mais Caro [□] Mais Barato [□] Igual [□]

- Aconselhas a que o nome da marca de azeite português tenha um significado em português? Sim [□] Não [□]

- Aconselhas a que a marca do azeite português tenha referências ao teu país? Sim [□] Não [□]

- Aconselhas a que a marca de azeite português deva estar escrita em inglês? Sim [□] Não [□]

- Aconselhas a que a embalagem de azeite português tenha imagens alusivas a Portugal? Sim [□] Não [□]
- Aconselha a que a embalagem do azeite português tenha imagens que, de alguma forma, lembrem a Suíça? Sim [ ] Não [ ]

**CHOCOLATE**

**POR FAVOR OBSERVA, TOCA, CHEIRA E PROVA** AS DUAS AMOSTRAS DE CHOCOLATE.

- Como classificarias o chocolate português?

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• Na tua opinião o chocolate português deveria ser mais caro ou mais barato que o Suíço? Mais Caro □ Mais Barato □ Igual □

• Aconselhas a que o nome da marca do chocolate português tenha um significado em português? Sim □ Não □

• Aconselhas a que a marca do chocolate português tenha referências ao teu país? Sim □ Não □

• Aconselhas a que a marca do chocolate português deva estar escrita em inglês? Sim □ Não □
• Aconselhas a que a embalagem do chocolate português tenha imagens alusivas a Portugal? Sim □  Não □

• Aconselha a que a embalagem do chocolate português tenha imagens que, de alguma forma, lembrem a Suíça? Sim □  Não □
**Questionário**

Os dados fornecidos ao longo deste questionário são considerados confidenciais e em nenhum momento serão partilhados com nenhuma entidade externa à Faculdade de Economia do Porto e à organização que o promove.

O questionário terá uma duração esperada inferior a 5 minutos.

Por favor, responde de forma consciente e verdadeira.

Responde às seguintes perguntas consoante o teu grau de concordância, em que 1-“Discordo totalmente”; 2-“Discordo”, 3-“Indiferente” 4- “Concordo” e 5- “Concordo totalmente”

### Produção

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<tr>
<td>Saber que o produto foi totalmente produzido numa fábrica portuguesa é um fator importante que me leva a querer comprar aquele produto.</td>
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<td>Saber que todos os trabalhadores que produziram um produto são Portugueses leva-me a querer comprar aquele produto.</td>
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<td>Saber que apenas ingredientes portugueses entram na composição de um produto leva-me a querer comprar aquele produto.</td>
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<tr>
<td>Apesar de serem usadas apenas ingredientes portugueses e trabalhadores portugueses no fabrico de um produto, o facto de a organização ser estrangeira leva-me a não querer comprar aquele produto.</td>
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### Design

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<tr>
<td>O facto do aspeto de um produto ter sido desenvolvido por portugueses leva-me a querer comprar aquele produto.</td>
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<td>Saber que o aspeto foi concebido por portugueses, mesmo que esteja fora de Portugal, leva-me a querer comprar aquele produto.</td>
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### Marca

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<td>As marcas portuguesas devem fazer lembrar a Portugal.</td>
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<td>As marcas portuguesas devem estar escritas em português</td>
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<tr>
<td>Se o produto for apenas para exportar, a marca não deve estar escrita em português.</td>
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</tbody>
</table>
Por favor, demonstra o teu grau de concordância com as frases abaixo, numa escala de 1 a 5, em que 1-“Discordo totalmente”; 2-“Discordo”, 3-“Indiferente” 4- “Concordo” e 5- “Concordo totalmente”

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>A população portuguesa deve comprar sempre produção nacional em vez de recorrer a importações.</td>
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<tr>
<td>Apenas os produtos que não são produzidos em Portugal devem ser importados</td>
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<tr>
<td>Compre produtos portugueses. Mantenha Portugal a trabalhar.</td>
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<tr>
<td>Produtos portugueses sempre.</td>
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<tr>
<td>Comprar produtos a estrangeiros é antiportuguês.</td>
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<tr>
<td>Não é correto comprar produtos ao estrangeiro, porque isso põe a população portuguesa sem emprego.</td>
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<tr>
<td>Um verdadeiro português deve sempre comprar produtos portugueses.</td>
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<tr>
<td>Nós devemos comprar produtos fabricados em Portugal, em vez de deixar que outros países fiquem ricos à nossa custa.</td>
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<tr>
<td>É sempre melhor comprar produtos portugueses.</td>
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<tr>
<td>Deve haver muito pouco comércio ou compra de bens de outros países, a não ser por necessidade.</td>
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<td>Deveriam ser impostos limites a todas as importações.</td>
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<tr>
<td>Portugal não deve comprar produtos estrangeiros, porque isto prejudica as empresas portuguesas e causa desemprego</td>
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<tr>
<td>Pode-me custar no futuro, mas eu prefiro apoiar os produtos portugueses.</td>
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<tr>
<td>Os produtos estrangeiros deviam pagar mais impostos para reduzir a sua entrada em Portugal.</td>
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<tr>
<td>Os estrangeiros não deveriam ter permissão para colocar os seus produtos nos nossos mercados.</td>
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<tr>
<td>Apenas devíamos comprar a países estrangeiros os produtos que nós não conseguimos obter dentro do nosso próprio país.</td>
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</tbody>
</table>
Consumidores portugueses que compram apenas produtos que são feitos noutros países são responsáveis pelo desemprego de outros portugueses.

Idade: ____________

Sexo:

- Masculino [ ]
- Feminino [ ]

Nível Educacional: ________________

Nacionalidade: ________________
### 7.3-Moderation Spreadsheet

<table>
<thead>
<tr>
<th>Effect</th>
<th>Sample A</th>
<th>Sample B</th>
<th>Comentario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Size</td>
<td></td>
<td>&lt;- Enter Data Here</td>
<td></td>
</tr>
<tr>
<td>Regression Weight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Error (S.E.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>t-statistic</td>
<td></td>
<td>&lt;- View Results Here</td>
<td></td>
</tr>
<tr>
<td>p-value (2-tailed)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
(m-1)^2 \quad 1 \\
(m+n-2) \quad -2 \\
(n-1)^2 \quad 1 \\
\sqrt{1/m+1/n} \quad #DIV/0! \\
1st half denom \quad 0 \\
2nd half denom \quad 0 \\
\sqrt{1st half + 2nd half} \quad 0 \\
Full denom \quad #DIV/0! \\
numerator \quad 0 \\
\]

Source: the author adapted from http://statwiki.kolobkreations.com/wiki/Main_Page

### 7.4-Mediation Spreadsheet

- **Unstandardized coefficient of IV -> Mediator (a):**
- **Standard error of IV -> Mediator (se a):**
- **Unstandardized coefficient of M->DV with IV in eqn (b):**
- **Standard error of M->DV with IV in eqn (se b):**
- **Sobel's z**

Two-tailed p value

Source: the author adapted from http://www.unc.edu/~preacher/sobel/sobel.htm