#### WAGENINGEN UNIVERSITY

#### Marketing and Consumer Behavior group

# Country-of-origin Effect on Consumer's Product Preference of Labelled Organic Food

**Major Master Thesis** 

Jing Dong

July, 2014

Reg. number: 840124189060

MSc program: Organic Agriculture

Supervisor: Drs. Ynte van Dam

Thesis code: MCB-80436



#### Thesis supervisor

Drs. Ynte van Dam Assistant professor, Marketing and Consumer Behaviour Group Wageningen University

#### Thesis co-reviewer

Dr. Ivo van der Lans Assistant professor, Marketing and Consumer Behaviour Group Wageningen University



#### Abstract

This study investigates the possible country-of-origin effect on consumer's perception of organic certification labels which may leads to alternative choice preference on organic food product. An on-line survey was conducted among the Dutch students of Wageningen University using fully self-administered questionnaire with all closed questions. N = 303 responses were analysed with quantitative method to test the effect of three country-of-origin labels (the Netherlands, Turkey and Brazil), three of organic certification labels (EKO, EU organic label and the local organic certification labels of the countries-of-origin) on two product categories (coffee and yoghurt) with three measurements (trust, quality perception and product preference). Result show that the trust, quality perception and product preference of food product from high to low according to different level of product-country match are: favourable > medium > unfavourable. The trust, quality perception and product preference regarding organic certification labels are higher on the certification label of the marketing country than the neutral certification label and lowest on organic certification label from the producing country. There is no significant interaction effect between country-of-origin label and organic certification label on the product preference. So the conclusion is that the possible country-of-origin effect on the perception of organic certification label is not tested to be significant in this research.

**Keywords**: Organic food, Certification Label, Country-of-origin effect, Trust, Quality perception, Product preference

# **Table of Contents**

1. I	ntroductior	۱	1
1.1.	Backgrou	und	1
1.2.	Problem	description	2
1.3.	Problem	statement	3
1.4.	Research	n questions	3
1.5.	Research	n objective	4
2	Theoretical	Framework	4
2.1.	Food Qu	ality and Informational Labelling	4
2.2.	Consume	er's evaluation of labels	6
2.3.	Concept	ual framework	7
3. I	Methodolog	gy	10
3.1.	Study de	sign	10
3.2.	Product p	profiles and label selection	10
3.3.	Measure	s in main questionnaire	12
3.4.	Data coll	ection	12
3.5.	Analysis	plan	13
4. F	Results		13
4.1.	Sample of	description	13
4.2.	Measure	description	14
4.3.	Label aw	areness	15
4.3.1	Countr	y-of-origin Label	15
4.3.2	Organi	ic Certification Label	15
4.4.	Testing h	ypotheses	16
4.4.1	Hypoth	nesis 1	16
4.4.2	Hypoth	nesis 2	17
4.4.3	Hypoth	nesis 3	19
4.5.	Further a	inalysis	19
5. (	Conclusion	and discussion	21
Refe	ences		25
Appe	ndix l	Organic certification labels	28
Appe	ndix II	Sample groups and product profile assignment	28
Appe	ndix III	Questionnaire	29

Appendix IV	Statistical output	33
-------------	--------------------	----

## **List of Tables**

Table 1 Motivations for country-of-origin selection and organic preference	6
Table 2 Selection of products, countries-of-origin and organic certification labels	11
Table 3 Statements and related measures in product evaluation	. 12
Table 4 Mean scores for awareness of Country-of-origin Labels	. 15
Table 5 Mean scores for awareness of Organic Certification Labels	. 15
Table 6 Descriptive result of effect of Country-of-origin Label	. 16
Table 7 ANOVA of Effect of Country-of-origin Label	. 17
Table 8 Descriptive result of effect of Organic Certification Label	. 18
Table 9 ANOVA of effect of Organic Certification Label	. 18
Table 10 Statistics of Between-Subjects Effects on Product Preference	. 19
Table 11 Statistics of Between-Subjects Effects on Trust	. 20
Table 12 Statistics of Between-Subjects Effects on Quality Perception	. 20

# List of Figures

Figure 1 Conceptual framework: Effect of Country-of-origin label and Organic certification label	el on
product preference	8
Figure 2 Computation of measurement from related statements	14
Figure 3 Interaction effect of Country-of-origin label and Organic certification label on Tru	st of
coffee	21

#### 1. Introduction

#### 1.1. Background

Organic food is one of the most dynamic and booming markets in the food sector and enjoys 23% of increase on average every two years since 1999 regarding market size worldwide (15.2 billion USD in 1999 and 62.9 billion USD in 2012) (FiBL and IFOAM, 2013).

There are a lot of consumer studies conducted throughout the world to understand the motivation for purchasing organic products and the values behind. The main reasons for organic purchasing are health/ safety concerns, environmental friendliness and hedonic values such as enjoyment or life style. Well-being of people and animal welfare are also mentioned quite often, but more by Northern European consumers than consumers in Mediterranean countries or Asian countries (Baker *et al.*, 2004; Makatouni, 2002; Roitner-Schobesberger *et al.*, 2008; Thøgersen, 2010; Yin *et al.*, 2010). In some studies, consumers perceive organic food to be fresh or seasonal and more regionally produced (Baker *et al.*, 2004; Roitner-Schobesberger *et al.*, 2008; Yin *et al.*, 2010).

The growth of consumer demand of organic food is met in the market in various ways. There are mainly three types of venues where consumers can source organic food products – mainstream venues such as supermarket and conventional grocery store; specialized retailing venues such as natural food store or organic product store; and direct-to-consumer markets such as open market, direct farm sale and community-supported agriculture (CSA). In recent years, organic sales in mainstream market and specialized natural product retailing have become the dominant market compared to direct sales in the US which is currently the largest country of organic consumption in the world. The sales of organic products through conventional retailers such as supermarkets and grocery stores in the US increased rapidly from less than 10% to almost half within five years' time (Dimitri and Greene, 2000).

When purchasing organic food in mainstream markets and specialized retail stores, consumers do not have the direct connection with the producers of their food. So they need to totally rely on the information given on the package of the products or the in-store signs to distinguish those from conventional ones. This situation put labelling of organic certification in a key position in order to make sure that organic food products gain the price premium as well as market share.

Organic labelling is the feature marketing strategy for organic food product and seems to play an important role in the market. Since organic production is credence attribute of the goods, the consumers cannot observe whether a product is produced organically, a label of organic certification can serve as a tool of communication, provide information about the nature of the offering, assures the consumers that the product was grown/ raised, processed and packaged according to certain rules which limit harmful inputs, protect the environment and guarantee welfare (Lohr, 1998). Research shows that the sale of organic food is positively affected when having an organic logo such as USDA seal but not with a simple listing of "natural" in the product description (Bezawada and Pauwels, 2013).

#### 1.2. Problem description

The consumers' perception of organic labels and certification logos have been keeping researchers interested since quite some years ago. However when looking into the literatures on this topic, it is surprising that the awareness of organic certification logos is consistently low (less than medium level) no matter the consumers were asked one to four years ago (Gerrard *et al.*, 2013; Janssen and Hamm, 2011) or around twenty year ago (Hutchins and Greenhalgh, 1997).

In the annual report "The World of Organic Agriculture 2013" published by FiBL and IFOAM, there are 162 countries which are involved in certified organic agriculture and 86 countries with organic regulations by the end of 2011. Nowadays, there are enormous number of organic certification schemes with own standards and own logos in the market. While the organic labels purport to prevent information asymmetries by providing transparency, the current situation is rather confusing to the consumers which causes uncertainty and affects people's confidence about organic products (Sonderskov and Daugbjerg, 2011).

Even though organic label gains low awareness and sometimes causes confusion to the consumers, quite a few participants in related researches declared that they trust the credibility of some certification logos shown or named to them (Nilsson et al., 2004; Uysal et al., 2013; Gerrard et al., 2013). Janssen and Hamm (2011) found that there are a number of aspects which consumers associate with the logo and the corresponding certification scheme that result in particular preference and high trust level of certain organic labels. One frequently mentioned aspect was "domestic origin of the product". In a research conducted by Gerrard et al in the UK, consumers were asked about the indication of national provenance of the product and around half of the respondents thought that Organic Farmers and Growers logo (OF&G, a leading private organic control body and certifier in the UK) represents a British product, although it is not necessarily true. The similar responses were seen also for Soil Association logo (another influential organic agriculture organization based in the UK) in slightly smaller group of respondents. Based on those findings, we could say that sometimes the trust in organic certification labels may be related to the perception of the originated country of the certification and the misunderstanding that the origin of the certification is always the same as the origin of the product itself. In these cases, the trust of such organic logos is actually an appearance of country-of-origin effect.

In 2008, it is reported that in stores of Whole Food Market, the largest supermarket of organic food supply in the US, there are some frozen organic vegetables sold with USDA organic label and another country-of-origin label beside it says that they were produced in China. People started to question about the quality of certified organic food, criticized that the inspection and supervision of USDA for organic production in other countries (China) may not be the same as in the US. Whole Food Market had paid the cost of this mistrust crisis by responding with explanations to the public and not sourcing any food product from China except for frozen edamame until 2010 (Whole Food Market website). Again, the country-of-origin effect makes the consumers re-consider the credibility of the organic certification logo that they have little knowledge on.

Country-of-origin is another credence attribute of food product, same as organic production that consumers could neither observe it before purchase nor experience it after consumption, yet it plays an important role in consumers' perceptions and preferences of food products because it

#### WUR Major Master Thesis

helps the consumers to form the expectation for future/ repeating purchase based on the previous experience of the product itself. Country-of-origin effect is a multidimensional concept. The match (or mismatch) of product category and country image can be favourable or unfavourable for the product as consumers perceive country-of-origin as an extrinsic cue of the product and may evaluate it as a symbol of premium quality or potential risk (Bilkey and Nes, 1982; Roth and Romeo, 1992). Country-of-origin effect can be country-specific (influence the perception of the products from the country in general), while in most cases product-specific (level of influence depends on product category), and sometimes even attribute-specific (influence specific attribute of the product) (Chryssochoidis et al., 2007). Besides the perceived correlation of product category and country image, the cause of Country-of-origin effect can also be traced back to consumer ethnocentrism. Ethnocentrism is defined as a property of personality that reflects the view of things based on the concept of group feelings. The consumer ethnocentrism (CE) triggers different attitudes toward domestic products and imported products (Chryssochoidis et al., 2007). It is mentioned before that organic food products are perceived to be more regionally/ locally produced (which is not always the case). The preferences of locally produced and organically produced products share the same concern behind: minimum environmental impact, support of economy (Hughner et al., 2007) and the welfare of people.

Both organic certification label and country-of-origin label should function to prevent market failure and ensure consumer welfare by providing correct and accurate information about the unobservable attribute of the products. However the examples show that when there is only certification label on the product while the origin of the product remains unknown to the consumers, they may misinterpret the information on the label and perceive the product differently. When both labels are provided they may impact each other and cause different perceptions. Thus it is crucial to understand consumer's perception towards organic products with these influencing factors in order to develop appropriate marketing strategies and protect the welfare of the consumers as well as the food producers.

#### 1.3. Problem statement

When purchasing organic food, the origin of the product and the certified organic production are considered as the two key factors which impact the consumers' preference. Some researches regarding specific organic food products show that both certification label and country-of-origin label are evaluated to be important and favourable of the product by the consumers as they represent certain level of product quality (Mauracher *et al.*, 2013; Wang *et al.*, 2013). Yet it is not clear how these two factors interact and how they together impact consumers' perception and product preference.

#### 1.4. Research questions

The main research question is:

# What is the interaction between organic certification label and country-of-origin label and how does this interaction affect consumers' perceptions and preferences on food product?

To answer this main research question, the following sub questions have to be answered:

- What is the consumer's perception of food quality derived from different organic certification labels?
- What is the consumer's perception of food quality derived from different country-of-origin labels?
- How does the attitude of consumers towards organic certification label and preference of food product differ when different country-of-origin information (label) is provided?

#### 1.5. Research objective

The objective of this research is to:

- a. Find out the differences of perceptions and product preferences of organic food product when they are labelled with different organic certifications and country-of-origins, and
- b. Examine the country-of-origin effect on consumers' attitude and product preference of organic food with certification labels from different origins.

#### 2. Theoretical Framework

#### 2.1. Food Quality and Informational Labelling

Product quality is defined as a bundle of attributes that determine the performance of the product (Caswell and Mojduszka, 1996). In the Total Food Quality Model developed by Grunert *et al.* (1996), the buying intention of a food product before purchase is based on the perceived cost and expected quality which derived by the consumer from cost cues and quality cues. There are two types of quality cues in the model. The intrinsic quality cues refer to physical characteristics of the product such as colour and aroma. All other characteristics that cannot be experienced from the product itself remain extrinsic quality cues such as brand and the place of purchase. In other words, both intrinsic and extrinsic quality cues are used by the consumers as the indicators of food quality and help them to form certain expectations of the product. After the purchase and meal preparation or consumption, the expected quality usually determines consumer's satisfaction with the product and hence impact the perception and behaviour of future purchases (Grunert, 2002).

In other economic models, product attributes are categorized into search attributes/ goods, experience attributes/ goods, and credence attribute/ goods (Darby and Karni, 1973). Search attributes can be directly observed by the consumers when examining the product before purchasing, such as appearance of food. There is basically no information issue in this part of market because diversity of goods is supplied and the consumers have relatively abundant and transparent information so they can make well-founded selections and are less likely to be harmed from fraud (Caswell and Mojduszka, 1996).

For experience attributes, the quality can only be determined after the consumer buys and uses the goods. A common example for experience attribute is the taste of food. The firms can get

#### WUR Major Master Thesis

advantage by communicating product knowledge through quality signalling like advertisement, labelling and warranties (mostly for non-food products) to the consumers. When the information is effectively communicated and the consumers are well informed, price premium will be paid to high quality products. Though there is no penalty for selling inferior products, the experience of quality will prevent the consumers from repeated purchases and eventually make the firms offering low quality and misleading information loses money, hence mitigate the communication problem and improve the function of the market.

Caswell and Mojduszka stated in their paper in 1996 that when discussing credence attributes or goods using economic models of quality, they "hit a dead end" due to the huge imperfection of information for such goods which simply makes these markets for quality fail to function well. Because the consumers cannot make judgement of the product quality from credence attributes even after consumption, there is an incentive for the sellers to have unfair behaviour such as giving false quality claim for profit reason. The credence attributes are often related to the process of food product such as animal welfare and impact on the environment. Unlike experience attributes, it is impossible (or costs too much) for the consumers to use credence attributes as quality indicator to make decision on future purchases. Nevertheless, quality signalling may still function but requires a reputable third party as a certification body which the consumers can trust (Caswell and Mojduszka, 1996; McCluskey, 2000). In this context, the government often plays this role. One example is the introduction of mandatory EU logo for organic food with indication of the origin of the raw materials (EU agriculture, non-EU agriculture or EU/non-EU agriculture if the raw materials come from both regions) since July 2010.

It can be concluded that informational labelling plays an important role in the food market especially for credence goods and experience goods to mitigate information asymmetry between demand side and supply side. A well functioned informational labelling system (usually independently certified, accredited or at least subject to legislation and control) is an important means of shaping consumers' way of quality perceiving, purchasing and consuming food product, as well as producers and sellers' offering and marketing practices (Caswell and Mojduszka, 1996).

In a research paper published in 2002 with regard to consumers' perception of quality in organic food, Cicia *et al.* investigated the correlation between product attributes and the perceived quality of organic extra virgin olive oil in Italy. All four attributes tested in the research – price, geographic origin, organic certification institute and visual appearance – were significantly related to perceived quality of the product (Cicia *et al.*, 2002). Visual appearance is clearly an intrinsic quality cue and search attribute, the most straight forward characteristic to the consumers to make judgement of quality. Organic production and geographic origin are both credence attributes of food product. They cannot be used by the consumers to form quality expectations unless the information is given through certification labels or statements on the package which make them become extrinsic quality cues. Moreover, the communication of these attributes can only function well when the information is trusted and correctly interpreted by the consumers. Price can be a cost cue and an extrinsic quality cue. However price is not the focus of this research.

People who have the tendency of making organic purchase or seek for (or avoid) products from certain countries may also look for something other than what they can experience during consumption. The reasons and values behind the preference of organic food and food product from certain countries have multi-dimensional meanings.

#### WUR Major Master Thesis

It is demonstrated in many researches that ethical concerns are very important for the consumers as motivations to buy organic foods. The ethical motives towards food choice can be scaled into three dimensions: the ecological motives which reflect concerns about animal welfare and environmental friendliness; the political values which reflect the human right concerns and the political acceptance of producing countries of food; and the religious motives which influence the choice of certain food product based on one's religion (Lindeman and Vaananen, 2000; Honkanen*et al.*, 2006). Besides these ethical concerns, another motive for organic purchase identified is that the consumers think that the consumption of organic food is fashionable and represent certain lifestyle (McCluskey, 2000; Hughner*et al.*, 2007).

Similarly, country-of-origin has symbolic and emotional meanings to consumers in addition to its role of a cognitive cue for product quality. The process of country-of-origin effect on perception of product can be further described as affective and normative aspects. Consumers process the information of country-of-origin based on their perception of that country and the match between the country image and the specific product they evaluate. The product-country images contain a series of mental representations of the country's people, culture, national symbols and products. In cognitive mechanism of country-of-origin effect, product-country images help consumers to form guality related expectations through the impression of the country and the direct or indirect product experiences. Product-country images also work in affective aspects of the country-of-origin effect. For example the products from Europe or the US usually receive positive attitudes among consumers in developing countries such as India with evaluation of high guality due to their degree of economic development. The positive attitudes also come from the admiration of "western" lifestyles. Here the consumption and ownership of products from western countries can be seen as an "expressive" behaviour and a fulfilment of social and self-actualization needs. Consumers may tend to or avoid purchase products from certain countries based to their social and personal norms, as a "vote" pro or contra the producing country's policies and practices of its government. In other words, the country-of-origin needs to be politically in line with a person's normative view or interest to gain positive attitude towards its products. Buy domestic is another common norm that is related to country-of-origin. It is a moral action to purchase the products manufactured or grown in one's own country because this represents a supporting behaviour of the country's economy. The normative aspect of country-of-origin is strongly motivated by consumers' ethnocentrism (Verlegh and Steenkamp, 1999).

The motivations/ considerations for selecting organically produced food and country-of-origin are summarized as follows (Table 1):

Organic	Country-of-origin
Health/ Food safety	Product-country image
Fashionable/ Lifestyle	Expressive – Lifestyle
Environmental concern/ Animal welfare/ human	"Customer voting"/ Ethnocentrism
welfare	

#### Table 1 Motivations for country-of-origin selection and organic preference

#### 2.2. Consumer's evaluation of labels

Organic label and country-of-origin label can be seen as independent extrinsic cues to the

consumers and lead to certain product preference according to their quality and perceptions.

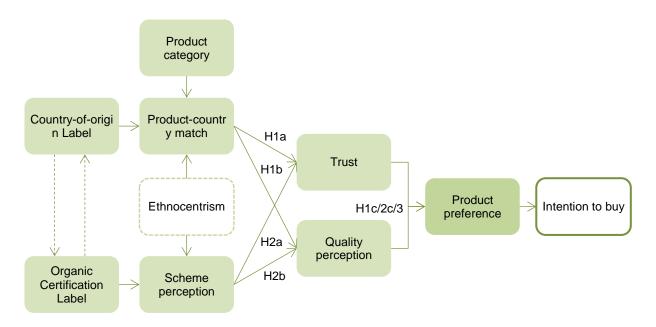
When a food product with organic claim is presented to the consumers, they first look at the certification label and process the information then form perception based on their knowledge about the label as well as their belief and trust level of the certification organization. There are different organic certification schemes and standards which may result in difference in consumers' perceptions. For example, there is the mandatory EU logo (in Europe), National organic logos accredited by the government, third-party commercial certification bodies and farmers' associations and umbrella organisations. All these certification schemes have different standards and control. Consumers' motivation of purchasing will be associated with their understanding and trust of the label on the package and determine their product preferences. A research carried out in five European countries on different organic certification schemes found out that the preference for a particular organic label comes from several corresponding added values such as perceived stricter standards and control, familiarity of the logo, trust in general and perceived domestic origin of the product (Janssen and Hamm, 2011).

If a food product is provided with information of its country-of-origin, the consumers will form product-country images based on their view of the country associated with specific product category. The perceptions can be formed based on the level of economic development of the producing country (i.e. a general preference of product from developed countries in developing countries), as well as cultural context resulting in a package of stereotypes (e.g. preference of French wine, Dutch cheese, Italian ham, Chinese tea and so on).

The information will be integrated by the consumers when a food product is labelled with organic certification logo and the country-of-origin and both labels are clearly visible to them. Different attributes will interplay in the process and may lead to alternative product preferences compared to the situation when only a single cue is provided.

#### 2.3. Conceptual framework

Based on the descriptions above, the consumers' process of information on organic production and country-of-origin which leads to certain product preference is illustrated in the following theoretical model (Figure 1):



# Figure 1 Conceptual framework: Effect of Country-of-origin label and Organic certification label on product preference

In the paper by Roth and Romeo (1992) regarding product category and country image perception match, the operationalized country image has four dimensions in general – innovativeness, design, prestige and workmanship. Roth and Romeo also addressed different situations of product-country association based on the perceived importance of product features and country image. The match of product and country image would be favourable when the feature of the specific product category is important to the consumers and the country is positively perceived on that feature. Conversely, if the country is perceived to be weak on the important feature of that product category, the product-country match would be unfavourable. In the process of food purchase, prestige is one of the most important dimensions of consumer's evaluation especially for the products that are imported from another country. Here prestige is defined as the exclusiveness of the product and reputation of the producing country. It is obvious that a favourable product-country match.

One important reason for the consumers to seek origin information is that in a highly globalized market which products are becoming more complex, the information of origin as an indicator of quality can simplify the process of choice making for the consumers (Skaggs *et al.*, 1996). Quite often in reality, it is very difficult to identify the country-of-origin of a product due to the growth of multinational companies and the emergence of products which raw materials sourced from one country but processed in another country or hybrid products which components sourced from many countries (Ahmed *et al.*, 2004).

For the same purpose consumers make identification of country-of-origin through well-known brands when the origin of the product is rather blurred to them. For example McDonald's and Starbucks are perceived to be the US, Carrefour is French. For agricultural/ food product, this identification is very likely to be made on the processed end product instead of raw materials due to lack of knowledge in this field (e.g. Italian coffee, British tea).In these cases, country-of-origin effect occurs through consumer's stereotyping of particular country associated with the brand or

end product even if the product is not originally produced in that country.

Thus, the countries which do not produce specific product but is famous for processing or has renowned brand(s) of that product can be seen as an ambiguous country-of-origin. And the first hypothesis of this research is:

**H1:** The consumer's trust (H1a), quality perception (H1b) and preference (H1c) of organic food product from high to low are: favourable product-country match > ambiguous/ medium level product-country match > unfavourable product-country match.

Many studies show that the geographic origin of food product is important to organic consumers. They have a preference of domestic products and sometimes the assumption that the origin of the product is the same as the origin of organic certification label (Hughner *et al.*, 2007; Kim*et al.*, 2008; Janssen and Hamm, 2011; Janssen and Hamm, 2012a; Gerrard *et al.*, 2013; Wang *et al.*, 2013). When produced in one country but sold in another country, an organic product can get its certification logo accredited by an organization or the government in the marketing country. According to the researches by Janssen and Hamm, consumer's attitudes towards an organic certification scheme are related to several elements such as trust, credibility, and underlying standards. Awareness of the organic certification logo is a prerequisite to the consumers for an evaluation and familiarity of the logo leads to certain level of preference (Janssen and Hamm, 2011; Janssen and Hamm, 2012b). Since the consumers tend to prefer the organic logo that is more familiar to them for better evaluation, it can be hypothesised that:

**H2:** The consumer's trust (H2a), quality perception (H2b) and preference (H2c) of organic product certified by the importing country are higher than the same product certified by the exporting (producing) country.

In a multiple cue situation, consumers evaluate the product by allocating different judgement-weight and giving quality rating to each indicator they use. The integrated information forms the total perception and finally leads to specific product preference. Higher importance will be given to the cues which are highly familiar or distinctive to the consumers (Jo *et al.*, 2003). Sometimes people ignore quality labels on the product due to lack of awareness and knowledge about that label (Grunert, 2002), which means small judgement-weight will be given to that label during product evaluation as an unfamiliar cue. Both country-of-origin label and organic certification label are of certain level of distinctiveness. It is assumed that consumer's familiarity and knowledge of product-country image match is usually higher than their familiarity and knowledge of organic certification logos especially when this match is favourable. Thus, when the two factors are given to the consumer together, country-of-origin label will play a dominant role in formation of product perception and preference compared to organic certification label. In other words:

**H3:** There is interaction effect between country-of-origin label and organic certification label on consumer's product preference in which the effect size of organic certification label is smaller when the product-country match is favourable compared to unfavourable product-country match.

### 3. Methodology

#### 3.1. Study design

In order to test the hypotheses and answer the research questions, a consumer survey was conducted with fully structured questionnaire covering all the issues above. The survey examined three aspects of evaluation of food product: trust, quality perception and product preference.

A screening question was set in the beginning of the questionnaire to select respondents who hold a Dutch nationality so that the result could reflect possible existence of ethnocentrism in the model.

The questionnaire consists three parts. First, the respondents were asked about their frequency of purchasing the selected products from supermarket as warm-up questions.

The second part contains main questions which measure consumers' perception of countries-of-origin in terms of product-country image association and attitude towards the national organic certification labels. Pictures of product package with different combinations of country-of-origin label and organic certification label were shown to the respondents one by one with a number of statements regarding product-country match, perceived quality and trust of the labels, product preference, buying intention and willingness to pay a price premium. The respondents were asked to rate their agreement level to these statements related to each product using 7-point Likert scales individually.

After the main questions, demographic information of age, gender, education level and organic food purchasing frequency was collected to end up the survey.

#### 3.2. Product profiles and label selection

The full profiles of product are 2 (product category)  $\times$  3 (country-of-origin)  $\times$  3 (organic certification label) = 18 combinations in total. The three countries-of-origin are with favourably, unfavourably or ambiguous/ medium level match of product and country images. The organic certification labels of the producing country and the marketing country are tested together with a neutral label without nationality.

The selection of products and corresponding countries-of-origin should comply with the following criteria:

- The product should be easily accessible and familiar to the consumers;
- The product category is widely known for having organic products;
- No deep processing of the product/ raw material usually sourced from one country to minimize the confusion of multiple countries of origin for one product;
- Certain level of exclusivity for the producing countries as this research mainly focus on prestige dimension of product-country image, yet the selected countries should be replaceable with other countries-of-origin on the same level;
- Product can be marketed branded or unbranded to avoid strong impact on product perception from brand.

Table 2 shows the selection of products, countries-of-origin and organic certification labels for this research. Two product categories are selected according to the criteria.

Product category	Coffee		Yoghurt				
COOL Org. label	Brazil	Turkey	The Netherlands	The Netherlands	Turkey	Brazil	
EU logo	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		
NL – EKO	$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$		
NL – Milieukeur			$\checkmark$	$\checkmark$			
BR – Organico Brasil	$\checkmark$						
TR – Organik Tarim							

Table 2 Selection of products, countries-of-origin and organic certification labels

Coffee and yoghurt are both frequently purchased and consumed by the consumers in large quantity. There are plenty of organic coffee and yoghurt products in the market, so the consumers should have less difficulty to make evaluation when considering organic products of these two categories.

Based on the product categories, three countries-of-origin selected are the Netherlands, Brazil and Turkey. The Netherlands is considered to be the country where the products are sold and is included in the profiles for both products because the survey took place in the Netherlands. The strong reputation of dairy production makes the Netherlands the country-of-origin that enjoys a favourable match of product-country image for yoghurt. It is assumed to unfavourably match with coffee production as it is the importing country of coffee.

Brazil is selected to be the country-of-origin which has favourable match of product-country image for coffee. It is the largest exporter of coffee in the world with a large proportion going to Europe according to ICO (International Coffee Organization) statistics. It is also one of the leading countries in organic agricultural production as well as organic certification in Latin America with own national certification logo (Wilier and Kilcher, 2012). However Brazil has a rather weak country image for diary production, so it is assumed that the association between yoghurt and Brazil as producing country is unfavourable.

The majority of organic agricultural product produced in Turkey is for export and mainly supplying the European market (Wilier and Kilcher, 2012). Turkey has a strong tradition of coffee culture and it is seen as the country that introduced coffee to Europe. The famous Turkish coffee makes a country image with linkage to coffee product. However it is not the country which coffee plants are grown. So Turkey is set as the country-of-origin which has an ambiguous product-country association for organic coffee. For yoghurt, Turkey is assumed to have a medium level of product-country match.

The organic certification labels selected for all countries are national logos developed by the government or the national agricultural organization. The national certification logo for the Netherlands is EKO, the logo for Brazil is Organico Brasil and the logo for Turkey is Organik Tarim Trkiye Cmhuriyeti. The EU logo was included in the survey as a neutral certification logo without any country stereotyping. Another reason to include the EU logo is that this logo is mandatory on all organic products sold in Europe so it is assumed to have higher awareness compared to the

other organic certification logos. There should be significant difference seen between all national logos and the EU logo due to familiarity difference. Besides EU logo, another Dutch environmental certification logo Milieukeur was included together with EKO when the Netherlands is being evaluated as a producing country. The detail information for all selected organic certification logos is listed in Appendix I.

#### 3.3. Measures in main questionnaire

For each product, there are in total 15 statements under the picture of the product profile for evaluation. The respondents were asked to give their score to each statement representing the level of agreement (1 = Strongly Disagree to 7 = Strongly Agree).

For product-country match, the statements measured prestige dimension of country image including exclusiveness and authenticity of the country of origin on specific product (Roth and Romeo, 1992). The perception of national organic certification label of each country was measured by statements regarding perceived credibility, standards and control (Janssen and Hamm, 2012b). Awareness and trust of both country-of-origin label and organic certification label were tested. Other aspects in the product evaluation are trust and quality perception in general, buying intention and willingness to pay a price premium for the product (Table 3).

Stat	ements in product evaluation	Measured item
1.	This product is of high quality.	Quality perception (General)
2.	This country is well-known to me for this product.	Awareness (COO)
3.	This product from this country is authentic.	Quality perception (COO)
4.	When thinking about this product, this country comes to my mind immediately.	Quality perception (COO)
5.	I trust this product from this country.	Trust (COO)
6.	This organic label is well-known to me.	Awareness (Organic cert.)
7.	I trust this organic label.	Trust (Organic cert.)
8.	This organic label stands for real organic products.	Trust (Organic cert.)
9.	The standard behind this organic label is very strict.	Quality perception (Organic cert.)
10.	The control and inspection system behind this organic label is very strict.	Quality perception (Organic cert.)
11.	I would like to buy this product.	Product preference (General)
12.	I would pay price premium for this product.	Product preference (General)
13.	I trust this product in general.	Trust (General)
14.	I think this product has good taste/ aroma.	Quality perception (General)
15.	This product is safe and healthy.	Quality perception (General)

#### Table 3 Statements and related measures in product evaluation

#### 3.4. Data collection

The data was collected between April and June of 2014 by sending invitations to the online survey through e-mail to students of Wageningen University. The sample was randomly selected from the WUR contact list, so the result wouldn't be biased because of limited recruitment of people from familiar sources of the author. Links of direct access to the questionnaire were provided which they

could voluntarily participate. The questionnaire was fully self-administered with 13 closed questions. The duration of completing one questionnaire is approximately 10 minutes.

To avoid the confounding effect and too much information assessment for one respondent, the product evaluation part was divided into three groups with separate web links. Each group contained six product profiles for one respondent to evaluate which covered both product categories and all countries-of-origin and organic certification logos in different combinations (Appendix II). The profiles are shown to the respondents one by one in random order. Other questions remained the same for all respondents.

Approximately 500 responses were received during the data collection period and in the end 303 qualified questionnaires were included in the analysis. Among them 249 questionnaires were fully completed (82.2%), and 54 questionnaires contain three to six product evaluations (at least one product category) without demographic information. Responses with no more than two product evaluations were excluded from the research.

#### 3.5. Analysis plan

First, one-way ANOVA was conducted to investigate consumer's perceptions and attitudes of each label on various aspects. The scores of each statement were set as dependent variables with country-of-origin label or organic certification label as factor separately. The Homogeneity of variances was tested for each statement. For the statements with unequal variances, robust tests were conducted with the report of Welch's F. Games-Howell test was used as Post Hoc test for the differences between each label due to different sample sizes for the label groups. Interaction effect between country-of-origin label and organic certification label were analysed by conducting factorial ANOVA.

When organic certification label was used as factor in the analysis, Milieukeur, Organico Brasil and Organik Tarim were re-coded and combined as the (national) organic certification label of the producing country. All statistical analysis was carried out using SPSS software with confidence interval of 95%.

#### 4. Results

#### 4.1. Sample description

Among the total sample of 303 for statistical analysis, 249 respondents have filled in their demographic information. The age of respondents ranges from 17 to 50 with the average of 22. Majority of the respondents are between 18 - 25 years old (89.8%). There are slightly more female respondents (65.1%) than male respondents (34.9%). Most of the respondents are bachelor students or master students (61.4% undergraduate and 32.5% postgraduate).

#### 4.2. Measure description

To measure trust, quality perception and product preferences, scores to each statement were analysed separately as well as incorporated to test the overall effect. The score to each measure was the average score of the related statements. Statements related to trust and quality perception were first transformed into three models: Country-of-origin, Organic certification and General. Then the three partial variables were integrated into one variable of total trust and quality perception. Cronbach's a was reported to test the reliability of the measures transformed from multiple statements. The computation of dependent variables in the analysis of overall effect is shown in Figure 2. All subscales have relatively high reliabilities.

Statement	Measurement (Average score)	Reliability (a)
2. This country is well-known to me for this product.	Label Awareness - COO	
6. This organic label is well-known to me.	Label Awareness - OCL	
5. I trust this product from this country.	Trust - COO	
7. I trust this organic label.	H1a/ 2a –	0.705
8. This organic label stands for real organic products.	Trust - OCL	0.765
13. I trust this product in general.	Trust - General	
3. This product from this country is authentic.	Quality - COO	
4. When thinking about this product, this country comes to my mind immediately.	Guainy - COO	
9. The standard behind this organic label is very strict.	Quality - OCL H1b/ 2b – Quality	0.759
10. The control and inspection system behind this organic label is very strict.	Perception	0.759
1. This product is of high quality.		
14. I think this product has good taste/ aroma.	Quality -General	
15. This product is safe and healthy.		
11. I would like to buy this product.	H1c/ 2c/ 3 – Product	0.790
12. I would pay price premium for this product.	Preference	0.730

Figure 2 Computation of measurement from related statements

#### 4.3. Label awareness

#### 4.3.1. Country-of-origin Label

The awareness of countries-of-origin was analysed separately for different product categories because the countries-of-origin indicates different levels of product-country match for different products. For both product categories, country-of-origin has significant effect on consumers' awareness which means that the selected countries-of-origin with different levels of product-country match are distinguishable to them. For coffee (F = 191.73, p < 0.05), Brazil received the highest average score for being a producing country of coffee, whereas Turkey which was set for an ambiguous country-of-origin and the Netherlands which was set as an unfavourable coffee producing country have very close average scores. There is a significant difference between the Netherlands and Turkey is not significant (p > 0.05). For yoghurt (F= 626.45, p < 0.05), the awareness of favourable, medium and unfavourable product-country match is consistent with the expectation of prior settings. The differences between the countries in each level are significant (p < 0.05). (Table 4)

Table 4 Mean scores for awareness of Country-of-origin Labels

Country-of-origin	Coffee	Yoghurt
The Netherlands	$2.82^{b^*}$	5.62 <sup>a</sup>
Turkey	2.76 <sup>b</sup>	3.53 <sup>b</sup>
Brazil	4.96 <sup>a</sup>	2.08 <sup>c</sup>

\* Different superscripts (a, b, c...) indicate significant differences in attribute score within each product category.

#### 4.3.2. Organic Certification Label

In the sample of this research, EKO is the most well-known organic certification label to the respondents, with EU Organic label at the second place followed by the organic certification label of Milieukeur, Organico Brasil and Organik Tarim which are not so well-known to the respondents. There is a significant effect (F = 322.46, p < 0.05), and the differences between each label are significant (p < 0.05). (Table 5)

#### Table 5 Mean scores for awareness of Organic Certification Labels

Organic certification label	Mean score
EKO	5.05 <sup>a*</sup>
EU Organic	4.04 <sup>b</sup>
Milieukeur (NL)	2.97 <sup>c</sup>
Organico Brasil (BR)	2.09 <sup>d</sup>
Organik Tarim (TR)	1.75 <sup>e</sup>

\* Different superscripts (a, b, c...) indicate significant differences in attribute score.

#### 4.4. Testing hypotheses

#### 4.4.1. Hypothesis 1

*H1:* The consumer's trust (H1a), quality perception (H1b) and preference (H1c) of organic food product from high to low are: favourable product-country match > ambiguous/ medium level product-country match > unfavourable product-country match.

Combining the scores to different statements investigating trust, quality perception and product preference, Table 6 shows the descriptive results for country-of-origin for each product category and Table 7 shows the results of ANOVA using country-of-origin as factor:

Measure		Coffee			Yoghurt	
	NL	TR	BR	NL	TR	BR
Trust	4.62 <sup>a*</sup>	4.41 <sup>b</sup>	4.73 <sup>a</sup>	5.21 <sup>ª</sup>	4.35 <sup>b</sup>	4.11 <sup>c</sup>
Quality perception	3.88 <sup>b</sup>	3.88 <sup>b</sup>	4.56 <sup>a</sup>	4.95 <sup>a</sup>	4.03 <sup>b</sup>	3.66 <sup>c</sup>
Product preference	3.46 <sup>a</sup>	3.43 <sup>a</sup>	3.70 <sup>a</sup>	4.14 <sup>a</sup>	3.51 <sup>b</sup>	3.22 <sup>c</sup>

#### Table 6 Descriptive result of effect of Country-of-origin Label

\* Different superscripts (a, b, c...) indicate significant differences in attribute score within each measure and product category.

The trust level of countries-of-origin of coffee product is significantly different (F =7.894, p < 0.05). Respondents trust coffee products from Brazil and the Netherlands more than coffee from Turkey. However there is no significant difference of trust between Brazil and the Netherlands (p > 0.05). For yoghurt, differences of trust towards countries-of-origin is also significant (F = 110.697, p < 0.05). Moreover, there differences of trust level between each two countries-of-origin are significant (p < 0.05 for both contrasts).

Quality perception for country-of-origin label was tested from several perspectives. Country-of-origin does have effect on this issue for both coffee (F = 73.922, p < 0.05) and yoghurt (F = 257.643, p < 0.05). Except Brazil being the most favourable country-of-origin for coffee, Turkey gained higher score than the Netherlands in terms of authenticity and taste/ aroma perception. When general quality, direct product-country linkage and safety and health were tested, the Netherlands was more favourable than Turkey. In general, Brazil is perceived to have the highest quality compared to the other two countries-of-origin with significant difference (p < 0.05) while the other two countries-of-origin are not significantly different. The Netherlands is the most favourable country-of-origin for yoghurt, followed by Turkey at the second place and Brazil being the least favourite with significant differences (p < 0.05 for both contrasts).

Regarding product preference, country-of-origin has significant impact on respondents' decisions on coffee product (F = 3.234, p < 0.05). Respondents made different decisions based on the country-of-origin label but it didn't impact their willingness to pay a price premium. Although the descriptive result shows more preference on coffee product from Brazil, followed by the Netherlands and Turkey at the third place, the differences between each level is not significant (p > 0.05). Both respondents' buying intention and willingness to pay price premium for a yoghurt product is impacted by the country-of-origin label (F = 35.939, p < 0.05). The product preference on yoghurt has significant differences between each level of countries-of-origin (p < 0.05). Respondents are more willing to pay price premium for yoghurt produced in the Netherlands than the other two countries (p < 0.05), the difference between Turkey and Brazil on willingness to pay price premium is not significant (p > 0.05).

Measure	Product category	df	F	Sig.
Trust	Coffee	2, 869	7.894	0.000
	Yoghurt	2, 882	110.697	0.000
Quality perception	Coffee	2, 577.663	73.922	0.000
	Yoghurt	2, 579.415	257.643	0.000
Product preference	Coffee	2, 869	3.234	0.040
	Yoghurt	2, 882	35.939	0.000

Table 7 ANO	VA of Effect	of Country-of-o	origin Label
-------------	--------------	-----------------	--------------

The result of the statistical analysis investigating impact of country-of-origin label shows that for yoghurt product, the consumer's trust, quality perception and preference of organic food product from high to low are: the Netherlands (favourable product-country match) > Turkey (medium level product-country match) > Brazil (unfavourable product-country match). This is consistent with the expectation in the first hypothesis. For coffee product, Turkey was set to have ambiguous product-country match and expected to gain moderate perception scores compared to the favourable product-country match of Brazil with higher scores and the Netherlands which was assumed to have unfavourable product-country match so should have lower scores. However, only mean scores of two statements in the main questionnaire for Turkey are higher than the score for the Netherlands which is regarding authenticity and taste/ aroma. Although the respondents think that coffee from Turkey is more authentic and flavoured better than coffee from the Netherlands, they tend to prefer the product from their own country despite it is not the origin of the core material. When there is country-of-origin with an ambiguous match of product and country image, it seems that consumers may use other criteria to evaluate the country-of-origin label such as workmanship (the Netherlands is not a producing country of raw coffee beans but a processing country with strong brands in the market) and ethnocentrism (in the case of this research) to form their trust and preference. So it can be concluded that the consumer's trust, quality perception and preference of organic coffee is higher for the product with favourable product-country match than the product with ambiguous or unfavourable product-country match. The difference of consumer's perception of countries-of-origin with ambiguous and unfavourable product-country match may vary depending on other factors. H1 is partly confirmed with the exception of unclear discrimination of ambiguous and unfavourable product-country match.

#### 4.4.2. Hypothesis 2

# *H2:* The consumer's trust (H2a), quality perception (H2b) and preference (H2c) of organic product certified by the importing country are higher than the same product certified by the exporting (producing) country.

For all measures tested by organic certification label, EKO has the highest mean scores, EU organic label lies in the middle and the local organic certification labels of producing country are the least favourable (Table 8) and the effect of organic certification on trust, quality perception and preference is significant (Table 9).

Measure	Coffee			Yoghurt		
	EU	EKO	Local	EU	EKO	Local
Trust	4.60 <sup>b*</sup>	4.88 <sup>a</sup>	4.29 <sup>c</sup>	4.60 <sup>a</sup>	4.77 <sup>a</sup>	4.29 <sup>b</sup>
Quality perception	4.10 <sup>b</sup>	4.33 <sup>a</sup>	3.90 <sup>c</sup>	4.23 <sup>a</sup>	4.35 <sup>a</sup>	4.04 <sup>b</sup>
Product preference	3.55 <sup>ª</sup>	3.75 <sup>a</sup>	3.29 <sup>a</sup>	3.64 <sup>a</sup>	3.81 <sup>a</sup>	3.41 <sup>ª</sup>

#### Table 8 Descriptive result of effect of Organic Certification Label

\* Different superscripts (a, b, c...) indicate significant differences in attribute score within each measure and product category.

Respondents showed a clear attitude that EKO is the most trust worthy followed by EU organic label and the organic label from producing country is the least trust worthy for both coffee (F = 26.361, p < 0.05) and yoghurt (F = 16.860, p < 0.05). The difference of trust level between EKO and EU organic label is not significant when evaluating yoghurt (p < 0.05).

Quality perception based on different organic certification labels is also significantly different for both product categories (for coffee F = 21.164. p < 0.05, for yoghurt F = 8.731, p < 0.05). Respondents perceived the standards, control and inspection of EKO significantly stricter than EU label, and those for EU label significantly stricter than the national certification labels of producing countries when evaluating coffee product. When evaluating yoghurt product, they didn't make difference between the standards, control and inspection between EKO and EU label (p > 0.05) but perceived these labels significantly better than the national organic labels of producing countries (p < 0.05). Organic certification label does not significantly impact respondent's perception of taste or aroma of coffee and yoghurt.

Organic certification label influences respondent's preference of product in terms of buying intention and willingness to pay price premium (Table 9). For both product categories, the most preferred organic certification label is EKO, EU label is the second preferred and the national organic label of producing country of the product is least preferred. The differences between EKO and the national labels of producing country are significant (p < 0.05), but the differences are not significant between EKO and EU label as well as between EU label and the organic label from producing countries (p > 0.05).

Measure	Product category	df	F	Sig.
Trust	Coffee	2, 869	26.361	0.000
	Yoghurt	2, 882	16.860	0.000
Quality perception	Coffee	2, 577.568	21.164	0.000
	Yoghurt	2, 882	8.731	0.000
Product preference	Coffee	2, 869	7.989	0.000
	Yoghurt	2, 882	6.111	0.002

#### Table 9 ANOVA of effect of Organic Certification Label

The perception of food with different organic certification labels were tested from various dimensions. EKO which is set as the organic certification label of the marketing country is the most recognized from all dimensions for both product categories compared to other organic labels representing the certification of producing countries in terms of trust, quality perception and product preference. So H2 is fully confirmed. EU organic label was included in the research as a neutral organic label without any impact from national relation but with higher level of awareness.

The result shows that the respondents are more familiar with EKO than EU label. And consumer's trust, quality perception and preference of organic product with EU organic label is lower than products certified by EKO and higher than the products certified by the producing countries.

#### 4.4.3. Hypothesis 3

*H3:* There is interaction effect between country-of-origin label and organic certification label on consumer's product preference in which the effect size of organic certification label is smaller when the product-country match is favourable compared to unfavourable product-country match.

Country-of-origin label and organic certification label have impact on the preference of coffee and yoghurt product as single factor. However when these two labels are analysed together, the interaction effect is not significant for either product category (p > 0.05). (Table 10)

Source	F	Sig.	r <sup>2</sup>
Coffee			
Corrected model	2.940	0.003	0.027
Country-of-origin	3.075	0.047	0.007
Organic certification	7.741	0.000	0.018
Country-of-origin * Organic certification	0.327	0.860	0.002
Yoghurt			
Corrected model	11.280	0.000	0.093
Country-of-origin	35.345	0.000	0.075
Organic certification	5.994	0.003	0.014
Country-of-origin * Organic certification	1.369	0.243	0.006

Table 10 Statistics of Between-Subjects Effects on Product Preference

The result of factorial ANOVA shows no significance in the test of between-subject effect for country-of-origin label and organic certification label on product preference which means that there is no significant interaction effect between these two factors. So H3 is rejected.

#### 4.5. Further analysis

The last hypothesis concerns the interaction effect between country-of-origin label and organic certification label on the measure of product preference with a rejecting result. Trust and quality perception were tested using the same method to further investigate whether there is any interaction effect between these two labels on the items as components in the product evaluation process which could eventually lead to certain product preferences. The variables used in the test were general trust (statement 13) and general quality perception (average value of statement 1, 14 and 15,  $\alpha = 0.760$ ).

The result of test for interaction effect between labels on trust and quality perception are listed in Table 11 and Table 12.

#### Table 11 Statistics of Between-Subjects Effects on Trust

Source	F	Sig.	r <sup>2</sup>	
Coffee				
Corrected model	5.062	0.000	0.045	
Country-of-origin	2.237	0.107	0.005	
Organic certification	12.630	0.000	0.028	
Country-of-origin * Organic certification	2.444	0.045	0.011	
Yoghurt				
Corrected model	15.189	0.000	0.122	
Country-of-origin	48.936	0.000	0.100	
Organic certification	6.762	0.001	0.015	
Country-of-origin * Organic certification	1.830	0.121	0.008	

#### Table 12 Statistics of Between-Subjects Effects on Quality Perception

Source	F	Sig.	r <sup>2</sup>
Coffee			
Corrected model	6.549	0.000	0.057
Country-of-origin	15.927	0.000	0.036
Organic certification	7.506	0.001	0.017
Country-of-origin * Organic certification	0.998	0.408	0.005
Yoghurt			
Corrected model	13.564	0.000	0.110
Country-of-origin	47.127	0.000	0.097
Organic certification	5.359	0.005	0.012
Country-of-origin * Organic certification	0.516	0.724	0.002

The result shows no interaction effect on quality perception for both product categories and trust for yoghurt. There is interaction effect shown on the trust level of coffee product (Figure 3). When the product-country match is favourable (Brazil), the general trust of coffee is consistent with the perception of different organic labels. When the product-country match is not so favourable (the Netherlands and Turkey), the trust of organic coffee with different labels have changed in different magnitudes. It seemed that when country-of-origin is not so positively match the product category, a local certification label same as the origin of production buffered the drop of trust level of the product. Coffee from Turkey is less trusted than the Netherlands when labelled with EKO but more trusted when labelled with the EU logo.

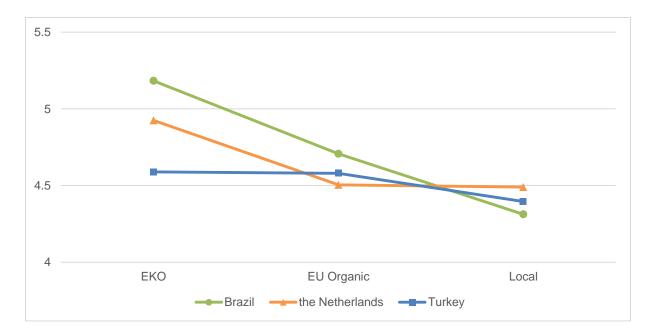


Figure 3 Interaction effect of Country-of-origin label and Organic certification label on Trust of coffee

#### 5. Conclusion and discussion

Based on the result of the survey, the research question(s) can be answered and the conclusions of this research are:

- Consumers' perceptions of food quality derived from different country-of-origin labels differ according to the levels of product-country match and this differentiation impacts the product preference.
- Consumers' perceptions of food quality derived from different organic certification labels differ according to familiarity and origin of the label and this differentiation impacts the product preference.
- Both labels impact consumer's attitude towards organic certified product. When shown together to the consumers, these two factors have interaction effect on trust of product when consumers are lack of knowledge regarding product-country match. However they don't have impact on each other which leads to alternative choice decisions.

Same method has been applied on two product categories in this research to investigate the effect of country-of-origin label and organic certification label with two measurements – trust and quality perception – which are shared by the two types of labels as considerations when consumers evaluating food products and lead to final product preference (buying intention). Yet in the result there are some differences found between measurements, types of label as well as product categories.

When evaluating coffee product, the consumers trust product from Brazil and the Netherlands more than product from Turkey, however make no difference between the two favourable countries. Whereas they perceived Brazilian coffee to have the highest quality compared to the other two

#### WUR Major Master Thesis

countries. The Netherlands and Turkey are perceived to be at same level with no substantial difference. Under this condition, country-of-origin still play a role in the main effect on product preference but unless the prestige dimension of product-country match is obviously favourable, other dimensions of country-of-origin effect may have larger impact on the buying intention. Since all the respondents of this research are Dutch students, ethnocentrism is quite possible to play a role in the decision making process on preference between a product which is perceived to be more authentic but not so trust worthy, and another product which is perceived to be safer and healthier but tastes not so well. This result could also indicate an allocation of importance to different aspects by the consumers in the process of forming product preferences.

Although there was no interaction effect of country-of-origin and organic certification label, the effect size of each label on product preference for different product categories seemed to be quite different. Moreover, it seemed that it is rather difficult for the consumers to make clear decision on preference of coffee product based on inconsistent perceptions on different aspects (when the product-country image match is not distinctive enough). Compared to coffee, the decision on yoghurt seemed to be much easier with substantial distinctiveness. There are several possible reasons behind this difference.

The consumers usually seek the most convenient ways to form their product perception and purchase decision especially when evaluating low-involvement products such as food. So higher familiarity of quality cues may lead to larger magnitude of impact. The Netherlands as a country which is famous for its dairy production is much more familiar to the Dutch consumers compared to the countries-of-origin being evaluated as coffee producing countries. Thus, under the condition of same familiarity level of the provided organic certification label, it is easier for the consumers to draw a conclusion of which product is the best in terms of trust and quality when evaluating yoghurt product compared to coffee product. The large effect size of country-of-origin label over organic certification label in the two-factor analysis also can be explained that the factor which is more familiar to the consumers plays more important role than the one which is not so familiar to them.

Besides familiarity of product-country match for the different categories, other issues related to product category may also explain the observed difference. For organic product, it is reported that the consumer's willingness to pay is different according to the groups of product categorized by frequency of purchase (Krystallis, 2005). The respondents of this research stated that on average they purchase coffee less than once a month and purchase yoghurt 2 - 3 times a month. Although the difference of purchasing frequency of coffee and yoghurt may due to common package size or perishability of the product, this difference can still be explained on a robust level. Another possible category related reason is consumers' choice of hedonic and utilitarian attributes of the goods (Dhar and Wertenbroch, 2000). Consumers may evaluate coffee and yoghurt differently in terms of hedonic and utilitarian values and form different product preference.

Interaction effect is seen on trust of coffee yet not on trust of yoghurt. Consumer's general trust of coffee product changes differently when the same country-of-origin is provided along with different organic certification labels. As mentioned before, yoghurt is a product category which is much more familiar to the respondents of this research compared to coffee in terms of product-country match. High familiarity with product category with the country-of-origin which indicates that consumers already possess more knowledge makes them less sensitive to the impact of

ethnocentrism. Here familiarity acts as a moderator on country image and trust (Jimenez and Martin, 2010). When familiarity decreases as in the case of coffee evaluation, the general trust is more significantly affected by the perception associated with the countries not only as origin of the product but also as origin of the organic certification labels with stereotype and ethnocentricity.

#### Limitations of the research

Product-country image is a term which is strongly product-specific. Consumers' attitude towards different products may vary extensively. Both products selected in this research have relatively strong product-country image in prestige dimension (exclusivity). Consumers' perception derived from country-of-origin on more common food products such as vegetable, fruit and meat may be different due to weaker product-country association.

The products evaluated in this research were unbranded and assumed to be purchased from a supermarket. The brand which could sometimes substantially impact the size of country-of-origin effect (Jo et al., 2003) was not considered as a factor in this research due to the nature of the target products. Purchasing venue is another influential extrinsic cue for food product which is not included in this research (Grunert, 2002). Consumers' perception and preference of the product could depend on the shop where they buy it. For example, one respondent mentioned that she would trust coffee from Turkey more if she saw it in an organic shop. However if the coffee product is seen in a supermarket, the trust would be lower and it is unlikely that she would buy. The premise of this research is to look into the effects of labels in the environment of mainstream market so the labels are the only cues for these credence attributes of the target product for evaluation.

The composition of the whole sample was university students. Different results may show from a sample with more diverse education levels and age range because product perception may be affected by purchasing habit which is related to age and the affective and normative aspect of country-of-origin effect is closely related to education background.

This research aims to examine the country-of-origin effect on consumers' attitude and product preference of organic food with certification labels from different origins. The certification logos being tested in this research are either governmental national logos or very widely spread in the country so can be seen as national logos. The result may help the farmers or marketers to find out the most appropriate certification body for their products to avoid unnecessary costs or loss from unrecognized certification. In many countries, the legislation requires any product in domestic market to carry a governmental national label to be sold as "organic". This represents that the imported product meets the standards for organic products in that country as a qualification to be recognized. There are also many international organic certification logos developed by various organizations focus on different issues or specific product categories (e.g. Soil Association, Fair Trade, Rainforest Alliance, UTZ, Demeter). Each certification scheme has its own standards and control. Consumers may look for such labels when purchasing organic food product based on particular ethic concerns. Country images can be associated with these concerns and form certain perception/ product preference as well.

#### Suggestion for future research

There are two labels and three measures in the conceptual framework of this research. The result shows that the measurements are impacted by the factors of two labels. The next step could be

further investigate the detailed effect of each label on each measurement or addressing different importance of the measurements with regard to the different labels on product preference, buying intention and willingness to pay.

The interaction effect of the two labels on trust of product with blurred country image matches can also be further investigated to seek the specific way which one factor have impact on another.

#### References

#### Articles:

Ahmed, Z. U., Johnson, J. P., Yang, X., Fatt, C. K., Teng, H. S., & Boon, L. C. (2004). Does country of origin matter for low-involvement products? International Marketing Review, 21(1), 102-120. doi: Doi 10.1108/02651330410522925

Baker, S., Thompson, K. E., Engelken, J., and Huntley, K. (2004). Mapping the values driving organic food choice: Germany vs the UK. *European Journal of Marketing*, *38*(8), 995-1012.

Bezawada, R., &Pauwels, K. (2013). What Is Special About Marketing Organic Products? How Organic Assortment, Price, and Promotions Drive Retailer Performance. Journal of Marketing, 77(1), 31-51.

Bilkey, W. J., &Nes, E. (1982). Country of Origin Effects on Product Evaluations. Journal of International Business Studies, 13(1), 89-99. doi: DOI 10.1057/palgrave.jibs.8490539

Caswell, J. A., & Mojduszka, E. M. (1996). Using informational labeling to influence the market for quality in food products. American Journal of Agricultural Economics, 78(5), 1248-1253. doi: Doi 10.2307/1243501

Chryssochoidis, G., Krystallis, A., &Perreas, P. (2007). Ethnocentric-beliefs and country-of-origin (COO) effect - Impact of country, product and product attributes on Greek consumers' evaluation of food products. European Journal of Marketing, 41(11-12), 1518-1544. doi: Doi 10.1108/03090560710821288

Cicia, G., Del Giudice, T., &Scarpa, R. (2002). Consumers' perception of quality in organic food: a random utility model under preference heterogeneity and choice correlation from rank-orderings. British Food Journal, 104(3/4/5), 200-213.

Darby, M. R., &Karni, E. (1973). Free competition and the optimal amount of fraud. Journal of law and economics, 16(1), 67-88.

Dhar, R., & Wertenbroch, K. (2000). Consumer choice between hedonic and utilitarian goods. Journal of Marketing Research, 37(1), 60-71.

Dimitri, C., & Greene, C. (2000). Recent growth patterns in the US organic foods market.

Gerrard, C., Janssen, M., Smith, L., Hamm, U., &Padel, S. (2013). UK consumer reactions to organic certification logos. British Food Journal, 115(5), 727-742. doi: Doi 10.1108/00070701311331517

Grunert, K. G. (1996). Market orientation in food and agriculture: Springer.

Grunert, K. G. (2002). Current issues in the understanding of consumer food choice. Trends in Food Science & Technology, 13(8), 275-285. doi: Pii S0924-2244(02)00137-1, Doi 10.1016/S0924-2244(02)00137-1

Honkanen, P., Verplanken, B., & Olsen, S. O. (2006). Ethical values and motives driving organic food choice. Journal of Consumer Behaviour, 5(5), 420-430.

Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., & Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. Journal of Consumer Behaviour, 6(2-3), 94-110.

#### WUR Major Master Thesis

Hutchins, R. K., & Greenhalgh, L. (1997). Organic confusion: sustaining competitive advantage. British Food Journal, 99(9), 336-338.

Janssen, M., & Hamm, U. (2011). Consumer perception of different organic certification schemes in five European countries. Organic Agriculture, 1(1), 31-43.

Janssen, M., & Hamm, U. (2012a). The mandatory EU logo for organic food: consumer perceptions. British Food Journal, 114(2-3), 335-352. doi: Doi 10.1108/00070701211213456

Janssen, M., & Hamm, U. (2012b). Product labelling in the market for organic food: Consumer preferences and willingness-to-pay for different organic certification logos. Food Quality and Preference, 25(1), 9-22. doi: DOI 10.1016/j.foodqual.2011.12.004

Jimenez, N. H., & Martin, S. S. (2010). The role of country-of-origin, ethnocentrism and animosity in promoting consumer trust. The moderating role of familiarity. International Business Review, 19(1), 34-45. doi: DOI 10.1016/j.ibusrev.2009.10.001

Jo, M. S., Nakamoto, K., & Nelson, J. E. (2003). The shielding effects of brand image against lower quality countries-of-origin in global manufacturing. Journal of Business Research, 56(8), 637-646. doi: Doi 10.1016/S0148-2963(01)00307-1

Kim, R., Suwunnamek, O., & Toyoda, T. (2008). Consumer attitude towards organic labeling schemes in Japan. Journal of International Food & Agribusiness Marketing, 20(3), 55-71.

Krystallis, A., & Chryssohoidis, G. (2005). Consumers' willingness to pay for organic food: factors that affect it and variation per organic product type. British Food Journal, 107(5), 320-343.

Lindeman, M., &Vaananen, M. (2000). Measurement of ethical food choice motives. Appetite, 34(1), 55-59. doi: DOI 10.1006/appe.1999.0293

Lohr, L. (1998). Implications of organic certification for market structure and trade. American Journal of Agricultural Economics, 80(5), 1125-1129. doi: Doi 10.2307/1244216

Makatouni, A. (2002). What motivates consumers to buy organic food in the UK?: Results from a qualitative study. British Food Journal, 104(3/4/5), 345-352.

Mauracher, C., Tempesta, T., &Vecchiato, D. (2013). Consumer preferences regarding the introduction of new organic products. The case of the Mediterranean sea bass (Dicentrarchuslabrax) in Italy. Appetite, 63, 84-91. doi: 10.1016/j.appet.2012.12.009

McCluskey, J. (2000). A game theoretic approach to organic foods: An analysis of asymmetric information and policy. Agricultural and Resource Economics Review, 29(1), 1-9.

Nilsson, H., Tunçer, B., & Thidell, Å. (2004). The use of eco-labeling like initiatives on food products to promote quality assurance—is there enough credibility? Journal of Cleaner production, 12(5), 517-526.

Roitner-Schobesberger, B., Darnhofer, I., Somsook, S., &Vogl, C. R. (2008). Consumer perceptions of organic foods in Bangkok, Thailand. Food Policy, 33(2), 112-121. doi: DOI 10.1016/j.foodpol.2007.09.004

Roth, M. S., & Romeo, J. B. (1992). Matching Product Category and Country Image Perceptions - a Framework for Managing Country-of-Origin Effects. Journal of International Business Studies, 23(3), 477-497. doi: DOI 10.1057/palgrave.jibs.8490276

#### WUR Major Master Thesis

Skaggs, R., Falk, C., Almonte, J., & Cardenas, M. (1996). Product- country images and international food marketing: Relationships and research needs. Agribusiness, 12(6), 593-600.

Sonderskov, K. M., &Daugbjerg, C. (2011). The state and consumer confidence in eco-labeling: organic labeling in Denmark, Sweden, The United Kingdom and The United States. Agriculture and Human Values, 28(4), 507-517. doi: DOI 10.1007/s10460-010-9295-5

Thøgersen, J. (2010). Country differences in sustainable consumption: The case of organic food. Journal of Macromarketing, 30(2), 171-185.

Uysal, O. K., Miran, B., Abay, C., Boyaci, M., Janssen, M., & Hamm, U. (2013). Factors influencing the perception of organic certification logos in Turkey. Journal of Food Agriculture & Environment, 11(1), 40-46.

Verlegh, P. W. J., & Steenkamp, J. B. E. M. (1999). A review and meta-analysis of country-of-origin research. Journal of Economic Psychology, 20(5), 521-546. doi: Doi 10.1016/S0167-4870(99)00023-9

Wang, H. H., Zhang, X., Ortega, D. L., &Widmar, N. J. O. (2013). Information on food safety, consumer preference and behavior: The case of seafood in the US. Food Control, 33(1), 293-300. doi: DOI 10.1016/j.foodcont.2013.02.033

Wilier, H., &Kilcher, L. (2012). The World of Organic Agriculture-Statistics and Emerging Trends 2012. Research Institute of Organic Agriculture (FiBL), Frick, International Federation of Organic Agriculture Movements (IFOAM), Bonn.

Yin, S., Wu, L., Du, L., & Chen, M. (2010). Consumers' purchase intention of organic food in China. Journal of the Science of Food and Agriculture, 90(8), 1361-1367.

#### Websites:

FiBL and IFOAM (2013): The World of Organic Agriculture 2013: Summary; Available from: <u>http://www.organic-world.net/2411.html</u> (last visited 07-01-2014)

WJLA's investigation of WFM selling organic vegetables from China, Available from: http://www.examiner.com/article/i-can-t-believe-it-s-organic-whole-foods-labeled-organic-products-of-c hina (last visited 07-01-2014)

Whole Food Market's response to WJLA's investigation, Available from: <u>http://www.wholefoodsmarket.com/whole-foods-market-responds-to-wjla</u> (last visited 07-01-2014) and <u>http://www.wholefoodsmarket.com/blog/whole-story/dispelling-rumors-organics-china</u> (last visited 07-01-2014)

International Coffee Organization (2013): Export of all forms of coffee by exporting countries to all destinations, December 2013, available from: <u>http://www.ico.org/prices/m1.htm</u>(last visited 09-02-2014)

# Appendix I Organic certification labels

Logo	Name	Country	Note
			Council Regulation (EC) No 834/2007 of 28 June 2007
*****			on organic production and labelling of organic
* * * *	EU organic	EU	products. All organic pre-packaged food products are
			obligated to correctly use this label.
			(Source: http://ec.europa.eu/agriculture/organic)
			The national seal for organic product for Brazilian
			market. The largest certifier IBD (Instituto
RECOLUTO_			Biodinâmico) holds the standard which is approved by
	OrganicoBrasil	Brazil	the EU to be equivalent to the European rule.(Source:
			http://www.organic-world.net/news-organic-world.html?L=0&tx_tt
			news%5Btt_news%5D=71&cHash=bcf5c9c8647ba153b5b541b5
			3fce6b57; http://ibd.com.br/en/IbdOrganico.aspx)
AAAAA	AAAAA		National certification logo for organic product
ORGANIN TARIN	OrganikTarim	Turkey	accredited and authorized by the Republic of Turkey
			Ministry of Food, Agriculture and Livestock.(Source:
	C		http://www.tarim.gov.tr/Documents/ENG/Legislation/law_organic_
PHYNE CUMHUR			farming.pdf)
			Skal is the legal holder of the EKO Quality symbol.
			This symbol stands for organic production certified by
	EKO	The Netherlands	
			Skal that meets the requirements of the EU-regulation
			for organic production.(Source: http://www.skal.nl)
			Milieukeur is a Dutch environmental quality label
			supported by the government towards sustainable
	Milieukeur	The Netherlands	products and services. Its specific themes on
	willeukeur		agro/food include animal welfare, biodiversity, crop
MILLEN			protection, minerals/ fertilisers, nature and country
			side etc. (Source: http://www.milieukeur.nl)

# Appendix II Sample groups and product profile assignment

		Coffee		Yoghurt			
	NL	TR	BR	NL	TR	BR	
EU	1	3	2	2	1	3	
EKO	2	1	3	3	2	1	
Milieukeur	3			1			
OrganicoBrasil			1			2	
OrganikTarim		2			3		

## Appendix III Questionnaire

#### Introduction

Thank you for participating in this research. The survey will take approximately 10 minutes.

#### Screener

- What is your nationality?
- the Netherlands
- Other

#### Warm up

How often do you purchase coffee from the supermarket?

- Never
- Less than Once a Month
- Once a Month
- ② 2-3 Times a Month
- Once a Week
- 2-3 Times a Week
- Daily

How often do you purchase yoghurt from the supermarket?

- Never
- Less than Once a Month
- Once a Month
- ② 2-3 Times a Month
- Once a Week
- 2-3 Times a Week
- Daily

#### Product evaluation (one example for each product category)

Please rate to what extent do you agree with the following statements regarding the coffee product in the picture.



Note: National Organic Label of the Netherlands

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
This product is of high quality.	0	0	0	0	0	0	0
This country is well-known to me for coffee product.	O	©	©	©	O	Ô	©
Coffee from this country is authentic.	0	0	0	0	0	0	0
When thinking about coffee, this country comes to my mind immediately.	©	©	©	©	©	©	©
I trust coffee product from this country.	0	۲	0	0	۲	0	0
This organic label is well- known to me.	Ô	Ô	Ô	©	0	Ô	©
I trust this organic label.	0	0	0	0	0	0	0
This organic label stands for real organic products.	Ô	٢	©	©	O	Ô	©
The standards behind this organic label is very strict.	O	$\odot$	$\odot$	0	0	O	0
The control and inspection system behind this organic label is very strict.	©	©	©	©	0	©	©
I would like to buy this product.	Ô	0	0	0	•	0	$\bigcirc$
I would pay price premium for this product.	Ô	۲	©	0	O	Ô	©
I trust this product in general.	۲	0	$\odot$	0	0	0	0
I think this product has good taste/ aroma.	Ô	٢	©	©	O	Ô	©
This product is safe and healthy.	O	$\odot$	۲	0	0	O	۲

.. ...

Please rate to what extent do you agree with the following statements regarding the yoghurt product in the picture.



#### Note: National Organic Label of Turkey

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
This product is of high quality.	0	0	0	0	0	0	0
This country is well-known to me for this product.	Ô	۲	٢	©	۲	O	©
Yoghurt from this country is authentic.	Ô	۲	0	0	۲	0	0
When thinking about dairy product, this country comes to my mind immediately.	©	©	©	©	0	©	©
I trust yoghurt from this country.	Ô	۲	0	٢	۲	0	0
This organic label is well- known to me.	Ô	٢	٢	©	0	O	©
I trust this organic label.	۲	0	0	$\odot$	۲	0	0
This organic label stands for real organic products.	O	۲	©	©	۲	O	©
The standards behind this organic label is very strict.	Ô	٢	0	٢	۲	0	0
The control and inspection system behind this organic label is very strict.	©	©	©	©	0	©	©
I would like to buy this product.	$\bigcirc$	0	$\odot$	$\odot$	0	$\odot$	0
I would pay price premium for this product.	Ô	٢	©	©	۲	Ô	©
I trust this product in general.	۲	0	$\odot$	$\odot$	۲	0	0
I think this product has good taste/ aroma.	Ô	٢	٢	©	۲	©	©
This product is safe and healthy.	۲	۲	٢	۲	0	O	۲

Neither

## Organic purchase frequency

How often do you purchase organic food products in general?

- Never
- Less than Once a Month
- Once a Month
- 2-3 Times a Month
- Once a Week
- 2-3 Times a Week
- O Daily

#### Demographic information

What is your education level?

- Ondergraduate
- Postgraduate
- O PhD
- Other

What is your age? Please fill in:

#### What is your gender?

- Male
- Female

# Appendix IV Statistical output

# H1 – Coffee

		ANOVA				
		Sum of	df	Mean Square	F	Sig.
	-	Squares				
	Between Groups	40,509	2	20,255	17,634	,000
1 This product is of high quality.	Within Groups	998,133	869	1,149		
quanty	Total	1038,642	871			
11 I would like to buy this	Between Groups	16,993	2	8,496	3,283	,038
product.	Within Groups	2248,896	869	2,588		
	Total	2265,889	871			
12 I would pay price	Between Groups	11,777	2	5,889	2,594	,075
premium for this product.	Within Groups	1972,726	869	2,270		
	Total	1984,503	871			
13 I trust this product in	Between Groups	7,130	2	3,565	2,367	,094
general.	Within Groups	1308,902	869	1,506		
general.	Total	1316,032	871			
15 This product is acts	Between Groups	8,005	2	4,002	3,558	,029
15 This product is safe and healthy.	Within Groups	977,518	869	1,125		
and notatiny.	Total	985,523	871			

#### **Robust Tests of Equality of Means**

		e el Equanty			
		Statistic <sup>a</sup>	df1	df2	Sig.
2 This country is well-known to me for coffee product.	Welch	191,725	2	576,675	,000
3 Coffee from this country is authentic.	Welch	156,570	2	573,506	,000
4 When thinking about coffee, this country comes to my mind immediately.	Welch	146,387	2	573,831	,000
5 I trust coffee product from this country.	Welch	27,426	2	573,235	,000
14 I think this product has good taste/ aroma.	Welch	19,305	2	579,210	,000

a. Asymptotically F distributed.

## **Multiple Comparisons**

Games-Howell						
Dependent	(I)	(J)	Mean	Std.	Sig.	95% Confidence
Variable	Country-of-origin	Country-of-origin	Difference	Error		Interval

	Label	Label	(I-J)			Lower	Upper
						Bound	Bound
	the Netherlands	Turkey	,247 <sup>*</sup>	,089	,016	,04	,46
	the Nethenands	Brazil	-,282 <sup>*</sup>	,089	,004	-,49	-,07
1 This product is		the Netherlands	-,247 <sup>*</sup>	,089	,016	-,46	-,04
of high quality.	Turkey	Brazil	-,529 <sup>*</sup>	,089	,000	-,74	-,32
		the Netherlands	,282 <sup>*</sup>	,089	,004	,07	,49
	Brazil	Turkey	,529 <sup>*</sup>	,089	,000,	,32	,74
		Turkey	,058	,132	,900	-,25	,37
	the Netherlands	Brazil	-2,146 <sup>*</sup>	,136	,000	-2,47	-1,83
2 This country is	Tudiau	the Netherlands	-,058	,132	,900	-,37	,25
well-known to me	Turkey	Brazil	-2,204 <sup>*</sup>	,123	,000	-2,49	-1,91
for coffee product.	Brazil	the Netherlands	2,146 <sup>*</sup>	,136	,000	1,83	2,47
	DIAZII	Turkey	2,204 <sup>*</sup>	,123	,000	1,91	2,49
	the Netherlands	Turkey	-,620 <sup>*</sup>	,118	,000	-,90	-,34
3 Coffee from this		Brazil	-1,887 <sup>*</sup>	,113	,000	-2,15	-1,62
country is	Turkey	the Netherlands	,620 <sup>*</sup>	,118	,000	,34	,90
authentic.		Brazil	-1,268	,103	,000	-1,51	-1,03
	Brazil	the Netherlands	1,887 <sup>*</sup>	,113	,000	1,62	2,15
		Turkey	1,268 <sup>*</sup>	,103	,000	1,03	1,51
4 When thinking	the Netherlands	Turkey	,092	,115	,706	-,18	,36
about coffee, this		Brazil	-1,903 <sup>*</sup>	,132	,000	-2,21	-1,59
country comes to	Turkey	the Netherlands	-,092	,115	,706	-,36	,18
my mind		Brazil	-1,995 <sup>*</sup>	,125	,000	-2,29	-1,70
immediately.	Brazil	the Netherlands	1,903 <sup>*</sup>	,132	,000	1,59	2,21
		Turkey	1,995 <sup>*</sup> ,496 <sup>*</sup>	,125	,000	1,70	2,29
	the Netherlands	Turkey Brazil	,490 -,230	,115 ,113	,000 ,103	,23 -,50	,77 ,03
5 I trust coffee		the Netherlands	-,230 -,496 <sup>*</sup>	,115	,103	-,30 -,77	,03 -,23
product from this	Turkey	Brazil	, 100 -,727 <sup>*</sup>	,099	,000	-,96	,20 -,49
country.		the Netherlands	,230	,113	,103	-,03	,50
	Brazil	Turkey	,727 <sup>*</sup>	,099	,000	,49	,96
		Turkey	,126	,130	,600	-,18	,43
	the Netherlands	Brazil	-,213	,134	,248	-,53	,10
11 I would like to		the Netherlands	-,126	,130	,600	-,43	,18
buy this product.	Turkey	Brazil	-,339 <sup>*</sup>	,136	,035	-,66	-,02
	Prozil	the Netherlands	,213	,134	,248	-,10	,53
	Brazil	Turkey	,339 <sup>*</sup>	,136	,035	,02	,66
12 I would pay	the Netherlands	Turkey	-,067	,122	,845	-,35	,22
price premium for		Brazil	-,272	,124	,074	-,56	,02
this product.	Turkey	the Netherlands	,067	,122	,845	-,22	,35
	. unity	Brazil	-,205	,129	,249	-,51	,10

_							
	Brazil	the Netherlands	,272	,124	,074	-,02	,56
	DIAZII	Turkey	,205	,129	,249	-,10	,51
	the Netherlands	Turkey	,108	,101	,534	-,13	,35
	the nethenands	Brazil	-,114	,103	,511	-,36	,13
13 I trust this	Turkey	the Netherlands	-,108	,101	,534	-,35	,13
product in general.	Turkey	Brazil	-,222	,101	,072	-,46	,02
	Brazil	the Netherlands	,114	,103	,511	-,13	,36
	Diazii	Turkey	,222	,101	,072	-,02	,46
	the Netherlands	Turkey	-,047	,095	,876	-,27	,18
14 I think this		Brazil	-,549 <sup>*</sup>	,098	,000	-,78	-,32
product has good	Turkey	the Netherlands	,047	,095	,876	-,18	,27
taste/ aroma.	Turkey	Brazil	-,502 <sup>*</sup>	,097	,000	-,73	-,27
	Brazil	the Netherlands	,549 <sup>*</sup>	,098	,000	,32	,78
	DIGZI	Turkey	,502 <sup>*</sup>	,097	,000	,27	,73
	the Netherlands	Turkey	,217 <sup>*</sup>	,088	,038	,01	,42
	the nethenalius	Brazil	,029	,088	,941	-,18	,24
15 This product is	Turkey	the Netherlands	-,217 <sup>*</sup>	,088	,038	-,42	-,01
safe and healthy.	Turkey	Brazil	-,188	,088	,083	-,39	,02
	Brazil	the Netherlands	-,029	,088	,941	-,24	,18
		Turkey	,188	,088	,083	-,02	,39

	ANOVA									
		Sum of Squares	df	Mean Square	F	Sig.				
Trust	Between Groups	15.670	2	7.835	7.894	.000				
	Within Groups	862.531	869	.993						
	Total	878.201	871							
	Between Groups	12.974	2	6.487	3.234	.040				
Preference	Within Groups	1743.190	869	2.006						
	Total	1756.164	871							

# Robust Tests of Equality of Means

	Statistic <sup>a</sup>	df1	df2	Sig.
Quality Welch	73.922	2	577.663	.000

a. Asymptotically F distributed.

#### **Multiple Comparisons**

Games-Howell						
Dependent	(I)	(J)	Mean	Std.	Sig.	95% Confidence
Variable	Country-of-origin	Country-of-origin	Difference	Error		Interval

	Label	Label	(I-J)			Lower	Upper
			*			Bound	Bound
the Netherlands	the Netherlands	Turkey	.21282*	.08259	.028	.0188	.4069
	the Netherlands	Brazil	11156	.08417	.382	3093	.0862
Turret	Turker	the Netherlands	21282 <sup>*</sup>	.08259	.028	4069	0188
Trust	Turkey	Brazil	32438 <sup>*</sup>	.08093	.000	5146	1342
Brazil	the Netherlands	.11156	.08417	.382	0862	.3093	
	Brazil	Turkey	.32438 <sup>*</sup>	.08093	.000	.1342	.5146
		Turkey	.00150	.05997	1.000	1394	.1424
	the Netherlands	Brazil	67386 <sup>*</sup>	.06227	.000	8202	5275
		the Netherlands	00150	.05997	1.000	1424	.1394
Quality	Turkey	Brazil	67536 <sup>*</sup>	.06383	.000	8254	5254
		the Netherlands	.67386*	.06227	.000	.5275	.8202
	Brazil	Turkey	.67536*	.06383	.000	.5254	.8254
		Turkey	.21282*	.08259	.028	.0188	.4069
	the Netherlands	Brazil	11156	.08417	.382	3093	.0862
Destaura	Turkan	the Netherlands	-,02911	,11398	,965	-,2969	,2387
Preference	Turkey	Brazil	-,27198	,12088	,064	-,5560	,0121
	Dro-il	the Netherlands	,24287	,11757	,098	-,0334	,5191
	Brazil	Turkey	,27198	,12088	,064	-,0121	,5560

\*. The mean difference is significant at the 0.05 level.

# H1 – Yoghurt

				Mean		
		Sum of Squares	df	Square	F	Sig.
1 This product is of	Between Groups	97.274	2	48.637	38.319	.000
high quality.	Within Groups	1119.502	882	1.269		
	Total	1216.775	884			
3 Yoghurt from this	Between Groups	620.894	2	310.447	194.823	.000
country is authentic.	Within Groups	1405.452	882	1.593		
	Total	2026.346	884			
11 I would like to buy	Between Groups	181.511	2	90.756	41.688	.000
this product.	Within Groups	1920.145	882	2.177		
	Total	2101.656	884			
12 I would pay price	Between Groups	88.290	2	44.145	19.679	.000
premium for this	Within Groups	1978.553	882	2.243		
product.	Total	2066.843	884			
13 I trust this produc	t Between Groups	148.199	2	74.099	49.571	.000
in general.	Within Groups	1318.427	882	1.495		

#### ANOVA

	Total	1466.626	884			
15 This product is	Between Groups	100.067	2	50.034	42.380	.000
safe and healthy.	Within Groups	1041.282	882	1.181		
	Total	1141.349	884			

#### Robust Tests of Equality of Means

		Statistic <sup>a</sup>	df1	df2	Sig.
2 This country is	Welch	626.450	2	569.314	.000
well-known to me for					
this product.					
4 When thinking about	Welch	785.952	2	561.807	.000
dairy product, this					
country comes to my					
mind immediately.					
5 I trust yoghurt from	Welch	316.942	2	579.058	.000
this country.					
14 I think this product	Welch	26.069	2	584.342	.000
has good taste/ aroma.					

a. Asymptotically F distributed.

#### **Multiple Comparisons**

						95% Cor	fidence
			Mean			Inter	val
			Difference			Lower	Upper
Dependent Variable		(I-J)	Std. Error	Sig.	Bound	Bound	
1 This product is o	of the Netherlands	Turkey	,682 <sup>*</sup>	.094	.000	.46	.90
high quality.		Brazil	,725 <sup>*</sup>	.091	.000	.51	.94
	Turkey	the Netherlands	-,682 <sup>*</sup>	.094	.000	90	46
		Brazil	.043	.093	.890	18	.26
	Brazil	the Netherlands	-,725 <sup>*</sup>	.091	.000	94	51
		Turkey	043	.093	.890	26	.18
2 This country is	the Netherlands	Turkey	2,098 <sup>*</sup>	.128	.000	1.80	2.40
well-known to me		Brazil	3,540 <sup>*</sup>	.100	.000	3.31	3.77
for this product.	Turkey	the Netherlands	-2,098 <sup>*</sup>	.128	.000	-2.40	-1.80
		Brazil	1,442 <sup>*</sup>	.123	.000	1.15	1.73
	Brazil	the Netherlands	-3,540 <sup>*</sup>	.100	.000	-3.77	-3.31
		Turkey	-1,442 <sup>*</sup>	.123	.000	-1.73	-1.15
3 Yoghurt from thi	sthe Netherlands	Turkey	,885 <sup>*</sup>	.106	.000	.63	1.13
country is		Brazil	2,041 <sup>*</sup>	.102	.000	1.80	2.28
authentic.	Turkey	the Netherlands	-,885 <sup>*</sup>	.106	.000	-1.13	63
		Brazil	1,157 <sup>*</sup>	.104	.000	.91	1.40

1	Brazil	the Netherlands	-2,041 <sup>*</sup>	.102	.000	-2.28	-1.80
		Turkey	-1,157 <sup>*</sup>	.104	.000	-1.40	91
4 When thinking	the Netherlands	Turkey	2,910 <sup>*</sup>	.125	.000	2.62	3.20
about dairy		Brazil	3,975 <sup>*</sup>	.100	.000	3.74	4.21
product, this	Turkey	the Netherlands	-2,910 <sup>*</sup>	.125	.000	-3.20	-2.62
country comes to		Brazil	1,065 <sup>*</sup>	.111	.000	.80	1.33
my mind	Brazil	the Netherlands	-3,975 <sup>*</sup>	.100	.000	-4.21	-3.74
immediately.		Turkey	-1,065 <sup>*</sup>	.111	.000	-1.33	80
5 I trust yoghurt	the Netherlands	Turkey	1,536 <sup>*</sup>	.093	.000	1.32	1.76
from this country.		Brazil	2,157 <sup>*</sup>	.090	.000	1.95	2.37
	Turkey	the Netherlands	-1,536 <sup>*</sup>	.093	.000	-1.76	-1.32
		Brazil	,622 <sup>*</sup>	.103	.000	.38	.86
	Brazil	the Netherlands	-2,157 <sup>*</sup>	.090	.000	-2.37	-1.95
		Turkey	-,622*	.103	.000	86	38
11 I would like to	the Netherlands	Turkey	,719 <sup>*</sup>	.122	.000	.43	1.00
buy this product.		Brazil	1,091 <sup>*</sup>	.120	.000	.81	1.37
	Turkey	the Netherlands	-,719 <sup>*</sup>	.122	.000	-1.00	43
		Brazil	,372 <sup>*</sup>	.122	.007	.08	.66
	Brazil	the Netherlands	-1,091*	.120	.000	-1.37	81
		Turkey	-,372 <sup>*</sup>	.122	.007	66	08
12 I would pay	the Netherlands	Turkey	,542 <sup>*</sup>	.126	.000	.25	.84
price premium for		Brazil	,750 <sup>*</sup>	.125	.000	.46	1.04
this product.	Turkey	the Netherlands	-,542 <sup>*</sup>	.126	.000	84	25
		Brazil	.208	.120	.193	07	.49
	Brazil	the Netherlands	-,750 <sup>*</sup>	.125	.000	-1.04	46
		Turkey	208	.120	.193	49	.07
13 I trust this	the Netherlands	Turkey	,782 <sup>*</sup>	.100	.000	.55	1.02
product in general.		Brazil	,936 <sup>*</sup>	.100	.000	.70	1.17
	Turkey	the Netherlands	-,782 <sup>*</sup>	.100	.000	-1.02	55
		Brazil	.154	.102	.287	09	.39
	Brazil	the Netherlands	-,936 <sup>*</sup>	.100	.000	-1.17	70
		Turkey	154	.102	.287	39	.09
14 I think this	the Netherlands	Turkey	,371 <sup>*</sup>	.095	.000	.15	.59
product has good		Brazil	,624 <sup>*</sup>	.087	.000	.42	.83
taste/ aroma.	Turkey	the Netherlands	-,371 <sup>*</sup>	.095	.000	59	15
		Brazil	,252 <sup>*</sup>	.095	.022	.03	.48
	Brazil	the Netherlands	-,624 <sup>*</sup>	.087	.000	83	42
		Turkey	-,252 <sup>*</sup>	.095	.022	48	03
15 This product is	the Netherlands	Turkey	,622 <sup>*</sup>	.090	.000	.41	.83
safe and healthy.		Brazil	,780 <sup>*</sup>	.089	.000	.57	.99
	Turkey	the Netherlands	-,622*	.090	.000	83	41
		Brazil	.158	.089	.182	05	.37
	Brazil	the Netherlands	-,780 <sup>*</sup>	.089		99	57
		Turkey	158				.05
		Turkey	130	.009	.102	57	.00

## ANOVA

				Mean		
		Sum of Squares	df	Square	F	Sig.
	Between Groups	195.350	2	97.675	110.697	.000
Trust	Within Groups	778.245	882	.882		
	Total	973.595	884			
Preference	Between Groups	130.589	2	65.294	35.939	.000
	Within Groups	1602.424	882	1.817		
	Total	1733.012	884			

#### Robust Tests of Equality of Means

	Statistic <sup>a</sup>	df1	df2	Sig.
Quality Welch	257.643	2	579.415	.000

a. Asymptotically F distributed.

#### **Multiple Comparisons**

Games-Howell	_						
Dependent	(I)	(L)	Mean	Std.	Sig.	95% Confidence	
Variable	Country-of-origin	Country-of-origin	Difference	Error		Inte	rval
	Label	Label	(I-J)			Lower	Upper
						Bound	Bound
	-	Turkey	.85736 <sup>*</sup>	.07800	.000	.6741	1.0406
	the Netherlands	Brazil	1.09498 <sup>*</sup>	.07399	.000	.9211	1.2688
		the Netherlands	85736*	.07800	.000	-1.0406	6741
Trust	Frust Turkey Brazil	Brazil	.23762*	.07994	.009	.0498	.4254
		the Netherlands	-1.09498	.07399	.000	-1.2688	9211
		Turkey	23762 <sup>*</sup>	.07994	.009	4254	0498
		Turkey	.92381*	.06481	.000	.7715	1.0761
	the Netherlands	Brazil	1.29652*	.05754	.000	1.1613	1.4317
	<b>-</b> .	the Netherlands	92381*	.06481	.000	-1.0761	7715
Quality	Turkey	Brazil	.37271 <sup>*</sup>	.06002	.000	.2317	.5138
		the Netherlands	-1.29652*	.05754	.000	-1.4317	-1.1613
	Brazil	Turkey	37271*	.06002	.000	5138	2317
	the Netherlands	Turkey	,63016 <sup>*</sup>	,11219	,000	,3666	,8938
	the Netherlands	Brazil	,92032 <sup>*</sup>	,11116	,000	,6591	1,1815
Preference	Turkey	the Netherlands	-,63016 <sup>*</sup>	,11219	,000	-,8938	-,3666
	тикеу	Brazil	,29016 <sup>*</sup>	,10969	,023	,0324	,5479
	Brazil	the Netherlands	-,92032 <sup>*</sup>	,11116	,000	-1,1815	-,6591

Turkey	-,29016 <sup>*</sup>	,10969	,023	-,5479	-,0324
* The mean difference is significant at the 0.05 level					

## H2 - Coffee

		ANOVA				
				Mean		
		Sum of Squares	df	Square	F	Sig.
1 This product is of	Between Groups	14.314	2	7.157	6.072	.002
high quality.	Within Groups	1024.328	869	1.179		
	Total	1038.642	871			
11 I would like to buy	Between Groups	26.808	2	13.404	5.202	.006
this product.	Within Groups	2239.080	869	2.577		
	Total	2265.889	871			
12 I would pay price	Between Groups	37.037	2	18.518	8.263	.000
premium for this	Within Groups	1947.467	869	2.241		
product.	Total	1984.503	871			
13 I trust this produc	t Between Groups	37.937	2	18.968	12.897	.000
in general.	Within Groups	1278.095	869	1.471		
	Total	1316.032	871			
15 This product is	Between Groups	15.976	2	7.988	7.160	.001
safe and healthy.	Within Groups	969.547	869	1.116		
	Total	985.523	871			

## **Robust Tests of Equality of Means**

	Statistic <sup>a</sup>	df1	df2	Sig.
6 This organic label is Welch	221.953	2	573.956	.000
well-known to me.				
7 I trust this organic Welch	57.618	2	579.318	.000
label.				
8 This organic label Welch	73.876	2	578.616	.000
stands for real organic				
products.				
9 The standards behind Welch	40.065	2	577.070	.000
this organic label is very				
strict.				
10 The control and Welch	35.592	2	577.806	.000
inspection system				
behind this organic label				
is very strict.				

14 I think this product Welch	2.722	2	578.357	.067
has good taste/ aroma.				

a. Asymptotically F distributed.

#### **Multiple Comparisons**

						95% Cor	
			Mean			Inter	
			Difference			Lower	Upper
Dependent Varia			(I-J)	Std. Error	Sig.	Bound	Bound
1 This product is	of EU Organic	EKO	164		.164	38	.05
high quality.		Local	.149	.089	.214	06	.36
	EKO	EU Organic	.164	.090	.164	05	.38
		Local	,313 <sup>*</sup>	.091	.002	.10	.53
	Local	EU Organic	149	.089	.214	36	.06
		EKO	-,313 <sup>*</sup>	.091	.002	53	10
6 This organic	EU Organic	EKO	-1,058 <sup>*</sup>	.150	.000	-1.41	71
label is well-know	vn	Local	1,708 <sup>*</sup>	.143	.000	1.37	2.04
to me.	EKO	EU Organic	1,058 <sup>*</sup>	.150	.000	.71	1.41
		Local	2,766 <sup>*</sup>	.133	.000	2.45	3.08
	Local	EU Organic	-1,708 <sup>*</sup>	.143	.000	-2.04	-1.37
		EKO	-2,766 <sup>*</sup>	.133	.000	-3.08	-2.45
7 I trust this	EU Organic	EKO	-,362 <sup>*</sup>	.106	.002	61	11
organic label.		Local	,754 <sup>*</sup>	.105	.000	.51	1.00
	EKO	EU Organic	,362 <sup>*</sup>	.106	.002	.11	.61
		Local	1,116 <sup>*</sup>	.106	.000	.87	1.37
	Local	EU Organic	-,754 <sup>*</sup>	.105	.000	-1.00	51
		EKO	-1,116 <sup>*</sup>	.106	.000	-1.37	87
8 This organic	EU Organic	EKO	-,408 <sup>*</sup>	.095	.000	63	18
label stands for		Local	,695 <sup>*</sup>	.091	.000	.48	.91
real organic	EKO	EU Organic	,408 <sup>*</sup>	.095	.000	.18	.63
products.		Local	1,103 <sup>*</sup>	.092	.000	.89	1.32
	Local	EU Organic	-,695 <sup>*</sup>	.091	.000	91	48
		EKO	-1,103 <sup>*</sup>	.092	.000	-1.32	89
9 The standards	EU Organic	EKO	-,290 <sup>*</sup>	.087	.003	49	09
behind this organ	ic	Local	,460 <sup>*</sup>	.080	.000	.27	.65
label is very strict	t. EKO	EU Organic	,290*	.087	.003	.09	.49
		Local	,750 <sup>*</sup>	.086	.000	.55	.95
	Local	EU Organic	-,460*	.080	.000	65	27
		EKO	-,750*	.086	.000	95	55
10 The control ar	nd EU Organic	EKO	-,229*	.085	.021	43	03
inspection systen	-	Local	,467 <sup>*</sup>	.080	.000	.28	.65
behind this organ		EU Organic	,229 <sup>*</sup>	.085	.021	.03	.43

label is very strict.		Local	,695 <sup>*</sup>	.086	.000	.49	.90
	Local	EU Organic	-,467 <sup>*</sup>	.080	.000	65	28
		EKO	-,695 <sup>*</sup>	.086	.000	90	49
11 I would like to	EU Organic	EKO	174	.137	.409	50	.15
buy this product.		Local	.252	.130	.129	05	.56
	EKO	EU Organic	.174	.137	.409	15	.50
		Local	,427 <sup>*</sup>	.133	.004	.12	.74
	Local	EU Organic	252	.130	.129	56	.05
		EKO	-,427*	.133	.004	74	12
12 I would pay	EU Organic	EKO	222	.127	.187	52	.08
price premium for		Local	.281	.122	.056	01	.57
this product.	EKO	EU Organic	.222	.127	.187	08	.52
		Local	,503 <sup>*</sup>	.124	.000	.21	.79
	Local	EU Organic	281	.122	.056	57	.01
		EKO	-,503 <sup>*</sup>	.124	.000	79	21
13 I trust this	EU Organic	EKO	-,312 <sup>*</sup>	.100	.005	55	08
product in general		Local	.193	.101	.138	04	.43
	EKO	EU Organic	,312 <sup>*</sup>	.100	.005	.08	.55
		Local	,505*	.100	.000	.27	.74
	Local	EU Organic	193	.101	.138	43	.04
		EKO	-,505*	.100	.000	74	27
14 I think this	EU Organic	EKO	133	.101	.386	37	.10
product has good		Local	.095	.097	.586	13	.32
taste/ aroma.	EKO	EU Organic	.133	.101	.386	10	.37
		Local	.229	.098	.052	.00	.46
	Local	EU Organic	095	.097	.586	32	.13
		EKO	229	.098	.052	46	.00
15 This product is	EU Organic	EKO	075	.089	.680	28	.14
safe and healthy.		Local	,242 <sup>*</sup>	.088	.016	.04	.45
	EKO	EU Organic	.075	.089	.680	14	.28
		Local	,317 <sup>*</sup>	.086	.001	.12	.52
	Local	EU Organic	-,242*	.088	.016	45	04
		EKO	-,317 <sup>*</sup>	.086	.001	52	12

\*. The mean difference is significant at the 0.05 level.

		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	50.232	2	25.116	26.361	.000
Trust	Within Groups	827.968	869	.953		
	Total	878.201	871			
Preference	Between Groups	31.706	2	15.853	7.989	.000

## ANOVA

Within Groups	1724.458	869	1.984	
Total	1756.164	871		

Robust Tests of Equality of Means

-		Statistic <sup>a</sup>	df1	df2	Sig.
Quality	Welch	21.164	2	577.568	.000

a. Asymptotically F distributed.

#### **Multiple Comparisons**

Games-Howell

						95% Cor	nfidence
			Mean			Inte	rval
			Difference			Lower	Upper
Dependent Var	iable		(I-J)	Std. Error	Sig.	Bound	Bound
		EKO	28097*	.08053	.002	4702	0917
	EU Organic	Local	.30593*	.07912	.000	.1200	.4918
<b>-</b> .	EKO	EU Organic	.28097 <sup>*</sup>	.08053	.002	.0917	.4702
Trust	ERO	Local	.58691 <sup>*</sup>	.08312	.000	.3916	.7822
	Local	EU Organic	30593 <sup>*</sup>	.07912	.000	4918	1200
	LUCAI	EKO	58691 <sup>*</sup>	.08312	.000	7822	3916
		EKO	23243 <sup>*</sup>	.06749	.002	3910	0738
	EU Organic	Local	.20286 <sup>*</sup>	.06280	.004	.0553	.3504
	EKO	EU Organic	.23243 <sup>*</sup>	.06749	.002	.0738	.3910
Quality	LINO	Local	.43529 <sup>*</sup>	.06692	.000	.2780	.5925
	Local	EU Organic	20286 <sup>*</sup>	.06280	.004	3504	0553
	LUCAI	EKO	43529 <sup>*</sup>	.06692	.000	5925	2780
	EU Organic	EKO	19808	.11937	.222	4786	.0824
		Local	.26669	.11470	.053	0028	.5362
_ /	EKO	EU Organic	.19808	.11937	.222	0824	.4786
Preference		Local	,46477 <sup>*</sup>	.11642	.000	.1912	.7383
	Local	EU Organic	26669	.11470	.053	5362	.0028
		EKO	-,46477 <sup>*</sup>	.11642	.000	7383	1912

\*. The mean difference is significant at the 0.05 level.

# H2 – Yoghurt

ANOVA

			Mean		
	Sum of Squares	df	Square	F	Sig.
1 This product is of Between Groups	14.102	2	7.051	5.171	.006

high quality.	Within Groups	1202.673	882	1.364		
	Total	1216.775	884			
7 I trust this organic	Between Groups	214.821	2	107.411	62.655	.000
label.	Within Groups	1512.042	882	1.714		
	Total	1726.863	884			
11 I would like to buy	y Between Groups	25.270	2	12.635	5.367	.005
this product.	Within Groups	2076.386	882	2.354		
	Total	2101.656	884			
13 I trust this produc	t Between Groups	22.211	2	11.106	6.781	.001
in general.	Within Groups	1444.415	882	1.638		
	Total	1466.626	884			
14 I think this produc	tBetween Groups	6.475	2	3.238	2.469	.085
has good taste/	Within Groups	1156.361	882	1.311		
aroma.	Total	1162.836	884			
15 This product is	Between Groups	11.106	2	5.553	4.333	.013
safe and healthy.	Within Groups	1130.243	882	1.281		
	Total	1141.349	884			

## **Robust Tests of Equality of Means**

	Statistic <sup>a</sup>	df1	df2	Sig.
6 This organic label is Welch	232.075	2	577.984	.000
well-known to me.				
8 This organic label Welch	60.589	2	585.635	.000
stands for real organic				
products.				
9 The standards behind Welch	46.130	2	583.852	.000
this organic label is very				
strict.				
10 The control and Welch	35.098	2	584.426	.000
inspection system				
behind this organic label				
is very strict.				
12 I would pay price Welch	5.196	2	587.017	.006
premium for this				
product.				

a. Asymptotically F distributed.

#### **Multiple Comparisons**

	Mean			95% Confidence
Dependent Variable	Difference	Std. Error	Sig.	Interval

			(I-J)			Lower	Upper
						Bound	Bound
1 This product is	of EU Organic	EKO	084	.098	.665	31	.15
high quality.		Local	.215	.096	.067	01	.44
	EKO	EU Organic	.084	.098	.665	15	.31
		Local	,300 <sup>*</sup>	.094	.004	.08	.52
	Local	EU Organic	215	.096	.067	44	.01
		EKO	-,300*	.094	.004	52	08
6 This organic	EU Organic	EKO	-,956 <sup>*</sup>	.154	.000	-1.32	60
label is well-knov	wn	Local	1,824 <sup>*</sup>	.141	.000	1.49	2.16
to me.	EKO	EU Organic	,956 <sup>*</sup>	.154	.000	.60	1.32
		Local	2,780 <sup>*</sup>	.133	.000	2.47	3.09
	Local	EU Organic	-1,824 <sup>*</sup>	.141	.000	-2.16	-1.49
		EKO	-2,780*	.133	.000	-3.09	-2.47
7 I trust this	EU Organic	EKO	-,357 <sup>*</sup>	.110	.004	62	10
organic label.		Local	,819 <sup>*</sup>	.106	.000	.57	1.07
	EKO	EU Organic	,357 <sup>*</sup>	.110	.004	.10	.62
		Local	1,176 <sup>*</sup>	.107	.000	.92	1.43
	Local	EU Organic	-,819 <sup>*</sup>	.106	.000	-1.07	57
		EKO	-1,176 <sup>*</sup>	.107	.000	-1.43	92
8 This organic	EU Organic	EKO	-,307*	.097	.005	54	08
label stands for		Local	,666 <sup>*</sup>	.091	.000	.45	.88
real organic	EKO	EU Organic	,307 <sup>*</sup>	.097	.005	.08	.54
products.		Local	,973 <sup>*</sup>	.092	.000	.76	1.19
	Local	EU Organic	-,666*	.091	.000	88	45
		EKO	-,973 <sup>*</sup>	.092	.000	-1.19	76
9 The standards	EU Organic	EKO	136	.087	.265	34	.07
behind this orga	nic	Local	,581 <sup>*</sup>	.079	.000	.40	.77
label is very stric	t. EKO	EU Organic	.136	.087	.265	07	.34
		Local	,717 <sup>*</sup>	.083	.000	.52	.91
	Local	EU Organic	-,581 <sup>*</sup>	.079	.000	77	40
		EKO	-,717 <sup>*</sup>	.083	.000	91	52
10 The control a	nd EU Organic	EKO	166	.085	.124	37	.03
inspection syster	m	Local	,476 <sup>*</sup>	.077	.000	.30	.66
behind this orga	nic EKO	EU Organic	.166	.085	.124	03	.37
label is very stric	:t.	Local	,642 <sup>*</sup>	.083	.000	.45	.84
	Local	EU Organic	-,476 <sup>*</sup>	.077	.000	66	30
		EKO	-,642*	.083	.000	84	45
11 I would like to	EU Organic	EKO	224	.128	.191	53	.08
buy this product.		Local	.190	.125	.285	10	.48
	EKO	EU Organic	.224	.128	.191	08	.53
		Local	,413 <sup>*</sup>	.125	.003	.12	.71
	Local	EU Organic	190	.125	.285	48	.10
		EKO	-,413 <sup>*</sup>	.125	.003	71	12

12 I would pay	EU Organic	EKO	116	.129	.640	42	.19
price premium for		Local	.269	.124	.076	02	.56
this product.	EKO	EU Organic	.116	.129	.640	19	.42
		Local	,385 <sup>*</sup>	.124	.006	.09	.68
	Local	EU Organic	269	.124	.076	56	.02
		EKO	-,385*	.124	.006	68	09
13 I trust this	EU Organic	EKO	111	.107	.555	36	.14
product in general.		Local	,266 <sup>*</sup>	.104	.029	.02	.51
	EKO	EU Organic	.111	.107	.555	14	.36
		Local	,377 <sup>*</sup>	.105	.001	.13	.62
	Local	EU Organic	-,266*	.104	.029	51	02
		EKO	-,377 <sup>*</sup>	.105	.001	62	13
14 I think this	EU Organic	EKO	007	.094	.997	23	.21
product has good		Local	.178	.095	.147	05	.40
taste/ aroma.	EKO	EU Organic	.007	.094	.997	21	.23
		Local	.185	.094	.123	04	.41
	Local	EU Organic	178	.095	.147	40	.05
		EKO	185	.094	.123	41	.04
15 This product is	EU Organic	EKO	048	.093	.862	27	.17
safe and healthy.		Local	.210	.095	.070	01	.43
	EKO	EU Organic	.048	.093	.862	17	.27
		Local	,258 <sup>*</sup>	.092	.014	.04	.47
	Local	EU Organic	210	.095	.070	43	.01
		EKO	-,258 <sup>*</sup>	.092	.014	47	04

\*. The mean difference is significant at the 0.05 level.

		Α	NOVA			
		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	35.851	2	17.925	16.860	.000
Trust	Within Groups	937.744	882	1.063		
	Total	973.595	884			
	Between Groups	14.416	2	7.208	8.731	.000
Quality	Within Groups	728.178	882	.826		
	Total	742.594	884			
Preferenc	eBetween Groups	23.688	2	11.844	6.111	.002
	Within Groups	1709.325	882	1.938		
	Total	1733.012	884			

#### **Multiple Comparisons**

Dependent Variable	Mean	Std. Error	Sig.	95% Confidence
--------------------	------	------------	------	----------------

			Difference			Inter	rval
			(I-J)			Lower	Upper
						Bound	Bound
		EKO	17671	.08690	.105	3809	.0275
	EU Organic	Local	.30993*	.08369	.001	.1133	.5066
	EKO	EU Organic	.17671	.08690	.105	0275	.3809
Trust	EKO	Local	.48664 <sup>*</sup>	.08407	.000	.2891	.6842
	Local	EU Organic	30993*	.08369	.001	5066	1133
	LUCAI	EKO	48664*	.08407	.000	6842	2891
		EKO	11950	.07623	.261	2986	.0596
	EU Organic	Local	.19024 <sup>*</sup>	.07421	.029	.0159	.3646
	EKO	EU Organic	.11950	.07623	.261	0596	.2986
Quality	EKO	Local	.30973*	.07398	.000	.1359	.4836
	Local	EU Organic	19024 <sup>*</sup>	.07421	.029	3646	0159
	LUCAI	EKO	30973 <sup>*</sup>	.07398	.000	4836	1359
	EU Organic	EKO	16969	.11650	.313	4434	.1040
		Local	.22927	.11347	.108	0373	.4959
Destaura	EKO	EU Organic	.16969	.11650	.313	1040	.4434
Preference		Local	,39896 <sup>*</sup>	.11388	.001	.1314	.6665
	Local	EU Organic	22927	.11347	.108	4959	.0373
		EKO	-,39896*	.11388	.001	6665	1314

# H3 - Coffee

## Tests of Between-Subjects Effects

Dependent Variable: 11 I would like to buy this product.

	Type III Sum of		Mean			Partial Eta
Source	Squares	df	Square	F	Sig.	Squared
Corrected Model	51,126 <sup>a</sup>	8	6.391	2.490	.011	.023
Intercept	11707.552	1	11707.552	4561.941	0.000	.841
COOL	16.327	2	8.164	3.181	.042	.007
OCL	25.828	2	12.914	5.032	.007	.012
COOL * OCL	7.648	4	1.912	.745	.561	.003
Error	2214.763	863	2.566			
Total	13987.000	872				
Corrected Total	2265.889	871				

a. R Squared = ,023 (Adjusted R Squared = ,014)

#### **Tests of Between-Subjects Effects**

	Type III Sum of		Mean			Partial Eta
Source	Squares	df	Square	F	Sig.	Squared
Corrected Model	48,613 <sup>a</sup>	8	6.077	2.709	.006	.024
Intercept	10035.329	1	10035.329	4473.647	0.000	.838
COOL	10.759	2	5.379	2.398	.092	.006
OCL	35.969	2	17.984	8.017	.000	.018
COOL * OCL	.862	4	.216	.096	.984	.000
Error	1935.890	863	2.243			
Total	12039.000	872				
Corrected Total	1984.503	871				

Dependent Variable: 12 I would pay price premium for this product.

a. R Squared = ,024 (Adjusted R Squared = ,015)

## H3 – Yoghurt

#### **Tests of Between-Subjects Effects**

Dependent Variable: 11 I would like to buy this product.

	Type III Sum of		Mean			Partial Eta
Source	Squares	df	Square	F	Sig.	Squared
Corrected Model	218,500 <sup>a</sup>	8	27.313	12.705	.000	.104
Intercept	13693.262	1	13693.262	6369.784	0.000	.879
COOL	176.728	2	88.364	41.105	.000	.086
OCL	22.266	2	11.133	5.179	.006	.012
COOL * OCL	14.585	4	3.646	1.696	.149	.008
Error	1883.156	876	2.150			
Total	15770.000	885				
Corrected Total	2101.656	884				

a. R Squared = ,104 (Adjusted R Squared = ,096)

#### Tests of Between-Subjects Effects

Dependent Variable: 12 I would pay price premium for this product.

	Type III Sum of		Mean			Partial Eta
Source	Squares	df	Square	F	Sig.	Squared
Corrected Model	117,167 <sup>a</sup>	8	14.646	6.580	.000	.057
Intercept	9658.275	1	9658.275	4339.515	0.000	.832
COOL	85.365	2	42.683	19.178	.000	.042
OCL	21.565	2	10.783	4.845	.008	.011
COOL * OCL	7.593	4	1.898	.853	.492	.004
Error	1949.676	876	2.226			

Total	11721.000	885			
Corrected Total	2066.843	884			

a. R Squared = ,057 (Adjusted R Squared = ,048)

## Further Analysis - Coffee

#### **Tests of Between-Subjects Effects**

Dependent vanable. 13 i trust this product in general.								
Source	Type III Sum of	df	Mean Square	F	Sig.	Partial Eta		
	Squares					Squared		
Corrected Model	58.984 <sup>a</sup>	8	7.373	5.062	.000	.045		
Intercept	18667.215	1	18667.215	12815.580	.000	.937		
COOL	6.518	2	3.259	2.237	.107	.005		
OCL	36.795	2	18.397	12.630	.000	.028		
COOL * OCL	14.237	4	3.559	2.444	.045	.011		
Error	1257.049	863	1.457					
Total	20052.000	872						
Corrected Total	1316.032	871						

Dependent Variable: 13 I trust this product in general.

a. R Squared = .045 (Adjusted R Squared = .036)

#### **Tests of Between-Subjects Effects**

Dependent Variable:	Dependent Variable: Quality_General									
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared				
Corrected Model	39.402 <sup>a</sup>	8	4.925	6.549	.000	.057				
Intercept	18168.491	1	18168.491	24156.419	.000	.966				
COOL	23.958	2	11.979	15.927	.000	.036				
OCL	11.291	2	5.646	7.506	.001	.017				
COOL * OCL	3.001	4	.750	.998	.408	.005				
Error	649.078	863	.752							
Total	18908.889	872								
Corrected Total	688.481	871								

a. R Squared = .057 (Adjusted R Squared = .048)

## Further Analysis - Yoghurt

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	178.657 <sup>a</sup>	8	22.332	15.189	.000	.122
Intercept	18121.942	1	18121.942	12325.470	.000	.934
COOL	143.899	2	71.950	48.936	.000	.100
OCL	19.884	2	9.942	6.762	.001	.015
COOL * OCL	10.763	4	2.691	1.830	.121	.008
Error	1287.969	876	1.470			
Total	19600.000	885				
Corrected Total	1466.626	884				

#### Dependent Variable: 13 I trust this product in general.

a. R Squared = .122 (Adjusted R Squared = .114)

#### Tests of Between-Subjects Effects

Dependent Variable:	Dependent Variable: Quality_General									
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared				
Corrected Model	93.160 <sup>a</sup>	8	11.645	13.564	.000	.110				
Intercept	18394.893	1	18394.893	21426.746	.000	.961				
COOL	80.917	2	40.458	47.127	.000	.097				
OCL	9.201	2	4.600	5.359	.005	.012				
COOL * OCL	1.773	4	.443	.516	.724	.002				
Error	752.047	876	.859							
Total	19245.111	885								
Corrected Total	845.207	884								

a. R Squared = .110 (Adjusted R Squared = .102)