



Thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in International Business

## Impact of "Made in Belgium" Label on Customers' Willingness To Pay for Fast-Moving Consumer Goods

Gino AYTAS 0552839 Academic year 2022-2023

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### Acknowledgements

First and foremost I would like to express my deepest gratitude to my promotor Prof. Dr. Kim Willems for her valuable guidance. Moreover, this endeavour would not have been possible without the feedback and expertise of co-promotor Drs. Jesse Zee.

I would also like to extend my sincere appreciation to Lukas Luykx for proofreading my thesis. Furthermore, thanks to my peer students and friends for pilot testing the research survey and providing helpful feedback.

Lastly, I'd like to acknowledge my family, friends and fellow students for participating in and sharing the research survey.

#### Abstract

The Belgian government encouraged customers to purchase local goods whenever possible during the Covid pandemic. As the Covid pandemic passes, it is interesting to investigate customer preferences for such local goods. This thesis investigates (1) if customers exhibit a higher willingness to pay for a FMCG product with a "Made in Belgium" label, compared to an identical FMCG product without the label. Moreover, it seeks to uncover (2) if there are observable differences between customers exposed to a "Made in Belgium" label and those not, in terms of: degree of ethnocentrism, country of origin image and brand image. Also, it explores (3) if there is a difference in customer ethnocentrism, country of origin image or brand image between customers shown a 3D product with a "Made in Belgium" label compared to those shown a 2D product with the label. A between-subjects design was used in a direct customer survey with 209 Belgians. Each respondent was randomly assigned to one of four groups: either being a shown a product in 3D or 2D and with or without a label. The analysis shows no findings indicating a higher willingness to pay when shown a "Made in Belgium" label. In terms of brand image it is found that those shown a label connect attributes descriptive of Belgium to the brand image more than those not shown a label. No significant findings were found regarding customer ethnocentrism and country of appearance origin image.

*Keywords:* made in Belgium, willingness to pay, country of origin, consumer ethnocentricity, brand image.

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Term	Definition
Brand Equity	"The marketing effects uniquely attributable to the brand" (Keller, 1993).
Consumer Ethnocentricity (CE)	"The concept to represent consumers' beliefs in the superiority of their own country's products" (Shimp, 1984).
Country Of Origin (COO)	The country where something originates from.
Fast-Moving Consumer Goods (FMCG)	"Fast-moving consumer goods are products that are sold quickly and at a relatively low cost" (Das, 2019).
Willingness To Pay (WTP)	"The maximum price a customer is willing to pay for a product or service" (Stobierski, 2020).

#### Introduction

During the Covid pandemic people have been encouraged to support local businesses and purchase local goods whenever possible (Agentschap Innoveren en Ondernemen, 2020). This was necessary as, often local, brick and mortar stores without an online presence suffered tremendously from the Covid pandemic.

As the Covid pandemic comes to an end, it is interesting to investigate customer preferences for local goods which they were encouraged to buy. Do customers prefer locally made goods, and if so in what ways does this show? Does it translate into an increased willingness to pay of a customer? Does the customer associate attributes of the country with the brand of the product? Is the country of origin image more favourable and does the customer exhibit a stronger degree of ethnocentricity? A study of the Indian market showed that the pandemic was a trigger for customers to favour "Made in India" products over others as a result of the government promoting the purchase of local goods. (Verma & Naveen, 2021). Indian customers exhibited a greater negative attitude towards foreign products, which is shown to positively influence the likelihood of buying "Made in India" products. Although a similar call to action by the government was made in Belgium, there is no research whether it influences customers behaviour. If research existed prior to the Covid pandemic the findings could be compared, however in the absence thereof this research is an attempt at solely filling the current research gap.

The current study aims to understand the impact of a "Made in Belgium" labels presence on a Fast Moving Consumer Goods product with regards to: the Willingness To Pay, the Degree of Ethnocentrism, the Country of Origin image and the Brand image. A direct customer survey is performed, utilizing a between-subjects design. A respondent is either exposed to the "Made in Belgium" label (independent variable) on an otherwise similar generic Fast Moving Consumer Goods product, or not. The generic product will either be displayed as a 3D model or as a 2D image (independent variable). The influence of the independent variables on the Degree of Ethnocentrism, Country of Origin image (attitude), Brand Image and Willingness To Pay (dependent variables) is investigated.

The research is important to both producers of products and B2C distributors as it seeks to gain insights, allowing them to better align the price per product with the Willingness To Pay of the customer for such a product with a "Made in Belgium" label.

The thesis builds on the previous work, part of the research paper (Aytas, 2022).

### **Theoretical background**

### The Country of Origin concept

The first independent variable of this research is the possible exposure to a "Made in Belgium" label, signalling the Country of Origin (COO). COO – the country where something originates from - is a concept that has extensively been researched and is shown to be of influence on an individual's product evaluation (Bilkey & Nes, 1982). To understand the COO concept, an exhaustive holistic model by Pharr (2005), which divides all elements of the concept into antecedents, moderators and outcomes, is probed. The model as developed by Pharr is one of the most recent extensive attempts that is widely referenced in the literature. Moreover, it builds on several of the earlier comprehensive meta-analyses, which are akin to its successor widely referenced in the literature. The research model created for this research, draws significantly on the findings of Pharr.

### Antecedents

Pharr (2005) starts by exploring antecedents of the COO concept. Antecedents can be described as "someone or something existing or happening before, especially as the cause or origin of something existing or happening later" (Cambridge Dictionary, 2022). In the context of this research we can describe antecedents as all elements determining and being of influence on an individual's general attitude, which in turn influences the evaluation of COO.

The first antecedent are the country stereotypes one has (Liu & Johnson, 2005). These country stereotypes influence the attitude in their COO evaluation. Such stereotypes can be activated by the presence of cues in the environment of the participant, such as for example a "Made in Belgium" label. In practice earlier research shows that when all other attributes are held constant, COO information can function as a sort of quality index to compare products (Elliott & Cameron, 1994). When the price and quality of local products are equal to those of foreign products, customers will express a preference for locally produced goods.

The next antecedent is demographics, of which an individual's age and socioeconomic group are of most effect to the evaluation of COO (Pharr, 2005). Regarding the former the COO effect is stronger for older customers than for younger customers, regarding the latter the COO is hypothesised to be stronger for socio-economic groups if it is for a product frequented by that group (Schaefer, 1997). For example, using the National Readership Survey (2022) Social Grade, individuals of socio-economic group AB exhibited stronger COO effects towards sparkling wine than other groups (Schaefer, 1997). The third antecedent identifies country-specific animosity – strong hostility towards as an explanation of differences in COO evaluation (Klein et al., 1998; Pharr, 2005). An individual is less likely to purchase products made in a certain country when one exhibits country-specific animosity.

Lastly, a significant antecedent of COO evaluation is Consumer Ethnocentrism (CE) (Balabanis & Diamantopoulos, 2004; Orth & Firbasová, 2003). CE is defined as "the concept ... to represent consumers' beliefs in the superiority of their own country's products" (Shimp, 1984). Although CE uses the term consumer – user of goods or service –, it relates to purchase intentions, enabling it to be used in the context of a customer – purchaser of goods or services. CE is considered a consistent predictor of explaining the preference of domestic customers for domestic products, this seems especially true for food products (Balabanis & Diamantopoulos, 2004). Customers with a high level of CE tend to have strong negative perceptions of foreign products (Erdogan & Uzkurt, 2010), as is affirmed by the earlier notion of country-specific animosity (Klein et al., 1998) when CE is the underlying reason thereof.

Considering the literature, the following hypotheses is made:

H1<sub>A</sub>. Customers exposed to a "Made in Belgium" label, have a higher degree of ethnocentrism than customers who have not been exposed.

### **Moderators**

After the antecedents, Pharr (2005) reviews the moderators that effect the COO concept. A moderator "... influences the level, direction, or presence of a relationship between variables" (Bhandari, 2021). Both product-based and individual-based moderators are part of the holistic model by Pharr (2005). This research directs focus to the individual-based moderators as the product-based moderators are the same for both groups of respondents. The product-based moderators include product complexity, brand type, price and brand name. All of which are the same for all respondents in the research design. The individual-based moderators include product familiarity, product importance, involvement type and involvement level.

Involvement level and type are moderators for the evaluation of COO (Ahmed et al., 2004; Gürhan-Canli & Maheswaran, 2000; Lee et al., 2005). Ahmed et al. (2004) examined that for low-involvement products, such as Fast Moving Consumer Goods (FMCG), the presence of a COO cue matters. However when other cues are present, the effect is weaker.

This aligns with the findings of Peterson & Jolibert (1995), stating that single-cue studies are of greater effect to COO evaluation than multi-cue studies. This is in part the case because when other cues are present, the participants COO evaluation is influenced. For example, the mean effect size of COO evaluation for quality & reliability perception is .30 and .16 for single cue and multiple-cue studies respectively. Further findings introduce the concepts situational involvement (SI) and enduring involvement (ES) (Lee et al., 2005). These concepts can respectively be defined as short term moments where an individual feels highly involved in a particular situation (Houston & Rothschild, 1978) and as long term involvement where an individual expresses a degree of interest in something on an ongoing basis (Lee, 2016). The effect of a COO cue is dependent on an individual's level of SI and EI (Lee et al., 2005). When customers experience a low level of involvement, the impact of a COO cue is more substantial. The opposite is true for instances where the individual experiences a high level of involvement, where the impact of a COO cue is minimized. A prime real world example of an individual faced with SI is when making an in-store purchasing decision for a FMCG good (McWilliam, 1993). Examples of such FMCG good include, but are not limited to bottled water, cookies, aspirins, carrots, toothpaste and pencils (Kenton, 2021). Specifically for an individual's attitude motivation, both processing goals and information type are of influence on the COO evaluation (Gürhan-Canli & Maheswaran, 2000). When customers have low motivation or where the goal is to evaluate the COO, they will focus on the COO and it will be of effect to the evaluation thereof. The contrary is true when customers have high motivation or where their goal is directed away from evaluating the COO, they will not focus on the COO and it is of little effect to the evaluation thereof.

Product familiarity and product importance emerge as moderators via the outcome 'brand equity' (Chien-Huang & Kao, 2004). The greater an individual's product familiarity, the greater the effect of the COO cue (Ahmed & D'Astous, 2008; Heimbach et al., 1989; Johansson et al., 1985; Samiee, 1994). Heimbach et al. (1989) uncovered that individuals with higher product familiarity have more confidence in the information value of the respective COO cue. Furthermore, Chien-Huang & Kao (2004) claim product importance as another individual-based moderator, there is little literature to support this.

### **Outcomes**

Pharr (2005) reviews the outcomes of the COO concept. This group of closely intertwined concepts, influenced by earlier COO evaluation, are of direct effect to perceived value (Pharr, 2005). The direct effect to perceived value, instead of purchase intention, was

found by Peterson & Jolibert (1995), showing that COO effects the perception of product quality and reliability. COO is responsible for .30 of the variances explained in product quality evaluations, while it was only responsible for .19 in purchase intentions. COO evaluations influence purchase intentions through a proxy such as brand equity, brand image and product evaluation (Pharr, 2005).

Brand equity and brand image act as a proxy through which COO influences purchase intentions (Chien-Huang & Kao, 2004; Pharr, 2005). Brand equity is defined as "The marketing effects uniquely attributable to the brand …" (Keller, 1993). Research shows that some combinations of brand attributes compared to other combinations of brand attributes, can positively impact brand image (Faircloth et al., 2001). In turn, an enhanced brand image will significantly increase the customer's Willingness To Pay (WTP) premium prices. The concept of WTP is defined as "the maximum price a customer is willing to pay for a product or service" (Stobierski, 2020). The function of brand image as a proxy for the effect on WTP highlights the importance of identifying brand equity, of which brand attributes, such as COO, are a determinant (Keller, 1993).

Figure 1 displays all dimensions of brand knowledge, of which brand image attributes are particularly interesting to this study.

### Figure 1



Brand Knowledge Dimensions (Keller, 1993)

Certain brand attributes, such as quality, can enhance the WTP for a product (Temperini et al., 2016). Therefore, it is interesting to identify attributes connected to Belgium as the COO, because customers associate a products brand with the brand its COO (Samiee, 2010; Samiee & Sharma, 1994).

Regarding the common customers country-image of Belgium, as a COO, there has been little research. However, Tourism Flanders has conducted two market surveys which allow for a preliminary understanding of Belgium as a COO and its products in the eyes of Belgian customers. On a regional level foreigners associate mainly culinary terms with Flanders, ranging from the beer culture, chocolate and fries to waffles (Toerisme Vlaanderen, 2021b). Additionally pralines and waffles are the highest ranking products, 66% and 57% respectively, that Flemish and Brussels residents recommend to international visitors (Toerisme Vlaanderen, 2021a). The Flemish perceive themselves primarily as "enjoying life", "being craftsmen" and "being hospitable". Other attributes possibly connected to a generic grocery product include but are not limited to (Barrena & Sanchez, 2009; Demirbilek & Sener, 2003) : quality, prestige, geographical origin, habits and familiarity.

The concept of product evaluation on the dimension of product quality, indirectly affects the perceived value (Pharr, 2005). COO is noted as "... shaping consumer evaluations of product quality ..." (Hui & Zhou, 2002) having a "... pronounced effect on perceived value" (Hui & Zhou, 2002). The monetary value is frequented in the literature as a core element of the overall customer perceived value construct (Kantamneni & Coulson, 1996; Sweeney & Soutar, 2001), therefore it is interesting to investigate this via the WTP.

### Attitude

All determinants mentioned under the section of antecedents explain an individual's attitude. Pharr (2005) divides it into country-specific beliefs (i.e. behaviour), country-specific affect and COO related cognitions. The literature respectively defines behaviour, affect and cognition as "... actions, behavioral intentions, and verbal statements regarding behavior" (Breckler, 1984), "... an emotional response, a gut reaction, or sympathetic nervous activity" (Breckler, 1984) and "... perceptual responses, and thoughts ..." (Breckler, 1984). These three elements are the exact subcomponents of attitude (Breckler, 1984; Ostrom, 1969), which will in turn influence the COO evaluation made by the individual (Pharr, 2005). To measure an individual's attitude towards the COO, the COO image (COI) can be examined. The COI is the overall set of opinion's an individual has regarding goods from a certain country, namely the COO (Parameswaran & Pisharodi, 1994). An individual's COI is of

effect to their product evaluation (Bilkey & Nes, 1982; Han & Terpstra, 1988; Parameswaran & Pisharodi, 1994). Koschate-Fischer et al. (2012) found that a favourable COI increases the WTP of customers.

A study seeking similar research objectives as this research, regarding the WTP of customers for products "Made in Italy" found that in the sectors food, fashion and furnishings customers are willing to pay a premium price, ranging from 10 to 30% (Cappelli et al., 2017). The concept of COO is underpinned as an important determinant in explaining the success of a product herein (Dichter, 1962). Connected with COO as a determinant is the perceived COI of an individual (Liefeld, 2004). Furthermore the "Made in Italy" brand is associated with several positive attributes in the customers mind, connected with the image that people have of Italy as a country (Temperini et al., 2016). Connecting these positive attributes of a country to a product enhances the brand image (Faircloth et al., 2001).

Considering the literature, the following hypothesis is made:

H2<sub>A</sub>. Customers exposed to a "Made in Belgium" label, have a more favourable COI of Belgium than customers who have not been exposed..

### "Made in Belgium" label

Having explored the COO concept it is important to discuss how a "Made in Belgium" label comes into effect herein.

The literature establishes the positive effect of using a quality label in a product's branding. For instance, the WTP a premium for products is positively impacted when a quality label is present (Aprile et al., 2012). A study examining the WTP for organic olive oils in Canada found that there was a premium ranging from 8.11 to 8.42 CAD per litre (Menapace et al., 2011). It is reasonable to assume that a similar effect is present for the "Made in Belgium" label as it evokes attributes, such as quality, which can increase the WTP. Similarly to the effect of the "Made in Italy" label in previous research (Cappelli et al., 2017).

Next let's look at a possible rationale why similar effects to using a quality label can be expected for a "Made in Belgium" label. WTP is partially influenced by attributes that brands and stores can manipulate, pertaining elements such as: product features, price policy and environment (Gall-Ely, 2009). Particularly interesting for this study are two of the product features, namely presentation (i.e. physical feature) and brand (i.e. brand image). Presentation includes our "Made in Belgium" label and brand includes the specific attributes that a customer experiences for a brand with that label. Additionally, home being the COO steps forward as a strong determinant regarding paying a price premium, guiding attention towards it is therefore valuable (Anselmsson et al., 2014; Liefeld, 2004). For example, research showed that customers were willing to pay on average of \$0.64 more per carton of strawberries when made aware they were locally produced (Darby et al., n.d.).

Furthermore, connecting a certain country to a product could transpose positive attributes of it, such as delivering craftsmanship, towards the brand image connected to it. Particularly because research has shown that 40% of the arguments given to pay a premium for a certain brand are non-quality related (Anselmsson et al., 2007). Possible non-quality related arguments included: origin, health, organisation – of the brand - and environment/animal friendliness. Origin was found to increase the WTP when it was for a product of domestic origin. Health, organisation and environmental/animal friendliness were not found to be of direct impact to the WTP.

Considering the literature, the following hypotheses are made:

H3<sub>A</sub>. Customers exposed to a "Made in Belgium" label, have a higher WTP than customers who have not been exposed.

**H4**<sub>A</sub>. Customers exposed to a "Made in Belgium" label, connect attributes descriptive of Belgium to the brand image more, while customers not exposed to the label will to a lesser extent.

### **FMCG Product**

Prior research assessed the effect of a "Made in Italy" label for three product sectors, being food, fashion and furnishing (Cappelli et al., 2017). The focus is on these sectors because they are sectors for which Italy is known. Looking at Belgium the closest sector approaching this is the food sector (Britannica, 2022). Moreover it is reasonable to assume that one is familiar with FMCG, which allows for sufficient and equal product familiarity when disregarding it as an individual-based moderator in the COO concept model of Pharr (2005). Furthermore, FMCG are considered purchases where there is a low level of involvement (Kenton, 2021). For such a low level of involvement purchase a COO cue is expected to be more substantial (Ahmed et al., 2004; Lee et al., 2005).

### 2D vs 3D Product cues

New technology is more prominent than ever nowadays. Therefore this study seeks to investigate the different outcomes of using either a 2D or 3D product cue.

The literature has previously attempted to support the hypothesis that using interactive media, such as 3D models, leads to a higher WTP than when shown the same product as a 2D image (Li & Meshkova, 2013). Although the data was unable to support the hypothesis, interactive technology such as 3D models did show a direct positive effect on purchase intentions. A possible limitation given, is that at the time these types of virtual experiences can be too difficult for some respondents. It is reasonable to assume that since 2013 these difficulties have been reduced, as the technology has gotten easier to use.

Considering the literature, the following hypothesis is made:

**H5**<sub>A</sub>. Customers exposed to a "Made in Belgium" label on a FMCG product 3D model, have a higher WTP than customers who have been exposed to a "Made in Belgium" label on a FMCG product 2D image.

No literature is available regarding the effect of exposure to a 3D model or 2D image on the degree of ethnocentrism, COI or brand image. However individuals tend to interact longer with a 3D model than with a 2D image (Jayathilaka & Park, 2022; Jessen et al., 2020). Therefore it is fair to assume they are more likely to notice the presence of a "Made in Belgium" label on the product when present, meaning that as an extension on  $H1_A$ ,  $H2_A$  and  $H4_A$  the following hypotheses are developed:

**H6**<sub>A</sub>. Customers exposed to a FMCG product 3D model with a "Made in Belgium" label, have a higher degree of ethnocentrism than customers who have been exposed to a FMCG product 2D image with a "Made in Belgium" label.

**H7**<sub>A</sub>. Customers exposed to a FMCG product 3D model with a "Made in Belgium" label, have a more favourable COI of Belgium than customers who have been exposed to a FMCG product 2D image with a "Made in Belgium" label.

**H8**<sub>A</sub>. Customers exposed to a FMCG product 3D model with a "Made in Belgium" label, connect attributes descriptive of Belgium to the brand image more, while customers not exposed to a FMCG product 2D image with a "Made in Belgium" label will to a lesser extent.

### Research

### **Research Questions**

The research attempts to answer the following questions:

- I. Do customers exhibit a higher WTP for a FMCG product with a "Made in Belgium" label, compared to an identical FMCG product without the "Made in Belgium" label?
  - a. If so, up to what extent are they willing to pay more?
- II. Is there a difference observable between customers exposed to a "Made in Belgium" label and customers not exposed to the label, in terms of:
  - a. Degree of ethnocentrism?
  - b. Country of origin image?
  - c. Brand image?
- III. Is there a difference in WTP, CE, COI or brand image between customers shown a 3D product with a "Made in Belgium" label compared to those shown a 2D product with the label?

### **Research Model**

Using the theoretical background, a research model to perform the research is created, as is seen in Figure 2. After a participant is shown a 2D or 3D FMCG product with either a "Made in Belgium" label or not, the antecedents of interest from Pharr (2005) are measured. For this study the antecedents demographics and ethnocentrism are investigated. Before one makes a COO evaluation the overall opinions one has of a country affect the outcome. These overall opinions of a country are captured by the COI (Parameswaran & Pisharodi, 1994). Subsequently, after the COO evaluation the effect on the perceived brand image is measured, as there is only an effect to WTP with brand image as a proxy (Faircloth et al., 2001). Finally the WTP for the different FMCG products is examined.

### Figure 2

Conceptual Map



### Hypotheses development

This section briefly repeats the (alternative) hypotheses established in the theoretical background, as well as developing the respective null hypothesis:

H1A. Customers exposed to a "Made in Belgium" label, have a higher degree of ethnocentrism than customers who have not been exposed.

H1<sub>0</sub>. Customers exposed to a "Made in Belgium" label, do not have a higher degree of ethnocentrism than customers who have not been exposed.

H2A. Customers exposed to a "Made in Belgium" label, have a more favourable COI of Belgium than customers who have not been exposed.

H2<sub>0</sub>. Customers exposed to a "Made in Belgium" label, do not have a more favourable COI of Belgium than customers who have not been exposed.

H3A. Customers exposed to a "Made in Belgium" label, have a higher WTP than customers who have not been exposed.

H3<sub>0</sub>. Customers exposed to a "Made in Belgium" label, do not have a higher WTP than customers who have not been exposed.

H4A. Customers exposed to a "Made in Belgium" label, connect attributes descriptive of Belgium to the brand image more, while customers not exposed to the label will to a lesser extent.

H40. Customers exposed to a "Made in Belgium" label, do not connect attributes descriptive of Belgium to the brand image more, while customers not exposed to the label will to a lesser extent.

H5<sub>A</sub>. Customers exposed to a "Made in Belgium" label on a FMCG product 3D model, have a higher WTP than customers who have been exposed to a "Made in Belgium" label on a FMCG product 2D image.

**H50.** Customers exposed to a "Made in Belgium" label on a FMCG product 3D model, do not have a higher WTP than customers who have been exposed to a "Made in Belgium" label on a FMCG product 2D image.

**H6**<sub>A</sub>. Customers exposed to a FMCG product 3D model with a "Made in Belgium" label, have a higher degree of ethnocentrism than customers who have been exposed to a FMCG product 2D image with a "Made in Belgium" label.

**H60.** Customers exposed to a FMCG product 3D model with a "Made in Belgium" label, do not have a higher degree of ethnocentrism than customers who have been exposed to a FMCG product 2D image with a "Made in Belgium" label.

H7<sub>A</sub>. Customers exposed to a FMCG product 3D model with a "Made in Belgium" label, have a more favourable COI of Belgium than customers who have been exposed to a FMCG product 2D image with a "Made in Belgium" label.

H7<sub>0</sub>. Customers exposed to a FMCG product 3D model with a "Made in Belgium" label, do not have a more favourable COI of Belgium than customers who have been exposed to a FMCG product 2D image with a "Made in Belgium" label.

**H8**<sub>A</sub>. Customers exposed to a FMCG product 3D model with a "Made in Belgium" label, connect attributes descriptive of Belgium to the brand image more, while customers not exposed to a FMCG product 2D image with a "Made in Belgium" label will to a lesser extent.

**H80.** Customers exposed to a FMCG product 3D model with a "Made in Belgium" label, do not connect attributes descriptive of Belgium to the brand image more, while customers exposed to a FMCG product 2D image with a "Made in Belgium" label will to a lesser extent.

These hypotheses are tested against the findings, either rejecting or failing to reject the null hypotheses.

### Methodology

### Procedure

Participants of the study are randomly assigned into one of four groups, utilising a between-subjects 2x2 design. The main goal is to test the effect of a "Made in Belgium" label on the WTP. A participant is either exposed to an FMCG product with a "Made in Belgium" label or an identical product without a label. Additionally, participants are randomly assigned to 2D product visualisation or 3D product visualisation. In 2D the participant is exposed to a 2D product (i.e. image), while in 3D the participant is exposed to a 3D product (i.e. interactable model). Although each group receives a different treatment, all participants will be asked the same questions in the survey. Potential participants include all people with the Belgian nationality.

Data is obtained with a Qualtrics survey using convenience sampling. This survey is pilot tested by a group of 10 participants in advance. This pilot test allowed to assess several aspects of the questionnaire: time required to fill in survey, validity of the questions and general feedback from respondents.

At the start of the questionnaire respondents are either shown four FMCG products after each other with or without the "Made in Belgium" label. These four FMCG products consist of: a jar of peanut butter (350g), a gingerbread bar (40g), a bag of chocolate chip cookies (184g) and a package of coffee (250g). These products are a random selection of FMCG products purchased by customers, of which can be assumed, with reasonable certainty, that respondents have sufficient and similar product familiarity. Moreover the products have a similar level of price elasticity.

Thereafter, in random order, respondents answer questions to measure their WTP, COI, CE and brand image. For each construct the individual questions are again presented in no particular set order. Such randomization of constructs and individual construct questions is done to mitigate order bias and order effects.

To measure the WTP for each product the respondents answer four questions, completing a Price Sensitivity Meter study. Section "Measuring WTP" goes into further detail about what such a Price Sensitivity Meter study entails. To measure COI respondents answer a set of 10 questions part of the COISCALE. The application of the COISCALE is explained in greater detail in the section "Measuring COI". Respondents their degree of ethnocentrism is determined via the CETSCALE. A further explanation regarding the application of the CETSCALE is given in section "Measuring Ethnocentrism". Finally, the respondent's brand image is examined via several Likert scale questions. The method is discussed in section "Measuring Brand image".

### Measuring WTP

There are several methods of determining WTP (Breidert et al., 2006). Table 1 shows a comparison of all methods to measure WTP on several relevant factors that are to be considered (Breidert et al., 2006). Overall, four types of measurement methods can be identified: market data, experiments, direct surveys and indirect surveys.

### Table 1

Evaluation criteria	Methods of measuring willingness to pay						
	Market Experiments		Direct	Indirect Surveys			
	data		Surveys	Conjoint	Discrete Choice		
				Analysis	Analysis (CBC)		
Cost effective	+/-		++	+	+		
Time efficient	+/-		++	+	+		
Flexibility to include new			17				
price/product combinations		TT	+/-		++		
Validity of estimations	++	+/-		+	+		
Real purchase behaviour	++	+/-					
Observed choice behaviour	++	+			+		
Individual level estimations	+/-	+/-	++	++	+		

### Comparing WTP Methodologies (Breidert et al., 2006)

*Note*. + (++) = (strong) advantage; - (--) = (strong) disadvantage; +/- = no clear advantage or disadvantage; Copied in full from Breidert et al. (2006)

Market Data utilizes mainly sales data that is suitable for estimating WTP. Second there are Experiments, which allow pricing studies to take place. Third there are Direct Surveys, which will be most useful in the form of Customer Surveys performing a Price Sensitivity Meter Study (Van Westendorp, 1976). Lastly there are Indirect Surveys, subdivided into Conjoint Analysis and Discrete Choice Analysis.

Considering all elements, Direct Surveys surfaces as the most applicable method for this research. The downsides are not as significant, because research is measuring the WTP of a familiar product. Moreover, the downsides identified by Breidert et al. (2006) are partially disputed, a meta-analysis showed that indirect methods overestimate the real WTP compared to direct methods (Schmidt & Bijmolt, 2020). The Van Westendorp Price Sensitivity Meter study has been heavily criticized as producing biased results due to the hypothetical nature and focus on minimal customer resistance (Kunter, 2016), however it turns out to be a sufficient measure for determining the WTP of frequently purchased and low-priced products. As part of Van Westendorp Price Sensitivity Meter study the following four questions are asked:

- "At what price do you consider the product to become inexpensive but you would still consider it to be a bargain? (Cheap)" (Kunter, 2016).
- "At what price do you consider the product to become expensive but you would still consider buying it? (Expensive)" (Kunter, 2016).
- "Above what price would the product become too expensive so that you would not consider buying it? (Too expensive)" (Kunter, 2016).
- "Below what price would the product become so inexpensive that you would doubt its quality and not consider buying it? (Too cheap)" (Kunter, 2016).

The data obtained with these questions allows a Price Meter, consisting of 4 curves (one for each question) to be developed. Interesting are the 4 price points where these graphs intersect with each other (Kunter, 2016; Luptak, 2021; Van Westendorp, 1976). The Point of Marginal Expensiveness (PME) is where the "too expensive" and "bargain" curves intersect. The PME is the point where a similar proportion of respondents consider the product too expensive on the one hand and a bargain on the other. Generally speaking, one should not price beyond this point as most are not willing to pay that much. The Point of Marginal Cheapness (PMC) is where the "too cheap" and the "expensive" curves intersect. The PMC is the point where a similar proportion of respondents consider the product too cheap on the one hand and expensive (but would still buy) on the other. Generally speaking, one should not price below this point as customers will doubt the products quality. Together beginning at the PMC and ending at the PME these points make up the range of acceptable prices. Within this range of acceptable prices the Optimal Price Point (OPP) and Indifference Price Point (IPP) reside. The OPP is the point where a similar proportion of respondents consider the product too expensive on the one hand and too cheap on the other. It is considered the optimal point because there is a low proportion of customers who will not buy the product due to the price. Generally it is considered best when the goal is to maximize customer acquisition. The IPP is the point where a similar proportion of respondents consider the product expensive (but would still buy) on the one hand and a bargain on the other. It is also considered optimal, but for maximizing revenue rather than maximizing customer acquisition.

### Measuring COI

The COISCALE is an approach developed by Knight et al. (2003) to measure an individual's attitude of the COI using a 10-item questionnaire. Each question is answered using a 7-point Likert scale. The scale is deemed valid and applicable for usage in different country settings. Compared to the original Parameswaran and Yaprak scale (Parameswaran & Yaprak, 1987), the COISCALE presents itself as much more appropriate given its conciseness and refinement. Table 2 lists all items respondents are asked to rate in response to the question: "In general, what is your image of (country name) regarding each of the following statements:" (Knight et al., 2003).

### Table 2

	Strongly			Neither			Strongly
	disagree						agree
People are well educated.	1	2	3	4	5	6	7
Technical skills of work force are high.	1	2	3	4	5	6	7
Products are unreasonably expensive.	1	2	3	4	5	6	7
Country produces highly technical products.	1	2	3	4	5	6	7
Products are made with meticulous workmanship.	1	2	3	4	5	6	7
Products are imitations, not innovations.	1	2	3	4	5	6	7
Products are distributed worldwide.	1	2	3	4	5	6	7
Products need frequent repairs.	1	2	3	4	5	6	7
Advertising of products is informative.	1	2	3	4	5	6	7
Friendly towards the USA international affairs.	1	2	3	4	5	6	7

COISCALE Items (Knight et al., 2003)

### Measuring Ethnocentrism

In this study CE will be measured via the CETSCALE method. Originally formatted and validated with the American customer market in mind (Shimp & Sharma, 1987). Afterwards the validity of this scale has been extended to other countries (Netemeyer et al., 1991). It also exceeds demographic variables as a predictor of buying behaviour (Herche, 1992). The CETSCALE will be adapted to the requirements of this study. Table 3 displays the 17 item list to which respondents are to give an answer using a 7-point Likert scale.

### Table 3

### CETSCALE Items (Shimp & Sharma, 1987)

	Strongly			Neither			Strongly	
	disagree						agree	
American people should always buy American-	1	2	2	4	5	6	7	
made products instead of imports.	1	Z	3	4	3	0	/	
Only those products that are unavailable in the	1	2	2	4	5	6	7	
U.S. should be imported.	1	Z	3	4	5	0	/	
Buy American-made products. Keep America	1	n	2	1	5	6	7	
working.	1	Z	3	4	5	0	/	
American products, first, last, and foremost.	1	2	3	4	5	6	7	
Purchasing foreign-made products is un-	1	r	3	1	5	6	7	
American.	1	2	5	4	5	0	/	
It is not right to purchase foreign products,	1	r	3	1	5	6	7	
because it puts Americans out of jobs.	1	2	5	4	5	0	/	
A real American should always buy American-	1	2	3	1	5	6	7	
made products.	1	2	3	4	5	0	/	
We should purchase products manufactured in								
America instead of letting other countries get	1	2	3	4	5	6	7	
rich off us.								
It is always best to purchase American products.	1	2	3	4	5	6	7	
There should be very little trading or purchasing								
of goods from other countries unless out	1	2	3	4	5	6	7	
of necessity.								
Americans should not buy foreign products,								
because this hurts American business and	1	2	3	4	5	6	7	
causes unemployment.								
Curbs should be put on all imports.	1	2	3	4	5	6	7	
It may cost me in the long-run but I prefer to	1	2	3	4	5	6	7	
support American products.	1	2	5	-	5	0	/	
Foreigners should not be allowed to put their	1	2	3	4	5	6	7	
products on our markets.	1	2	5	4	5	0	/	
Foreign products should be taxed heavily to	1	r	3	1	5	6	7	
reduce their entry into the U.S.	1	2	3	4	5	0	/	
We should buy from foreign countries only								
those products that we cannot obtain within	1	2	3	4	5	6	7	
our own country.								
American consumers who purchase products								
made in other countries arc responsible for	1	2	3	4	5	6	7	
putting their fellow Americans out of work.								

### Measuring Brand image

Many methods for assessing an individual's attitude towards a brand exist within the area of marketing literature. All methods can be categorised as either one of scaling or one of sorting. While scaling methods are targeted at finding out if brand and attribute are associated (and to which extent), sorting methods are solely trying to uncover if such association exists (Driesener & Romaniuk, 2006; Joyce, 1963). No clear advantage for using either method has been uncovered in the literature (Barnard & Ehrenberg, 1990; Joyce, 1963).

Considering the above a scaling method is chosen, 10 attributes are presented to the respondent. For each attribute the respondent has to indicate on a 7-point Likert scale whether or not it is characteristic of the brand. These attributes stem from a survey by Toerisme Vlaanderen (2021) in which associations respondents made with Flanders were measured in an assisted manner. The 10 attributes used to assess the brand image are the ones most frequently associated with Flanders. Due to the decision of applying convenience sampling it is reasonable to assume that a majority of the respondents will be from Flanders, therefore this source is being used for the attributes. Moreover, similar findings for Belgium as a whole are absent. Table 4 lists all attributes, to which respondents are asked to answer the question: "The brand is characterised by (attribute)". Answers consist of responses to a 7-point Likert scale, ranging from strongly disagree to strongly agree.

### Table 4

	Strongly			Neither			Strongly
	disagree						agree
Historic cities	1	2	3	4	5	6	7
Heritage	1	2	3	4	5	6	7
Beautiful landscapes	1	2	3	4	5	6	7
Good food and drinks	1	2	3	4	5	6	7
Local products	1	2	3	4	5	6	7
Nature	1	2	3	4	5	6	7
Architecture	1	2	3	4	5	6	7
Parks and gardens	1	2	3	4	5	6	7
Beer	1	2	3	4	5	6	7
Child-friendly	1	2	3	4	5	6	7

10 Most Associated Attributes with Flanders (Toerisme Vlaanderen,, 2021)

### Data collection and analysis

Data is collected using a Qualtrics survey. The survey was distributed in 2 ways, on the one hand respondents were invited to join the study through various word of mouth methods such as e-mail and social media. This yielded 117 responses. Additionally, for the remaining 90 responses, a paid online crowdsourcing research platform called Prolific was used. Each Prolific participant was rewarded between £0.90 and £1.20 for their participation. The platform has proven to yield high data quality from a diverse set of participants (Peer et al., 2017).

The survey is structured in several blocks. In the first block respondents are introduced to the study, and are given information such as its purpose. The latter is deliberately kept vague as to not give away the intended research difference between groups. As part of this block the respondent is asked to agree to a standard VUB template informed consent form. If the respondent doesn't agree there is a redirection to the end of the survey. Next a check question is asked, to verify if the respondent has the Belgian nationality. If not, there is a redirection to the end of the survey.

In block two, respondents are exposed to the four FMCG products of their respective group in a random order. Each respondent was randomly assigned to one of four groups, each with its own condition:

- Group 1: 3D, Label present
- Group 2: 3D, No label present
- Group 3: 2D, Label present
- Group 4: 2D, No label present

Figure 3 shows the different product cues of the bag of Chocolate Chip Cookies (184g) for each group. At the top the products displayed for group 1 and 2 are shown, while at the bottom the products displayed for group 3 and 4 are shown. All possible visualizations for the 4 products are shown in Appendix A. Each product comes from the made up brand "Blissful Bites".

### Figure 3

### Please take your time to observe the following product. Please take your time to observe the following product. The product is shown as a 3D model with which you can interact. The product is shown as a 3D model with which you can interact. You are being shown a bag of Chocolate Chip Cookies (184g) by the You are being shown a bag of Chocolate Chip Cookies (184g) by the brand Blissful Bites. brand Blissful Bites. 0 0 You may proceed to the next page after 15 seconds. You may proceed to the next page after 15 seconds. Please take your time to observe the following product. Please take your time to observe the following product. The product is shown as an image. The product is shown as an image. You are being shown a bag of Chocolate Chip Cookies (184g) by the You are being shown a bag of Chocolate Chip Cookies (184g) by the brand Blissful Bites brand Blissful Bites. You may proceed to the next page after 15 seconds. You may proceed to the next page after 15 seconds.

Visualization Chocolate Chip Cookies (184g) for All Groups

Respondents of group 1 and group 2 had the ability to manipulate the product 360 degrees, as well as zoom in on the product. Figure 4 shows some of the possible views utilising these manipulations.

### Figure 4

Manipulations of Chocolate Chip Cookies (184g) for Group 1



Respondents had to observe the product for a minimum of 15 seconds before being able to proceed onto the next page. Each time after being shown a product their WTP was measured using a Van Westendorp Price Sensitivity Meter study as discussed in the section "Measuring WTP".

Once respondents were shown all four products and their WTP for each was measured, their COI, ethnocentrism and brand image were observed. The constructs, as well as the individual scale items per construct, were randomized for each respondent. The respective scale items respondents were asked to answer can be found in the respective sections "Measuring COI", "Measuring Ethnocentrism" and "Measuring Brand image".

At the end respondents were asked general demographic questions, including age, gender, level of education, employment status, level of household income and residing Belgian region. The end of survey screen contained a unique ID the respondent could store, in case they wanted to exercise their GDPR rights at a point in time for which their data has to be identified. A full overview of all questions asked per block to the respondent is available in Appendix B. The data which was collected through Qualtrics is analysed using a combination of IBM SPSS and Excel. It is not possible to include the raw data as an appendix in a readable manner due to its extensive nature, therefore it is available upon request.

### Results

### **Demographics**

In total 209 respondents participated in the study, all of which have the Belgian nationality. The characteristics of the respondents are shown in Table 5.

### Table 5

### Respondent characteristics

		Count	Column N %
Age	18-24 years old	123	58,9%
	25-34 years old	55	26,3%
	35-44 years old	23	11,0%
	45-54 years old	5	2,4%
	55-64 years old	3	1,4%
Gender	Female	94	
	Male	113	
	Non-binary / third gender	2	
Education level	Some secondary school	3	1,4%
	Completed secondary school	42	20,1%
	Vocational or Similar	1	0,5%
	Some university but no degree	19	9,1%
	University Bachelors Degree	71	34,0%
	Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS etc.)	73	34,9%
Employment status	Working full-time	84	40,2%
	Working part-time	14	6,7%
	Unemployed and looking for work	2	1,0%
	Student	106	50,7%
	Retired	1	0,5%
	Other	2	1,0%
Household income	Less than 25,000 Euros	29	13,9%
	25,000 - 49,999 Euros per vear	53	25,4%
	50,000 - 99,999 Euros per vear	56	26,8%
	100,000 - 199,999 Euros per vear	22	10,5%
	200,000 Euros per year or more	3	1,4%
	Prefer not to say	46	22,0%
Region	Flemish Region	165	78,9%
5	Brussels-Capital Region	36	17,2%
	Walloon Region	5	2,4%
	I don't currently live in Belgium	3	1,4%

The sample consist out of 94 females (44.5%) and 113 males (54.1%). Over half, around 59%, are between the ages of 18 and 24 years old, followed by the group of 25 to 34 year old respondents at about 26%. The most predominant types of respondents are students

(50.7%) and people working full-time (40.2%). In terms of household income, the groups 25,000 to 49,999 euros and 50,000 to 99,999 represent over 50%. A large majority (78.9%) of the respondents resides within the Flemish region.

Table 6 displays the distribution of respondents among the different groups, as introduced in the section "Data collection and analysis". The rounded mean sample size per group is 52. Although the study was designed to evenly distribute respondents among all conditions, there are small discrepancies due to incomplete data collection and withdrawals.

### Table 6

		Presentation			
		2D 3D			
		Count	Count		
Visual	Label present	51	49		
	NO Label present	57	52		

### Distribution Respondent Over Conditions

### **Customers' Willingness To Pay**

Within each group respondents were exposed to 4 products. These were either shown in 2D or 3D and with or without a "Made in Belgium" label, depending on the conditions of the group. The graphical Van Westendorp price sensitivity meters for the 4 FMCG products are shown in Appendix C.

Remember the groups as they were previously introduced:

- Group 1: 3D, Label present
- Group 2: 3D, No label present
- Group 3: 2D, Label present
- Group 4: 2D, No label present

### Product 1 – Jar of Peanut butter (350g)

Table 7 displays the four price points (PME, PMC, OPP and IPP) of product 1 (Jar of peanut butter [350g]) for each group. Using a Mahalanobis Distance Test the data was assessed for multivariate outliers (Tabachnick & Fidell, 2013). From group 1 three multivariate outliers were identified and removed: [Cheap = 5.89, Expensive = 12.35, Too Expensive = 17.053, Too Cheap = 2.51; Sig. Mahalanobis Distance = .0001], [Cheap = 5.83, Expensive = 6.55, Too Expensive = 10.00, Too Cheap = 2.03; Sig. Mahalanobis Distance = .0003] and [Cheap = 1.69, Expensive = 5.83, Too Expensive = 4.326, Too Cheap = .19; Sig. Mahalanobis Distance = .0011]. From group 2 two multivariate outliers were identified and

removed: [Cheap = 1.01, Expensive = 18.00, Too Expensive = 16.00, Too Cheap = 1.01; Sig. Mahalanobis Distance = .0000] and [Cheap = 1.94, Expensive = .35, Too Expensive = 1.22, Too Cheap = 5.13; Sig. Mahalanobis Distance = .0000]. No multivariate outliers were identified for group 3 and 4.

### Table 7

Results Van Westedorp Price Sensitivity Meter - Product 1

		PMC	PME	OPP	IPP	Outliers
Group	Group 1	2,81	4,00	3,04	3,07	3,00
	Group 2	2,57	3,57	2,58	3,39	2,00
	Group 3	2,35	3,59	2,45	2,99	,00,
	Group 4	2,21	3,59	2,56	3,01	,00

Comparing the results on a solely descriptive level, results for the groups with a 3D product indicate a higher WTP when exposed to the "Made in Belgium" label. Price preferences for PMC, PME and OPP are all higher in the 3D product group that was exposed to the label. The WTP in terms of IPP is the exception, being higher for the group that was not shown a label. The range of acceptable prices is larger for the 3D group exposed to the label. Looking at the groups exposed to a 2D product, there is a less evidence supporting a higher WTP for the group exposed to the label, a higher price preference is only present for PMC.

A two-way multivariate analysis of variance (MANOVA) is utilized to compare the WTP of the four groups for product 1 via the pricing points obtained. These pricing point (Cheap, Expensive, Too Expensive and Too Cheap) differ from the ones above, as these are the ones which are used to calculate PMC, PME, OPP and IPP. Before conducting the Two-Way MANOVA the assumptions are tested. First, the observations are randomly and independently obtained from the population. Second, the normality assumption is looked at for each dependent variable individually. Using a Mahalanobis Distance Test nine multivariate outliers were found and removed (Tabachnick & Fidell, 2013). Table 8 shows that according to the Shapiro-Wilk test a normal distribution cannot be assumed for any of the four dependent variables.

### Table 8

Tests of Normality – Product 1

		Shapiro-Will	2
	Statistic	df	Sig.
MANOVA_P1_Cheap	,952	200	<,001
MANOVA_P1_Expensive	,967	200	<,001
MANOVA_P1_Too_Expensive	,956	200	<,001
MANOVA_P1_Too_Cheap	,944	200	<,001

Table 9 shows Skewness and Kurtosis for the dependent variables. In line with earlier findings regarding normal distribution the skewness for all variables lies between 0.5 and 1, indicating a moderately skewed distribution. In terms of Kurtosis, the findings are acceptable to prove a normal distribution.

### Table 9

Skewness and Kurt	osis – Product I	
-------------------	------------------	--

		Statistic	Std. Error
MANOVA_P1_Cheap	Skewness	,860	,172
	Kurtosis	,949	,342
MANOVA_P1_Expensive	Skewness	,690	,172
	Kurtosis	,798	,342
MANOVA_P1_Too_Expensive	Skewness	,699	,172
	Kurtosis	,388	,342
MANOVA_P1_Too_Cheap	Skewness	,967	,172
	Kurtosis	1,604	,342

The skewness and kurtosis are deemed acceptable for the data to be considered normally distributed (George & Mallery, 2021). Moreover, the literature provides evidence that although the normality requirement is violated, the outcome of ANOVA is robust (Schmider et al., 2010). The sample size of 200 (> 30) also justifies the use of the Central Limit Theorem (CLT), which states that for sufficiently large sample sizes violation of the normality requirement can still yield robust results (Boos & Brownie, 1995; Brownie & Boos, 1994; Ross, 2017).

Third, regarding the linear relationship between each pair of the dependent variables across each level of the independent variables a scatterplot matrix is computed. Figure 5 depicts the result. If there is an elliptic shape moving from the bottom right to the top left the assumption is met, which is the case in this instance.

### Figure 5



Matrices of Scatter Plots for Testing Curvilinear Relation – Product 1

Fourth, testing for multicollinearity with a bivariate correlations analysis as shown in Table 10. In general, the assumption is met when the correlations are below or equal to .90 and above .20, to indicate that they are related but not multicollinear. Both conditions apply, so the requirement is met.

### Table 10

		MANOVA_P1_ Cheap	MANOVA_P1_ Expensive	MANOVA_P1_ Too_Expensive	MANOVA_P1_ Too_Cheap
MANOVA_P1_Cheap	Pearson Correlation	1	,683	,664	,795""
	Sig. (2-tailed)		<,001	<,001	<,001
	N	200	200	200	200
MANOVA_P1_Expensive	Pearson Correlation	,683""	1	,901 ""	,586""
	Sig. (2-tailed)	<,001		<,001	<,001
	И	200	200	200	200
MANOVA_P1_Too_Expensive	Pearson Correlation	,664	,901 ""	1	,521
	Sig. (2-tailed)	<,001	<,001		<,001
	И	200	200	200	200
MANOVA_P1_Too_Cheap	Pearson Correlation	,795""	,586	,521	1
	Sig. (2-tailed)	<,001	<,001	<,001	
	N	200	200	200	200

Correlation Matrices – Product 1

\*\*\* Correlation is significant at the 0.01 level (2-tailed).

The results of the Two-way MANOVA are shown in Table 11. The Willks' Lambda test for the interaction effect (Presentation \* Visual) shows no statistically significant interaction effect between presentation (2D or 3D) and the visual (Label or No Label) on the combined dependent variables (F(4, 193) = .991, p = .414; Wilks'  $\Lambda = .980$ ). If you were to consider it a One-way MANOVA for either Presentation (F(4, 193) = .991, p = .082; Wilks'  $\Lambda = .958$ ) or Visual (F(4, 193) = 1.040, p = .388; Wilks'  $\Lambda = .979$ ) there would be no statistically significant findings either. The Partial Eta Squared ( $\eta_p^2$ ) indicates the effect size for a multivariate analysis. For the interaction effect and visual effect it is .020 and .021 respectively, both values are small (Cohen, 1988). The  $\eta_p^2$  of the presentation effect is a small effect at .042.

### Table 11

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	,912	499,248 <sup>6</sup>	4,000	193,000	<,001	,912
	Wilks' Lambda	,088	499,248 <sup>b</sup>	4,000	193,000	<,001	,912
	Hotelling's Trace	10,347	499,248 <sup>b</sup>	4,000	193,000	<,001	,912
	Roy's Largest Root	10,347	499,248 <sup>b</sup>	4,000	193,000	<,001	,912
Presentation	Pillai's Trace	,042	2,104 <sup>6</sup>	4,000	193,000	,082	,042
	Wilks' Lambda	,958	2,104 <sup>b</sup>	4,000	193,000	,082	,042
	Hotelling's Trace	,044	2,104 <sup>b</sup>	4,000	193,000	,082	,042
	Roy's Largest Root	,044	2,104 <sup>b</sup>	4,000	193,000	,082	,042
Visual	Pillai's Trace	,021	1,040 <sup>6</sup>	4,000	193,000	,388	,021
	Wilks' Lambda	,979	1,040 <sup>b</sup>	4,000	193,000	,388	,021
	Hotelling's Trace	,022	1,040 <sup>b</sup>	4,000	193,000	,388	,021
	Roy's Largest Root	,022	1,040 <sup>b</sup>	4,000	193,000	,388	,021
Visual * Presentation	Pillai's Trace	,020	,991 <sup>6</sup>	4,000	193,000	,414	,020
	Wilks' Lambda	,980	,991 <sup>b</sup>	4,000	193,000	,414	,020
	Hotelling's Trace	,021	,991 <sup>b</sup>	4,000	193,000	,414	,020
	Roy's Largest Root	,021	,991 <sup>b</sup>	4,000	193,000	,414	,020

Multivariate Tests – Product 1

<sup>b</sup>. Exact statistic

### Product 2 – Gingerbread Bar (40g)

Table 12 displays the four price points (PME, PMC, OPP and IPP) of product 2 (Gingerbread bar [40g]) for each group. Using a Mahalanobis Distance Test the data was assessed for multivariate outliers (Tabachnick & Fidell, 2013). From group 1 four multivariate outliers were identified and removed: [Cheap = 5.04, Expensive = 8.90, Too Expensive = 10.12, Too Cheap = 3.80; Sig. Mahalanobis Distance = .0000], [Cheap = 2.53, Expensive = 8.77, Too Expensive = 10.28, Too Cheap = 1.80; Sig. Mahalanobis Distance = .0002], [Cheap = 4.20, Expensive = 8.53, Too Expensive = 9.15, Too Cheap = 1.38; Sig. Mahalanobis Distance = .0004] and [Cheap = 3.96, Expensive = 4.80, Too Expensive = 8.77, Too Cheap = 2.04; Sig. Mahalanobis Distance = .0009]. From group 2 two multivariate outliers were identified and removed: [Cheap = .12, Expensive = .81, Too Expensive = 2.09, Too Cheap = 4.09; Sig. Mahalanobis Distance = .0000] and [Cheap = 1.04, Expensive = 5.04, Too Expensive = 7.04, Too Cheap = 1.04; Sig. Mahalanobis Distance = .0003]. From group 3 one outlier was identified and removed: [Cheap = .46, Expensive = 2.41, Too Expensive = 2.03, Too Cheap = .96; Sig. Mahalanobis Distance = .0307]. From group 4 three multivariate outliers were identified and removed: [Cheap = 2.17, Expensive = 5.07, Too Expensive = 6.41, Too Cheap = 4.20; Sig. Mahalanobis Distance = .0000], [Cheap = .55, Expensive = 4.99, Too Expensive = 3.94, Too Cheap = .52; Sig. Mahalanobis Distance = .0011] and [Cheap = 2.51, Expensive = 1.03, Too Expensive = 2.01, Too Cheap = .39; Sig. Mahalanobis Distance = .0105].

### Table 12

		PMC	PME	OPP	IPP	Outliers
Group	Group 1	1,00	1,74	1,29	1,52	4,00
	Group 2	1,08	2,00	1,29	1,57	2,00
	Group 3	1,16	1,99	1,51	1,54	1,00
	Group 4	1,04	1,98	1,42	1,60	3,00
	-					

Results Van Westendorp Price Sensitivity Meter - Product 2

On a descriptive level the results indicate that there is no higher WTP for the 3D groups when shown a "Made in Belgium" label. The acceptable price range is smaller for the 3D group exposed to the label. The groups exposed to a 2D product exhibited a higher WTP when exposed to the label, showing higher price preferences for PMC and OPP. Due to the PMC being higher while the PME is similar, the range of acceptable prices is larger for the group not exposed to the label.

A two-way MANOVA is utilized to compare the WTP of the four groups for product 2. The observations are randomly and independently obtained from the population. Using a Mahalanobis Distance Test twenty multivariate outliers were found and removed (Tabachnick & Fidell, 2013). Table 13 shows the Shapiro-Wilk test, according to which a normal distribution can only be assumed for the Too Expansive variable.

### Table 13

Tests of Norma	lity – Prod	uct 2
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	5	hapiro-Wilk	
	Statistic	df	Sig.
MANOVA_P2_Cheap	,929	189	<,001
MANOVA_P2_Expensive	,964	189	<,001
MANOVA_P2_Too_Expensive	,980	189	,010
MANOVA_P2_Too_Cheap	,880	189	<,001

Table 14 shows the Skewness and Kurtosis for the dependent variables. The findings are deemed acceptable for the data to be considered normally distributed (George & Mallery, 2021) with some caution for the Kurtosis of the Too Cheap variable. For a sample size of 189 (> 30) the use of the CLT is justified (Boos & Brownie, 1995; Brownie & Boos, 1994; Ross, 2017). As introduced for product 1, although the normality requirement is violated, the outcomes of ANOVA can still be robust (Schmider et al., 2010).
		Statistic	Std. Error
MANOVA_P2_Cheap	Skewness	1,001	,177
	Kurtosis	,754	,352
MANOVA_P2_Expensive	Skewness	,653	,177
	Kurtosis	,339	,352
MANOVA_P2_Too_Expensive	Skewness	,472	,177
	Kurtosis	,172	,352
MANOVA_P2_Too_Cheap	Skewness	1,470	,177
	Kurtosis	2,591	,352

Skewness and Kurtosis – Product 2

The linear relationship between each pair of the dependent variables across each level of the independent variables is assessed with a scatterplot matrix as shown in Figure 6. There are elliptic shapes in each matrix, indicating the assumption is not violated.

# Figure 6

Matrices of Scatter Plots for Testing Curvilinear relation – Product 2



A bivariate correlations analysis to assess the multicollinearity assumption is shown in Table 15. The correlations are below or equal to .90 and above .20, so the assumption is justified.

		MANOVA_P2_ Cheap	MANOVA_P2_ Expensive	MANOVA_P2_ Too_Expensive	MANOVA_P2_ Too_Cheap
MANOVA_P2_Cheap	Pearson Correlation	1	,758	,756	,734
	Sig. (2-tailed)		<,001	<,001	<,001
	N	189	189	189	189
MANOVA_P2_Expensive	Pearson Correlation	,758***	1	,885	,586
	Sig. (2-tailed)	<,001		<,001	<,001
	N	189	189	189	189
MANOVA_P2_Too_Expensive	Pearson Correlation	,756	,885	1	,541
	Sig. (2-tailed)	<,001	<,001		<,001
	И	189	189	189	189
MANOVA_P2_Too_Cheap	Pearson Correlation	,734***	,586	,541	1
	Sig. (2-tailed)	<,001	<,001	<,001	
	И	189	189	189	189

### Correlation Matrices – Product 2

\*\*\* Correlation is significant at the 0.01 level (2-tailed).

The results of the Two-way MANOVA are shown in Table 16. The Willks' Lambda test for the interaction effect shows no statistically significant interaction effect between presentation and the visual (Label or No Label) on the combined dependent variables (F(4, 182) = .645, p = .631; Wilks'  $\Lambda = .986$ ). Furthermore, if you were to consider it a One-way MANOVA for either Presentation (F(4, 182) = 1.452, p = .219; Wilks'  $\Lambda = .969$ ) or Visual (F(4, 182) = 1.432, p = .225; Wilks'  $\Lambda = .969$ ) there would be no statistically significant findings either. For the interaction effect  $\eta_p^2$  is .014, while for both the visual and presentation effect it is .031. All values are considered of small effect size (Cohen, 1988).

# Table 16

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	,863	286,794 <sup>6</sup>	4,000	182,000	<,001	,863
	Wilks' Lambda	,137	286,794 <sup>b</sup>	4,000	182,000	<,001	,863
	Hotelling's Trace	6,303	286,794 <sup>b</sup>	4,000	182,000	<,001	,863
	Roy's Largest Root	6,303	286,794 <sup>b</sup>	4,000	182,000	<,001	,863
Presentation	Pillai's Trace	,031	1,452 <sup>6</sup>	4,000	182,000	,219	,031
	Wilks' Lambda	,969	1,452 <sup>b</sup>	4,000	182,000	,219	,031
	Hotelling's Trace	,032	1,452 <sup>b</sup>	4,000	182,000	,219	,031
	Roy's Largest Root	,032	1,452 <sup>b</sup>	4,000	182,000	,219	,031
Visual	Pillai's Trace	,031	1,432 <sup>6</sup>	4,000	182,000	,225	,031
	Wilks' Lambda	,969	1,432 <sup>b</sup>	4,000	182,000	,225	,031
	Hotelling's Trace	,031	1,432 <sup>b</sup>	4,000	182,000	,225	,031
	Roy's Largest Root	,031	1,432 <sup>b</sup>	4,000	182,000	,225	,031
Presentation * Visual	Pillai's Trace	,014	,645⁰	4,000	182,000	,631	,014
	Wilks' Lambda	,986	,645 <sup>b</sup>	4,000	182,000	,631	,014
	Hotelling's Trace	,014	,645 <sup>b</sup>	4,000	182,000	,631	,014
	Roy's Largest Root	,014	,645 <sup>b</sup>	4,000	182,000	,631	,014

Multivariate Tests – Product 2

b. Exact statistic

### Product 3 – Bag of Chocolate Chip Cookies (184g)

Table 17 displays the four price points (PME, PMC, OPP and IPP) of product 3 (Bag of Chocolate Chip Cookies [184g]) for each group. Using a Mahalanobis Distance Test the data was assessed for multivariate outliers (Tabachnick & Fidell, 2013). From group 1 two multivariate outliers were identified and removed: [Cheap = 4.92, Expensive = 10.63, Too Expensive = 14.95, Too Cheap = 6.91; Sig. Mahalanobis Distance = .0000] and [Cheap = 5.89, Expensive = 13.48, Too Expensive = 16.80, Too Cheap = 3.01; Sig. Mahalanobis Distance = .0002]. From group 2 one multivariate outlier was identified and removed: [Cheap = 5.07, Expensive = 14.03, Too Expensive = 14.49, Too Cheap = 3.51; Sig. Mahalanobis Distance = .0000]. From group 3 two multivariate outliers were identified and removed: [Cheap = 1.76, Expensive = 3.43, Too Expensive = 5.67, Too Cheap = 2.79; Sig. Mahalanobis Distance = .0010] and [Cheap = 2.41, Expensive = 6.67, Too Expensive = 6.17, Too Cheap = 1.48; Sig. Mahalanobis Distance = .0026]. From group 4 five multivariate outliers were identified and removed: [Cheap = 4.00, Expensive = 10.00, Too Expensive = 6.99, Too Cheap = 2.00; Sig. Mahalanobis Distance = .0000], [Cheap = 6.57, Expensive = 6.43, Too Expensive = 7.00, Too Cheap = 3.14; Sig. Mahalanobis Distance = .0007], [Cheap = 2.49, Expensive = 5.98, Too Expensive = 6.54, Too Cheap = 3.05; Sig. Mahalanobis Distance = .0070], [Cheap = 3.28, Expensive = 3.01, Too Expensive = 2.93, Too Cheap = 2.52; Sig. Mahalanobis Distance = .0514] and [Cheap = 1.39, Expensive = 3.31, Too Expensive = 4.13, Too Cheap = 2.11; Sig. Mahalanobis Distance = .1139].

## Table 17

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		PMC	PME	OPP	IPP	Outliers
Group	Group 1	2,10	3,10	2,61	2,94	2,00
	Group 2	2,06	3,06	2,36	2,72	1,00
	Group 3	2,32	3,13	2,46	2,99	2,00
	Group 4	2,00	3,19	2,03	2,93	5,00

On a mere descriptive level the results indicate a higher WTP for both the 3D and 2D group when exposed to a "Made in Belgium" label. For the group shown a 3D product this holds true for all four price points. However, the range of acceptable prices is equal, it is unaffected by the presence of the label. For the group shown a 2D product the WTP is higher for all price points except PME. The range of acceptable prices is larger for the group not exposed to the label, largely due to a smaller PMC.

A two-way MANOVA compares the WTP of the four groups for product 3. The observations are randomly and independently obtained. Using a Mahalanobis Distance Test thirteen multivariate outliers were found and removed (Tabachnick & Fidell, 2013). According to the Shapiro-Wilk test shown in Table 18 a normal distribution cannot be assumed for any of the four dependent variables.

# Table 18

Tests of Normality – Product 3

		Shapiro-Will	1
	Statistic	df	Sig.
MANOVA_P3_Cheap	,935	196	<,001
MANOVA_P3_Expensive	,957	196	<,001
MANOVA_P3_Too_Expensive	,960	196	<,001
MANOVA_P3_Too_Cheap	,911	196	<,001

Table 19 displays the Skewness and Kurtosis for the dependent variables. The findings are deemed acceptable for the data to be considered normally distributed (George & Mallery, 2021). However, caution is required, as the Kurtosis of the Too Cheap variable is relatively high. The use of the CLT is justified for a sample size of 196 (> 30) (Boos & Brownie, 1995; Brownie & Boos, 1994; Ross, 2017). Although the normality requirement is violated, the outcomes of ANOVA can still be robust (Schmider et al., 2010).

# Table 19

Skewness and Kurtosis – Product 3

		Statistic	Std. Error
MANOVA_P3_Cheap	Skewness	,898	,174
	Kurtosis	,507	,346
MANOVA_P3_Expensive	Skewness	,757	,174
	Kurtosis	,627	,346
MANOVA_P3_Too_Expensive	Skewness	,673	,174
	Kurtosis	,311	,346
MANOVA_P3_Too_Cheap	Skewness	1,268	,174
	Kurtosis	2,266	,346

The linear relationship between each pair of the dependent variables across each level of the independent variables assessed in Figure 7 form elliptic shapes. The assumption is not violated.

# Figure 7

Matrices of Scatter Plots for Testing Curvilinear Relation – Product 3



Table 20 shows a bivariate correlations analysis to assess the multicollinearity assumption. The correlations are all below or equal to .90 and above .20, so the assumption is not violated.

# Table 20

		MANOVA_P3_ Cheap	MANOVA_P3_ Expensive	MANOVA_P3_ Too_Expensive	MANOVA_P3_ Too_Cheap
MANOVA_P3_Cheap	Pearson Correlation	1	,713""	,676	,797 ""
	Sig. (2-tailed)		<,001	<,001	<,001
	N	196	196	196	196
MANOVA_P3_Expensive	Pearson Correlation	,713""	1	,921	,590 ""
	Sig. (2-tailed)	<,001		<,001	<,001
	N	196	196	196	196
MANOVA_P3_Too_Expensive	Pearson Correlation	,676	,921	1	,523
	Sig. (2-tailed)	<,001	<,001		<,001
	N	196	196	196	196
MANOVA_P3_Too_Cheap	Pearson Correlation	,797 ***	,590 ""	,523 ""	1
	Sig. (2-tailed)	<,001	<,001	<,001	
	N	196	196	196	196

Correlation Matrices – Product 3

\*\*\*. Correlation is significant at the 0.01 level (2-tailed).

Results of the Two-way MANOVA are displayed in Table 21. No statistically significant interaction effect between presentation and the visual (Label or No Label) on the combined dependent variables is shown by The Willks' Lambda test (F(4, 189) = .040, p = .997; Wilks'  $\Lambda = .999$ ). Also, if you were to consider a One-way MANOVA for either Presentation (F(4, 189) = 1.284, p = .278; Wilks'  $\Lambda = .974$ ) or Visual (F(4, 189) = 1.526, p = .196; Wilks'  $\Lambda = .969$ ) there would be no statistically significant findings either. The  $\eta_p^2$  for the interaction effect, the visual effect and presentation effect is .001, .031 and .026 respectively. These values all represent small effect sizes (Cohen, 1988).

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	,892	390,639 <sup>6</sup>	4,000	189,000	<,001	,892
	Wilks' Lambda	,108	390,639 <sup>b</sup>	4,000	189,000	<,001	,892
	Hotelling's Trace	8,267	390,639 <sup>b</sup>	4,000	189,000	<,001	,892
	Roy's Largest Root	8,267	390,639 <sup>b</sup>	4,000	189,000	<,001	,892
Presentation	Pillai's Trace	,026	1,284 <sup>b</sup>	4,000	189,000	,278	,026
	Wilks' Lambda	,974	1,284 <sup>b</sup>	4,000	189,000	,278	,026
	Hotelling's Trace	,027	1,284 <sup>b</sup>	4,000	189,000	,278	,026
	Roy's Largest Root	,027	1,284 <sup>b</sup>	4,000	189,000	,278	,026
Visual	Pillai's Trace	,031	1,526 <sup>b</sup>	4,000	189,000	,196	,031
	Wilks' Lambda	,969	1,526 <sup>b</sup>	4,000	189,000	,196	,031
	Hotelling's Trace	,032	1,526 <sup>b</sup>	4,000	189,000	,196	,031
	Roy's Largest Root	,032	1,526 <sup>b</sup>	4,000	189,000	,196	,031
Presentation * Visual	Pillai's Trace	,001	,040 <sup>6</sup>	4,000	189,000	,997	,001
	Wilks' Lambda	,999	,040 <sup>b</sup>	4,000	189,000	,997	,001
	Hotelling's Trace	,001	,040 <sup>b</sup>	4,000	189,000	,997	,001
	Roy's Largest Root	,001	,040 <sup>b</sup>	4,000	189,000	,997	,001

#### Multivariate Tests – Product 3

<sup>b.</sup> Exact statistic

# Product 4 – Package of Coffee (250g)

Table 22 displays the four price points (PME, PMC, OPP and IPP) of product 4 (Package of Coffee [250g]) for each group. Using a Mahalanobis Distance Test the data was assessed for multivariate outliers (Tabachnick & Fidell, 2013). From group 1 one multivariate outlier was identified and removed: [Cheap = 1.46, Expensive = 8.66, Too Expensive = 9.02, Too Cheap = 5.46; Sig. Mahalanobis Distance = .0000]. From group 2 three multivariate outliers were identified and removed: [Cheap = 5.01, Expensive = 20.00, Too Expensive = 20.00, Too Cheap = 5.10; Sig. Mahalanobis Distance = .0000], [Cheap = 10.00, Expensive = 12.46, Too Expensive = 14.00, Too Cheap = 8.38; Sig. Mahalanobis Distance = .0000] and [Cheap = 3.05, Expensive = 13.36, Too Expensive = 12.07, Too Cheap = .00; Sig. Mahalanobis Distance = .0002]. From group 3 three multivariate outliers were identified and removed: [Cheap = 4.96, Expensive = 14.18, Too Expensive = 17.98, Too Cheap = 7.99; Sig. Mahalanobis Distance = .0000], [Cheap = 4.96, Expensive = 7.88, Too Expensive = 4.84, Too Cheap = 2.20; Sig. Mahalanobis Distance = .0004] and [Cheap = 5.19, Expensive = 2.90, Too Expensive = 4.18, Too Cheap = 2.35; Sig. Mahalanobis Distance = .0035]. From group 4 four multivariate outliers were identified and removed: [Cheap = 10.00, Expensive = 13.00, Too Expensive = 15.00, Too Cheap = 4.00; Sig. Mahalanobis Distance = .0000], [Cheap = 4.00, Expensive = 12.88, Too Expensive = 15.66, Too Cheap = 1.97; Sig. Mahalanobis Distance = .0001], [Cheap = 2.00, Expensive = 6.99, Too Expensive = 6.00, Too Cheap = .49; Sig. Mahalanobis Distance = .0371] and [Cheap = 4.29, Expensive = 7.01, Too Expensive = 6.06, Too Cheap = 3.25; Sig. Mahalanobis Distance = .0413].

		PMC	PME	OPP	IPP	Outliers
Group	Group 1	3,51	4,79	3,66	4,03	1,00
	Group 2	2,99	4,07	3,07	3,86	3,00
	Group 3	2,50	4,00	3,07	3,89	3,00
	Group 4	2,64	4,20	2,78	3,94	4,00

Results Van Westendorp Price Sensitivity Meter - Product 4

Comparing the results on a mere descriptive level we can state that those shown a 3D product with a "Made in Belgium" label show a higher WTP. All price points are larger and the range of acceptable prices is too. This is not true for the group shown a 2D product, where the group not shown a label is willing to pay more, except for OPP. The range of acceptable prices is similar between those shown the label or not.

A two-way MANOVA compares the WTP of the four groups for product 4. The observations are random and independent. With the Mahalanobis Distance Test twelve multivariate outliers were found and removed (Tabachnick & Fidell, 2013). The Shapiro-Wilk test in Table 23 shows that for all variables a normal distribution cannot be assumed.

# Table 23

		Shapiro-Will	(
	Statistic	df	Sig.
MANOVA_P4_Cheap	,970	197	<,001
MANOVA_P4_Expensive	,947	197	<,001
MANOVA_P4_Too_Expensive	,962	197	<,001
MANOVA_P4_Too_Cheap	,959	197	<,001

Tests of Normality – Product 4

Table 24 displays the Skewness and Kurtosis for the dependent variables. These findings are acceptable for the data to be considered normally distributed (George & Mallery, 2021). The CLT is appropriate for a sample size of 197 (> 30) (Boos & Brownie, 1995; Brownie & Boos, 1994; Ross, 2017). The normality requirement is violated, but the outcomes of ANOVA can still be robust (Schmider et al., 2010).

		Statistic	Std. Error
MANOVA_P4_Cheap	Skewness	,690	,173
	Kurtosis	,657	,345
MANOVA_P4_Expensive	Skewness	,926	,173
	Kurtosis	1,299	,345
MANOVA_P4_Too_Expensive	Skewness	,720	,173
	Kurtosis	,463	,345
MANOVA_P4_Too_Cheap	Skewness	,778	,173
	Kurtosis	,707	,345

Skewness and Kurtosis – Product 4

Regarding the linear relationship between each pair of the dependent variables across each level of the independent variables, Figure 8. shows that within the matrices there are elliptic shapes oriented towards the top left. This means that the assumption is met.

# Figure 8

Matrices of Scatter Plots for Testing Curvilinear Relation – Product 4



Table 25 shows a bivariate correlations analysis to assess the multicollinearity assumption. The correlations are all below or equal to 0.9 and above 0.2, so the assumption is met.

		MANOVA_P4_ Cheap	MANOVA_P4_ Expensive	MANOVA_P4_ Too_Expensive	MANOVA_P4_ Too_Cheap
MANOVA_P4_Cheap	Pearson Correlation	1	,793""	,755""	,737 ""
	Sig. (2-tailed)		<,001	<,001	<,001
	N	197	197	197	197
MANOVA_P4_Expensive	Pearson Correlation	,793""	1	,903""	,589
	Sig. (2-tailed)	<,001		<,001	<,001
	N	197	197	197	197
MANOVA_P4_Too_Expensive	Pearson Correlation	,755***	,903""	1	,539""
	Sig. (2-tailed)	<,001	<,001		<,001
	N	197	197	197	197
MANOVA_P4_Too_Cheap	Pearson Correlation	,737 ""	,589 ""	,539""	1
	Sig. (2-tailed)	<,001	<,001	<,001	
	N	197	197	197	197

# Correlation Matrices – Product 4

\*\*\* Correlation is significant at the 0.01 level (2-tailed).

Results of the Two-way MANOVA are shown in Table 26. There is no statistically significant interaction effect between presentation and the visual on the combined dependent variables shown by The Willks' Lambda test (F(4, 190) = 1.576, p = .182; Wilks'  $\Lambda = .968$ ). If you consider it a One-way MANOVA for either Presentation (F(4, 190) = 1.042, p = .387; Wilks'  $\Lambda = .979$ ) or Visual (F(4, 190) = .649, p = .628; Wilks'  $\Lambda = .987$ ) there are no statistically significant findings either. The interaction effect, visual effect and presentation effect have a  $\eta_p^2$  of respectively .032, .013 and .021. All values are small effect sizes (Cohen, 1988).

# Table 26

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	,882	354,381 <sup>6</sup>	4,000	190,000	<,001	,882
	Wilks' Lambda	,118	354,381 <sup>b</sup>	4,000	190,000	<,001	,882
	Hotelling's Trace	7,461	354,381 <sup>b</sup>	4,000	190,000	<,001	,882
	Roy's Largest Root	7,461	354,381 <sup>b</sup>	4,000	190,000	<,001	,882
Presentation	Pillai's Trace	,021	1,042 <sup>6</sup>	4,000	190,000	,387	,021
	Wilks' Lambda	,979	1,042 <sup>b</sup>	4,000	190,000	,387	,021
	Hotelling's Trace	,022	1,042 <sup>b</sup>	4,000	190,000	,387	,021
	Roy's Largest Root	,022	1,042 <sup>b</sup>	4,000	190,000	,387	,021
Visual	Pillai's Trace	,013	,649 <sup>6</sup>	4,000	190,000	,628	,013
	Wilks' Lambda	,987	,649 <sup>b</sup>	4,000	190,000	,628	,013
	Hotelling's Trace	,014	,649 <sup>b</sup>	4,000	190,000	,628	,013
	Roy's Largest Root	,014	,649 <sup>b</sup>	4,000	190,000	,628	,013
Presentation * Visual	Pillai's Trace	,032	1,576 <sup>6</sup>	4,000	190,000	,182	,032
	Wilks' Lambda	,968	1,576 <sup>b</sup>	4,000	190,000	,182	,032
	Hotelling's Trace	,033	1,576 <sup>b</sup>	4,000	190,000	,182	,032
	Roy's Largest Root	,033	1,576 <sup>b</sup>	4,000	190,000	,182	,032

Multivariate Tests – Product 4

<sup>b.</sup> Exact statistic

Although there are some preliminary findings on a descriptive level in support of rejecting null hypotheses 3 and 5 there are no statistically significant findings to reject them.

# **Customers' Brand Image**

The brand image of a customer is assessed using 10 items, of which the Cronbach's Alpha is  $\alpha = .860$ . For such a value, the internal consistency is considered good. Reliability statistics are shown in Table 27. The data does not fit a normal distribution. However, due to a sufficient large sample size of 209 the use of the CLT is justified, so that the normality assumption is adequately met to perform parametric tests (Lumley et al., 2002; Ross, 2017; Sainani, 2012).

#### Table 27

	Cronbach's Alpha Based on	
Cronbach's Alpha	Standardized Items	N of Items
,860	,858	10

Per respondent a composite variable is computed by calculating the mean response over the 10 items. Values of this composite variable, similarly to the items it is based on, range from 1 (Strongly disagree) to 7 (Strongly agree). The higher the composite variable, the more one connects attributes descriptive of Belgium to the brand image.

A one-tailed two-sample Student's t-test is performed to compare the composite variable of the group shown a "Made in Belgium" label and the group not shown the label on a 3D product. On a descriptive level we can state that the mean composite variable of brand image is higher for the group exposed to the label, as shown in Table 28.

### Table 28

	Group	N	Mean	Std. Deviation	Std. Error Mean
Brand Image Composite Variable	3D Label present	49	3,5918	,98125	,14018
	3D NO Label present	52	3,2481	,80962	,11227

Brand Image 3D Group Statistics

Table 29 displays the test results. For the Student's t-test the results for equal variances assumed can be used, as Levene's test does not indicate a significant value that states otherwise (p = .772). If Levene's test yielded a significant value, the assumption of

homogeneity of variance would be violated, in such instances where equal variances are not assumed a Welch's t-test would be used instead of a Student's t-test. The results indicate that there is a significant difference in the Brand Image Composite Variable between the 3D group shown the label (M = 3.59, SD = .98) and the 3D group not shown the label (M = 3.25, SD = .81); t(99) = 1.925, p = .029.

# Table 29

One-tailed Two-sample Student's t-test for 3D Group Brand Image Composite Variable

		Levene's Test for Equality of Variances					t-test for Equality of Means			
					Significance	Mean	Std. Error	95% Confidence In	terval of the Difference	
		F	Sig.	t	df	One-Sided p	Difference	Difference	Lower	Upper
Brand Image Composite Variable	Equal variances assumed	,127	,722	1,925	99	,029	,34376	,17858	-,01058	,69810

This result signals that for the 3D groups, those shown a label connect attributes descriptive of Belgium to the brand image more than those who were not shown the label. For the effect size Glass's delta is computed instead of Cohen's d as the standard deviations of both groups differ. It shows an effect size approximating a moderate effect at .425 (Cohen, 1988).

Next, a one-tailed two-sample Student's t-test is used on the 2D Groups to compare the composite variable of the group shown the label and the group not shown the label. Table 30 shows that the mean composite variable of brand image is higher for the group exposed to the label, compared to the one that was not.

# Table 30

Brand Image 2D Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Brand Image Composite Variable	2D Label present	51	3,3902	,95546	,13379
	2D NO Label present	57	3,2158	1,02640	,13595

The test results are shown in Table 31. The results for equal variances assumed can be used, as Levene's test does not indicate a significant value that tells otherwise (p = .800). The results indicate that there is a not a significant difference in the Brand Image Composite Variable between the 2D group shown the label (M = 3.39, SD = .96) and the 2D group not shown the label (M = 3.22, SD = 1.03); t(106) = .911, p = .182.

One-tailed Two-sample Student's t-test for 2D Group Brand Image Composite Variable

		Levene's Test for Equality of Variances				t-test for Equality of Means				
		F	Sig.	t	df	Significance One-Sided p	Mean Difference	Std. Error Difference	95% Confidence I Lower	nterval of the Difference Upper
Brand Image Composite Variable	Equal variances assumed	,063	,80	,911	106	,182	,17441	,19151	-,20528	,55409

Glass's delta effect size is .170, indicating a small effect (Cohen, 1988). This is somewhat contradictory to the earlier findings for the 3D group. Therefore an additional comparison is done between the group shown the label and those not, regardless of the product being shown in 3D or 2D. The one-tailed two-sample Student's t-test is used for this test. The mean composite variable of brand image is higher for the group exposed to the label, compared to the one that was not, as shown in Table 32.

#### Table 32

Brand Image Statistics

	Grouip	И	Mean	Std. Deviation	Std. Error Mean
Brand Image Composite	Label present	100	3,4890	,96859	,09686
Variable	NO Label present	109	3,2312	,92523	,08862

Table 33 displays the test results. The results with equal variances assumed can be used according to Levene's test (p = .790). The results indicate that there is a significant difference in the Brand Image Composite Variable between the group shown the label (M = 3.49, SD = .97) and the group not shown the label (M = 3.23, SD = .93); t(207) = 1.968, p = .025. As the standard deviations of both groups are relatively similar, Cohen's d is used. The effect size is .279, somewhat in between a small and moderate effect size (Cohen, 1988).

### Table 33

One-tailed Two-sample Student's t-test for Brand Image Composite Variable

		Levene's Te Equality of V	Levene's Test for Equality of Variances				t-test for Equality of Means			
						Significance	Mean	Std. Error	95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Difference	Difference	Lower	Upper
Brand Image Composite Variable	Equal variances assumed	,071	,790	1,968	207	,025	,25781	,13102	-,00050	,51612

Considering the findings in the first (p = .029) and last (p = .025) test, there is deemed a significant difference in terms of connecting more attributes descriptive of Belgium to the brand image when shown a "Made in Belgium" label. The difference of the second test is not considered significant (p = .189), but is still somewhat close to being so. Therefore the null hypothesis 4 is rejected. There is support for the alternative hypothesis that customers exposed to a "Made in Belgium" label, connect attributes descriptive of Belgium to the brand image more, while customers not exposed to the label will to a lesser extent.

It is interesting to perform a post-hoc one-tailed two-sample t-test on all scale items making up the Brand Image Composite Variable individually. This allows to identify which individual items are of significant difference, and which are not. The comparison is between the group shown the label and those not.

The mean of most individual items is higher for the group exposed to the label compared to the group not shown the label, as is displayed in Table 34. Exceptions include "Good food and drinks" and "Child-friendly" where the attribute was connected more to the brand image when no label was present. Moreover, for "Beautiful landscapes" and "Nature" only small differences occurred between the groups.

# Table 34

	Group	И	Mean	Std. Deviation	Std. Error Mean
Historic Cities	Label present	100	2,8600	1,43562	,14356
	NO Label present	109	2,3670	1,36531	,13077
Heritage	Label present	100	3,3900	1,53014	,15301
	NO Label present	109	2,5688	1,47427	,14121
Beautiful landscapes	Label present	100	2,7900	1,28153	,12815
	NO Label present	109	2,7339	1,44429	,13834
Good food and drinks	Label present	100	4,8100	1,28468	,12847
	NO Label present	109	4,9450	1,28981	,12354
Local products	Label present	100	5,2500	1,54642	,15464
	NO Label present	109	4,5229	1,27364	,12199
Nature	Label present	100	3,4400	1,40216	,14022
	NO Label present	109	3,4037	1,61084	,15429
Architecture	Label present	100	2,6900	1,39041	,13904
	NO Label present	109	2,3670	1,39881	,13398
Parks and gardens	Label present	100	2,9000	1,45297	,14530
	NO Label present	109	2,6330	1,48860	,14258
Beer	Label present	100	2,7200	1,46391	,14639
	NO Label present	109	2,3853	1,45874	,13972
Child-friendly	Label present	100	4,0400	1,31748	,13175
	NO Label present	109	4,3853	1,38717	,13287

Brand Image Composite Variable Individual Items Statistics

The effect sizes, shown in Table 35, of all individual scale items somewhat reflect similar findings. For the items "Good food and drinks" and "Child-friendly", where there was a higher mean for the group not shown the label, the Cohen's d effect sizes are negative, at - .105 and -.255 respectively. For the items "Beautiful landscapes" and "Nature" where only a slight difference in mean occurred, the Cohen's d effect sizes are very small at .041 and .024 respectively (Cohen, 1988).

				95% Confide	ence Interval
		Standardizer <sup>a</sup>	Point Estimate	Lower	Upper
Historic Cities	Cohen's d	1,39938	,352	,078	,625
	Hedges' correction	1,40448	,351	,078	,623
	Glass's delta	1,36531	,361	,085	,636
Heritage	Cohen's d	1,50125	,547	,270	,823
	Hedges' correction	1,50671	,545	,269	,820
	Glass's delta	1,47427	,557	,274	,837
Beautiful landscapes	Cohen's d	1,36886	,041	-,231	,312
	Hedges' correction	1,37385	,041	-,230	,311
	Glass's delta	1,44429	,039	-,233	,310
Good food and drinks	Cohen's d	1,28736	-,105	-,376	,167
	Hedges' correction	1,29205	-,104	-,375	,166
	Glass's delta	1,28981	-,105	-,376	,167
Local products	Cohen's d	1,41070	,515	,239	,791
	Hedges' correction	1,41583	,514	,238	,788
	Glass's delta	1,27364	,571	,288	,851
Nature	Cohen's d	1,51463	,024	-,247	,295
	Hedges' correction	1,52014	,024	-,247	,294
	Glass's delta	1,61084	,023	-,249	,294
Architecture	Cohen's d	1,39480	,232	-,041	,504
	Hedges' correction	1,39988	,231	-,041	,502
	Glass's delta	1,39881	,231	-,043	,504
Parks and gardens	Cohen's d	1,47167	,181	-,091	,453
	Hedges' correction	1,47703	,181	-,090	,452
	Glass's delta	1,48860	,179	-,094	,451
Beer	Cohen's d	1,46122	,229	-,044	,501
	Hedges' correction	1,46654	,228	-,043	,499
	Glass's delta	1,45874	,229	-,044	,502
Child-friendly	Cohen's d	1,35429	-,255	-,527	,018
	Hedges' correction	1,35922	-,254	-,525	,018
	Glass's delta	1,38717	-,249	-,522	,025

Brand Image Composite Variable Individual Effect Sizes

\* The denominator used in estimating the effect sizes.

The results of the t-tests are shown in Table 36. For all but one of the scale items equal variances can be assumed. The attribute "Nature" violates the assumption of homogeneity of variance, with Levene's test yielding a significant result (p = .042), thus prompting the use of a Welch's t-test instead of a Student's t-test. The Welch's t-test is visible in the table under the row of "Equal variances not assumed".

Both "Heritage" and "Local products" show a significant difference of being connected to the brand image when being shown the "Made in Belgium" label, at a p-value of <.001. Similarly close, "Historic Cities" also shows a significant difference at a p-value of .006 . Significant, but to a lesser extent, are the differences for "Architecture" and "Beer", with respective p-values of .048 and .050 . For "Child-friendly" it is established that there is a bigger mean for the group not shown the label, this difference is significant at a p-value of .033.

		Levene's Te Equality of V	st for ariances				t-test for Equa	lity of Means		
						Significance			95% Confid I	lence Interval of the Difference
		F	Sig.	t	df	One-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Historic Cities	Equal variances assumed	,344	,558	2,544	207	,006	,49303	,19377	,11100	,87505
	Equal variances not assumed			2,539	203,206	,006	,49303	,19420	,11013	,87592
Heritage	Equal variances assumed	,009	,925	3,950	207	<,001	,82119	,20788	,41136	1,23103
	Equal variances not assumed			3,944	203,880	<,001	,82119	,20821	,41066	1,23172
Beautiful landscapes	Equal variances assumed	2,505	,115	,296	207	,384	,05606	,18955	-,31764	,42975
	Equal variances not assumed			,297	206,777	,383	,05606	,18858	-,31572	,42783
Good food and drinks	Equal variances assumed	,384	,536	-,757	207	,225	-,13495	,17826	-,48640	,21649
	Equal variances not assumed			-,757	205,596	,225	-,13495	,17823	-,48635	,21644
Local products	Equal variances assumed	2,644	,105	3,722	207	<,001	,72706	,19534	,34195	1,11218
	Equal variances not assumed			3,691	192,294	<,001	,72706	,19697	,33857	1,11556
Nature	Equal variances assumed	4,176	,042	,173	207	,431	,03633	,20973	-,37716	,44982
	Equal variances not assumed			,174	206,443	,431	,03633	,20849	-,37470	,44736
Architecture	Equal variances assumed	,045	,833	1,673	207	,048	,32303	,19314	-,05775	,70380
	Equal variances not assumed			1,673	205,664	,048	,32303	,19309	-,05766	,70372
Parks and gardens	Equal variances assumed	,229	,633	1,310	207	,096	,26697	,20378	-,13479	,66873
	Equal variances not assumed			1,311	206,197	,096	,26697	,20357	-,13437	,66832
Beer	Equal variances assumed	,128	,721	1,654	207	,050	,33468	,20234	-,06423	,73358
	Equal variances not assumed			1,654	205,331	,050	,33468	,20237	-,06431	,73366
Child-friendly	Equal variances assumed	2,213	,138	-1,841	207	,033	-,34532	,18753	-,71503	,02439
	Equal variances not assumed			-1,846	206,746	,033	-,34532	,18711	-,71421	,02357

One-tailed Two-sample t-tests for Brand Image Composite Variable Individual Scale Items

To assess whether customers exposed to a product with a "Made in Belgium" label in 3D format connect attributes descriptive of Belgium to the brand image more than those exposed to a product with the label in 2D format, a one-tailed two-sample Student's t-test is performed. The mean composite variable of brand image is higher for the group exposed to the label in 3D, as displayed in Table 37.

## Table 37

Brand Image Statistics

	Group	И	Mean	Std. Deviation	Std. Error Mean
Brand Image Composite Variable	3D Label present	49	3,5918	,98125	,14018
	2D Label present	51	3,3902	,95546	,13379

The results are shown in Table 38. Levene's test (p = .548). indicates that equal variances assumed can be used. There is not a significant difference in the Brand Image Composite Variable between the group shown the label in 3D (M = 3.59, SD = .98) and the group shown the label in 2D (M = 3.39, SD = .96); t(98) = 1.041, p = .150. Cohen's d effect size is .208, indicating a small effect (Cohen, 1988).

### Table 38

One-tailed Two-sample Student's t-test for Brand Image Composite Variable

		Levene's Equality o	Test for f Variances			t-test for Equality of Means				
		_				Significance	Mean	Std. Error	95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Difference	Difference	Lower	Upper
Brand Image Composite Variable	Equal variances assumed	,363	,548	1,041	98	,150	,20164	,19367	-,18270	,58598

#### **Customer' Degree of Ethnocentrism**

The degree of ethnocentrism of a customer is assessed using 17 items. At a Cronbach's Alpha of  $\alpha$  = .927, the internal consistency is deemed excellent. The reliability statistics are shown in Table 39. The data obtained does not fit a normal distribution. However, the sufficiently large sample size of 209 justifies the use of the CLT. Under CLT the normality assumption is adequately met to perform parametric tests (Lumley et al., 2002; Ross, 2017; Sainani, 2012).

### Table 39

#### Reliability Statistics CETSCALE

	Cronbach's Alpha Based on	
Cronbach's Alpha	Standardized Items	N of Items
,927	,928	17

A composite variable is computed by calculating the mean response over the 17 items. Values of this composite variable, similarly to the items it is based on, range from 1 to 7. The higher the composite variable, the higher the degree of ethnocentrism.

A one-tailed two-sample Student's t-test is used on the 3D groups to compare the composite variable of the group shown the label and the group not shown the label. Table 40 shows that the mean composite variable of CETSCALE is lower for the group exposed to the label, compared to the group that was not.

### Table 40

### **CETSCALE 3D Groups Statistics**

	Group	N	Mean	Std. Deviation	Std. Error Mean
CETSCALE Composite Variable	3D Label present	49	2,9676	,82327	,11761
	3D NO Label present	52	3,1606	,97225	,13483

The results of the Student's t-test are shown in table 41. The equal variances assumed results can be used under Levene's test (p = .185). As is to be expected looking at the difference in means between the groups, there is no significant difference in the CETSCALE Composite Variable between the group shown the label (M = 2.97, SD = .82) and the group not shown the label (M = 3.16, SD = .97); t(99) = -1.070, p = .143. Glass's delta is used as effect size instead of Cohen's d as the standard deviations of both groups are different. It shows a small effect of -.199 in size (Cohen, 1988).

One-tailed Two-sample Student's t-test for 3D Group CETSCALE Composite Variable

		Levene's Equality of	Test for f Variances			t-test for Equality of Means					
		F	Sig.	t	df	Significance One-Sided p	Mean Difference	Std. Error Difference	95% Confidence In Lower	terval of the Difference Upper	
CETSCALE Composite Variable	Equal variances assumed	1,786	,185	-1,07	99	,143	-,19305	,17980	-,54981	,16372	

Similarly, for the 2D groups a one-tailed two-sample Student's t-test is used to compare the composite variable of the group shown the label and the group not shown the label. Table 42 shows that the mean composite variable of CETSCALE is lower for the group exposed to the label, compared to the group that was not.

## Table 42

#### **CETSCALE 2D Groups Statistics**

	Group	N	Mean	Std. Deviation	Std. Error Mean
CETSCALE Composite Variable	2D Label present	51	2,8997	,90192	,12629
	2D NO Label present	57	2,9412	,81811	,10836

In table 43 the results of the Student's t-test are displayed. The equal variances assumed results can be under Levene's test (p = .585). There is no significant difference in the CETSCALE Composite Variable between the group shown the label (M = 2.90, SD = .90) and the group not shown the label (M = 2.94, SD = .82); t(106) = -.251, p = .401. Glass's delta effect size is -.051, signalling a small effect (Cohen, 1988).

# Table 43

One-tailed Two-sample Student's t-test for 2D Group CETSCALE Composite Variable

		Levene's Equality o	Test for Variances			t-test for Equality of Means				
					Significance	Mean	Std. Error	95% Confidence Interval of the Difference		
		F	Sig.	t	df	One-Sided p	Difference	Difference	Lower	Upper
CETSCALE Composite Variable	Equal variances assumed	,300	,585	-,251	106	,401	-,04152	,16551	-,36965	,28661

Considering the findings of the first (p = .143) and second (p = .401) tests, there is not a significant difference in terms of having a higher degree of ethnocentrism when exposed to the label. Therefore it is not possible to reject null hypothesis 1.

To determine if customers exposed to a product with a "Made in Belgium" label in 3D format display a higher degree of ethnocentrism than those exposed to a product with the label in 2D format, a one-tailed two-sample Student's t-test is performed. The mean composite variable of CETSCALE is slightly higher for the group exposed to the label in 3D, shown in Table 44.

## **CETSCALE** Statistics

	Group	Ν	Mean	Std. Deviation	Std. Error Mean
CETSCALE Composite Variable	3D Label present	49	2,9676	,82327	,11761
	2D Label present	51	2,8997	,90192	,12629

Test Results are shown in Table 45. Levene's test (p = .714). indicates that equal variances assumed can be used. There is not a significant difference in the CETSCALE composite variable between the group shown the label in 3D (M = 2.97, SD = .82) and the group shown the label in 2D (M = 2.90, SD = .90); t(98) = .393, p = .348. The Glass's delta effect size is .075.

# Table 45

*One-tailed Two-sample Student's t-test for CETSCALE Composite Variable* 

		Levene's Equality o	Test for f Variances			t-test for Equality of Means				
						Significance	Mean	Std. Error	95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Difference	Difference	Lower	Upper
CETSCALE Composite Variable	Equal variances assumed	,135	,714	,393	98	,348	,06793	,17289	-,27517	,41103

There is no evidence supporting alternative hypothesis 6. The findings fail to reject null hypothesis 6.

## **Customer' COI**

The COI of a customer is assessed using 10 items. The Cronbach's Alpha amounts to  $\alpha = .417$ , meaning that the internal consistency is deemed poor. Nonetheless, the scale is used as it has been proven in the literature (Knight et al., 2003). The reliability statistics are shown in Table 46. The data is non-normally distributed. Due to the sufficiently large sample size of 209 usage of CLT is justified. Under CLT the normality assumption is adequately met to perform parametric tests (Lumley et al., 2002; Ross, 2017; Sainani, 2012).

#### Table 46

Reliability Statistics COISCALE

	Cronbach's Alpha Based on	
Cronbach's Alpha	Standardized Items	N of Items
,417	,459	10

Per respondent a composite variable is computed by calculating the mean response over the 10 items. Values of this composite variable, similarly to the items it is based on, range from 1 to 7. The higher the composite variable, the more favourable the COI held.

A one-tailed two-sample Student's t-test is used on the groups shown a 3D product to compare the composite variable of the group shown the label and the group not shown the label. Table 47 shows that the mean of composite variable COISCALE is lower for the group exposed to the label, compared to the group that was not.

# Table 47

#### COISCALE 3D Group Statistics

	Group	И	Mean	Std. Deviation	Std. Error Mean
COISCALE Composite Variable	3D Label present	49	4,5000	,38568	,05510
	3D NO Label present	52	4,5750	,51407	,07129

Table 48 shows the results of the Student's t-test. Equal variances assumed results are used under Levene's test (p = .153). There is no significant difference in the COISCALE composite variable between the group shown the label (M = 4.50, SD = .39) and the group not shown the label (M = 4.58, SD = .51); t(99) = -.825, p = .206. As the standard deviations differ between groups Glass's delta is used for the effect size. The effect size is considered small, at -.146 (Cohen, 1988).

#### Table 48

One-tailed Two-sample Student's t-test for 3D Group COISCALE Composite Variable.

		Levene's Equality of	Test for f Variances							
						Significance	Mean	Std. Error	95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Difference	Difference	Lower	Upper
COISCALE Composite Variable	Equal variances assumed	2,074	,153	-,825	99	,206	-,07500	,09086	-,25528	,10528

For the 2D groups a one-tailed two-sample Student's t-test is done to compare the composite variable of the group shown the label and the group not shown the label. Table 49 shows the results. The mean composite variable of COISCALE is higher for the group exposed to the label, compared to the group that was not.

### COISCALE 2D Group Statistics

	Group	И	Mean	Std. Deviation	Std. Error Mean
COISCALE Composite	2D Label present	51	4,4588	,40159	,05623
Variable	2D NO Label present	57	4,3702	,44680	,05918

Table 50 contains the results of the Student's t-test. Equal variances are assumed, as the Levene's test results (p = .345) are appropriate. There is no significant difference in the COISCALE composite variable between the group shown the label (M = 4.46, SD = .40) and the group not shown the label (M = 4.37, SD = .45); t(106) = 1.079, p = .141. As the standard deviations of both groups are relatively similar Cohen's d is used. The effect size is .208.

# Table 50

One-tailed Two-sample Student's t-test for 2D Group COISCALE Composite Variable

		Levene's Test for Equality of Variances				t-test for Equality of Means					
						Significance	Mean	Std. Error	95% Confidence Int	erval of the Difference	
		F	Sig.	t	df	One-Sided p	Difference	Difference	Lower	Upper	
COISCALE Composite Variable	Equal variances assumed	,901	,345	1,079	106	,141	,08865	,08212	-,07417	,25147	

Considering the findings of the first (p = .206) and second (p = .141) test, there is not a significant difference in terms of having a more favourable COI of Belgium when exposed to the label. Therefore there is insufficient evidence to reject null hypothesis 2.

Next, to determine if customers exposed to a product with a "Made in Belgium" label in 3D format have a more favourable COI of Belgium than those exposed to a product with the label in 2D format, a one-tailed two-sample Student's t-test is done. The mean COISCALE composite variable is higher for the group exposed to the label in 3D compared to the group which saw it in 2D. Full results are shown in Table 51.

# Table 51

**COISCALE** Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
COISCALE Composite	3D Label present	49	4,5000	,38568	,05510
Vanable	2D Label present	51	4,4588	,40159	,05623

The Student's t-test output is displayed in Table 52. Levene's test (p = .737). indicates that equal variances assumed can be used. There is not a significant difference in the COISCALE composite variable between the group shown the label in 3D (M = 4.50, SD =.39) and the group shown the label in 2D (M = 4.46, SD = .40); t(98) = .523, p = .301. Cohen's d effect size is small at .105 (Cohen, 1988).

		Levene's Test for Equality of Variances				t-test for Equality of Means					
		F	Sig.	t	df	Significance One-Sided p	Mean Difference	Std. Error Difference	95% Confidence Inte Lower	rval of the Difference Upper	
COISCALE Composite Variable	Equal variances assumed	,114	,737	,523	98	,301	,04118	,07879	-,11518	,19753	

One-tailed Two-sample Student's t-test for COISCALE Composite Variable

Considering the findings, there is no evidence in support of alternative hypothesis 7. It is not possible to reject null hypothesis 7.

## **Hypotheses testing**

Table 53 gives a summary overview of all alternative hypotheses that were tested. Each alternative hypothesis is listed, followed by if it is supported or not supported by the test results. There is no evidence in support of alternative hypotheses 1, 2, 3, 5, 6, 7 and 8. Only null hypothesis 4 can be rejected, indicating support for alternative hypothesis 4.

# Table 53

# Summary of Alternative Hypotheses Testing Results

Hypothesis	Testing results	
H1A. Customers exposed to a "Made in Belgium" label, have a higher degree of ethnocentrism	Not supported	
than customers who have not been exposed.	Not supported	
H2A. Customers exposed to a "Made in Belgium" label, have a more favourable COI of Belgium		
than customers who have not been exposed.	Not supported	
H3A. Customers exposed to a "Made in Belgium" label, have a higher WTP than customers who		
have not been exposed.	Not supported	
H4A. Customers exposed to a "Made in Belgium" label, connect attributes descriptive of Belgium	G (1	
to the brand image more, while customers not exposed to the label will to a lesser extent.	Supported	
H5A. Customers exposed to a "Made in Belgium" label on a FMCG product 3D model, have a		
higher WTP than customers who have been exposed to a "Made in Belgium" label on a FMCG	Not supported	
product 2D image.		
H6A. Customers exposed to a FMCG product 3D model with a "Made in Belgium" label, have a		
higher degree of ethnocentrism than customers who have been exposed to a FMCG product 2D	Not supported	
image with a "Made in Belgium" label.		
H7A. Customers exposed to a FMCG product 3D model with a "Made in Belgium" label, have a		
more favourable COI of Belgium than customers who have been exposed to a FMCG product 2D	Not supported	
image with a "Made in Belgium" label.		
H8A. Customers exposed to a FMCG product 3D model with a "Made in Belgium" label, connect		
attributes descriptive of Belgium to the brand image more, while customers not exposed to a	Not supported	
FMCG product 2D image with a "Made in Belgium" label will to a lesser extent.		

#### Discussion

#### **Theoretical contributions**

This thesis attempts to answer the research question if customers exhibit a higher WTP for a FMCG product with a "Made in Belgium" label, compared to an identical FMCG product without the "Made in Belgium" label. The results indicate that this is not the case for the FMCG product selection that was tested. Customers do not show a significant willingness to pay more. Moreover, it is investigated if there is a difference observable in the CE, COI and brand image between the group shown a label and those not. The data suggests that this is not the case for CE and COI. However, the results do show that customers shown the label connect attributes descriptive of Belgium to the brand image more than those not shown the label. Lastly, it was studied if there is a difference in WTP, CE, COI or brand image between a 2D product with the label. The data shows that this is not the case, for any of the constructs observed.

Looking closer at the results of customer WTP the results show that on a descriptive level some of the price points in a Van Westendorp price meter study are higher for those shown a label. However this is not the case for all four products when displayed on 3D or 2D. A pattern observable is identified in the range of acceptable prices the different groups exhibit for the products. Groups 3 and 4, the ones shown products in 2D, have a larger range of acceptable prices when there is no label present. For example product 1 (Jar of peanut butter [350g]), where the range of acceptable prices is 1.24 when there is a "Made in Belgium" label present, and 1.38 when there is not. This finding only holds true for product 2 (Gingerbread bar [40g]) when looking at groups 1 and 2, the ones shown products in 3D. For the other products shown in 3D the range of acceptable prices is bigger when shown the label, except for product 3 Chocolate Chip Cookies [184g]) where it is equal. When statistically comparing the values (Cheap, Expensive, Too Expensive and Too Cheap) obtained from each Van Westendorp price meter study question no findings are deemed significant. Only for product 1 the presentation effect approximates a significant value, with a p-value of .082. These findings are unexpected, being contrary to what was hypothesized (H3<sub>A</sub>). Contrary to the findings of Cappelli et al. (2017), which found that customers are willing to pay a price premium of 10% to 30% for food sector products, Belgian customers are not willing to pay a premium for the FMCG products we observed. A possible explanation for this is that Belgian customers feel little connection to the "Made in Belgium"

concept. Cappelli et al. (2017) identified that Italian customers connected attributes such as "original", "elegant" and "beautiful" to the "Made in Italy" concept. Moreover, for Belgians there might be a lack of local food brands they can think of from the top of their minds. For "Made in Italy" for example, Ferrero was identified as a brand representing the concept (Cappelli et al., 2017). Another possible explanation for the, opposing to the literature, findings is the time period at which data was collected. Data was collected from March 13<sup>th</sup> 2023 till April 6<sup>th</sup> 2023. A period during which inflation was 6.67%, still decreasing from a historic all time high level of 10.3% in 2022 (FOD Economie, 2023; Statbel, 2023). It is reasonable to assume that the Belgian customer behaves more price sensitive during such periods of high inflation than during normal times when the inflation floats around its target of 2%. Over time there has been evidence of customers getting more price sensitive for food purchases due to inflation (McDaniel et al., 1986). The data shows no difference in WTP between the groups shown a product with a "Made in Belgium" label in 3D or 2D. These findings are contradicting what was hypothesized (H5<sub>A</sub>), but share those of Li & Meshkova (2013) that were similarly unable to support a hypothesis of interactive media leading to a higher WTP. A possible explanation for this is that interactive media such as 3D models are too difficult to use.

The results show, as was hypothesized (H4<sub>A</sub>), that customers exposed to the "Made in Belgium" label, connect attributes descriptive of Belgium to the brand image to a greater extent than those not exposed to the label. Looking at the individual scales making up the brand image composite variable to assess this we can identify some interesting findings. Somewhat logically, both "Heritage" and "Local products" showed the most significant difference (p-values = <.001) between groups shown the label and not shown the label. Both these attributes likely embody what the "Made in Belgium" concept stands for, for many people. Somewhat surprisingly, "Historic Cities" also came forward as significant (p = .006). This is peculiar as none of the products shared a particular connection to a city, as would be the case for example with many famous Belgian beers. "Child friendly" was among the attributes that was connected significantly more (p = .033) to the brand when a "Made in Belgium" label was absent. Although not significantly, the attribute "Good food and drinks" was connected more to the brand image when there was no label present. This could signal Belgian customers not connecting quality with the "Made in Belgium" concept, thus not with the brands using such a label. Next, contrary to what was hypothesized (H8<sub>A</sub>), customers shown a 3D product with the label do not connect attributes descriptive of Belgium to the

brand more than those shown a 2D product with the label. A possible explanation is that, different to Jayathilaka & Park (2022) and Jessen et al. (2020) their findings of longer interactions with 3D models, in a research environment customers do not spend longer than necessary looking at a product. This is understandable, as there is no intention to purchase the products, as there possibly would be in an e-commerce scenario. Under that assumption, customers are not more likely to notice the presence of a "Made in Belgium" label. It could also be the case that customers are experiencing the 3D model on a mobile device, which in general makes manipulating the product less easy and intuitive. Foregoing some of the possible effects it would otherwise entail.

The data regarding CE yields no significant findings. It was hypothesized  $(H1_A)$  that customers exposed to the label would have a higher degree of ethnocentrism than those not exposed to the label. Although not statistically significant, the opposite is true. Individually for the 3D groups and the 2D groups, customers exhibit a higher CE when not shown the label. Only when looking at 3D and 2D together, in terms of being shown the label or not, the CE of those shown the label is higher. A possible explanation is that the "Made in Belgium" label does not evoke strong feelings amongst Belgian customers. Another reason could be that the CETSCALE used to assess CE asks questions that are quite sensitive for some respondents. Take for example the CETSCALE item "It is not right to purchase foreign products, because it puts Belgians out of jobs". Although anonymous, responding in favour of such a statement might make some feel too closely affiliated with certain political views. Something which they might not be inclined to share. There are many subjects, similar to politics, for which false self-reporting by respondents can occur (Corstange, 2009; Tourangeau & Yan, 2007). With regards to the impact of a 3D model or 2D image on CE when shown the label, contrary to what was hypothesized (H6<sub>A</sub>), customers shown a 3D product with the label do not have a larger degree of ethnocentrism compared to those shown a 2D product with the label. As was the case for the brand image, a possible explanation is that in a research environment customers spend only as long as necessary looking at the product. It can be argued that this is because there is no intention to purchase. Therefore, customers are not more likely to notice the presence of a "Made in Belgium" label. It could also be due to customers viewing the 3D model on a mobile device, making manipulating the product harder and less intuitive.

Last, the results do not support the hypothesis (H2<sub>A</sub>) that customers exposed to a "Made in Belgium" label have a more favourable COI of Belgium than those not shown a

label. No significant differences occur when comparing the groups shown a label and those not in 3D, 2D or all together. It could be that Belgian customers do not get a more favourable COI of Belgium when the label is shown on an ordinary FMCG product. Possibly the results could be different when the "Made in Belgium" concept is shown with regards to speciality goods such as Leonidas pralines. COI shows no impact of a product with the label displayed in either 3D model or 2D image, opposing what was hypothesized (H7<sub>A</sub>), Similar to what is the case for the brand image and CE, this can be explained by the research environment. Here customers spend only as long as necessary, there is no intention to purchase anything. Customers are not more likely to notice the presence of a "Made in Belgium" label. Moreover, It could also be due to customers viewing the 3D model on a mobile device, making manipulating the product harder and less intuitive.

# **Managerial implications**

The findings regarding the WTP of customers of a premium indicate that FMCG companies possibly have to adopt their pricing strategy to the current economic environment. This is especially true for those companies that rely on positioning their brand and product as "Made in Belgium" expecting to yield a price premium from it. The research shows that customers are not willing to pay more for a product that has the "Made in Belgium" label compared to another.

Companies of FMCG brands can position their products in a way evoking the "Made in Belgium" concept if they deem attributes descriptive of Belgium beneficial to their brand. Such an undertaking is achievable in a similar way to the research setup in this thesis, by adding a label to the product packaging, but also through other aspects of the marketing mix. Think for example of the way in which products of the brand are advertised. It could also influence the place aspect of the marketing mix, for example in terms of the market coverage is strives for. Moreover, companies should not innovate towards interactive media such as 3D models too easily. The effects thereof are not proven significant for FMCG products.

Looking at the findings regarding CE it should be noted that brands have to be wary of marketing their products in an ethnocentric way. Although the presence of a "Made in Belgium" label brought about no significant differences, it could be argued that strong ethnocentric visions are not seen favourably by the general customer. There is too much of a political affiliation, foregoing the cultural aspect.

#### **Research limitations**

Although this thesis contributes interesting theoretical findings and managerial implications, there are some limitations that should be addressed. Respondents were collected with convenience sampling, it would be better to acquire a dataset from respondents representative of the general population. This would allow for further deductions with regards to demographics, which was not possible in this instance. Moreover, the sample predominantly included students, who might often not be the person in the household responsible for grocery purchases. The respondents were also largely from Flanders, making the generalizability of the results for Belgium difficult. The sample size is sufficient, but would ideally be larger. Cappelli et al. (2017) in their research regarding the effects of a "Made in Italy" label collected data from 660 respondents. This would increase the power and confidence with which findings can be deducted from the data. Respondents collected via convenience sampling are also more likely to give low efforts responses. Many of these sample limitations could be mitigated if a greater proportion of total respondents was sourced through the crowdsourcing research platform Prolific, however this requires more financial resources.

A further weakness is the research setup. Data was solely collected trough an online survey. Ideally this kind of experiment would have been run in a real world scenario, for example an experiment in a grocery store where customers have a set spending budget that they can allocate over a basket of FMGC products.

#### **Future research**

This research identifies multiple avenues for future research. The research could be replicated accounting to a larger extent for the limitations mentioned. Moreover it could be applied to other countries to identify if different findings occur. Specifically for Belgium, it should be identified what the "Made in Belgium" concept means for Belgian customers. Possible questions could include: What attributes, feelings and brands do they connect to this concept and how can it be utilised in a meaningful way? Do customers find themselves connected to the "Made in Belgium" concept, and how can such connectedness be triggered?

A possible explanation for the findings given is that data collection occurred in a period of historically high inflation. It is incredibly interesting to replicate this research in the future when inflation settles at its target level of 2%. Doing so allows for a comparison to see if and where different findings occur.

With regards to the brand image, some attributes descriptive of Belgium as a country are connected more to the brand image than others. It is interesting to investigate which attributes of the country tend to get connected more to the brand and why this is the case.

The CETSCALE was used to determine a customer's CE. However, the items of this scale could be deemed sensitive, yielding inaccurate responses. Future research could attempt to prove if this is an actual issue of the scale and if so try improving the results obtained therefrom.

### Conclusion

This thesis set out to answer the question if customers exhibit a higher willingness to pay for a fast moving consumer good with a "Made in Belgium" label, compared to those shown the product without such label. By testing the willingness to pay of four different groups (3D or 2D and label or no label), there are no findings supporting a higher willingness to pay when the label is present. However, the presence of the label yielded a significant difference in terms of the brand image customers perceived. Peculiarly, the attribute "Good food and drinks" is not amongst the attributes of significant influence to the difference in brand image between groups. More attributes descriptive of Belgium are connected to the brand image when the label is shown. The label has no effect on the degree of ethnocentrism or country of origin image. The findings pose interesting managerial implications, especially with regards to the brand image. If deemed beneficial, the marketing mix of a product can be manipulated in such a way that attributes of the country are transposed onto the brand image. Future research can focus on a range of avenues, such as replicating the research during a time where inflation has stabilised. Or doing similar research for other countries.

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## Appendices

# Appendix A: Product visualizations FMCG products

Visualization Jar of Peanut butter (350g) for All Groups



## Visualization Gingerbread Bar (40g) for All Groups



# Visualization Chocolate Chip Cookies (184g) for All Groups



# Visualization Package of Coffee (250g) for All Groups



### Appendix B: Overview Survey Questions

#### Informed consent form

#### Title of the study

Survey on the Willingness to Pay of customers for Fast Moving Consumer Goods

#### Purpose of the study

This research is part of a student master thesis for the Master of International Business at Vrije Universiteit Brussel. The research focuses on identifying the willingness to pay of customers for different fast moving consumer goods.

#### Description of the study

In this study direct surveys with people of the Belgian nationality are performed.. As a respondent, you participate in a survey that will take approximately 10 minutes. This recording will not be made public.

#### Privacy and anonymity

The personal information that is shared in this study will be treated confidentially. All personal data gathered during the research will be processed only by the student. All participants will be coded (for example by using pseudonyms) in the processing and reporting of the research findings. This means your name will not be directly linked to the collected information.

The collection and processing of data is in accordance with the legal principles imposed by the new European General Data Protection Regulation 2016/679 (GDPR or AVG), which has been in force since 25 May 2018.

a. What personal data I collect from/about you, in particular: general demographic non identifiable information.
b. That Gino Aytas <gino.aytas@vub.be> acts as controller of your data.

c. That the data are collected and processed for the purpose of the aforementioned study. In accordance with the relevant legislation, data collected as part of the study will be retained for 5 years.

d. That I may only use your personal data for scientific purposes. The processing is based on informed consent. e. That you have the right to access and correct your data. You also have the right to erase your data, to limit their processing, to object to their processing and to transfer your data to third parties. If you have any questions, please contact the researcher.

f. You have the right to withdraw your consent to the processing of your data at any time. The withdrawal of consent does not affect the lawfulness of the processing of the data obtained prior to the withdrawal of consent. g. Your data may only be accessed and processed by the student and its promotor and will not be shared with other institutions.

h. Your data will be stored and secured in accordance with the guidelines of the VUB.

i. If you wish to exercise your rights or if you have any further questions regarding your rights and the processing of your personal data, you can always contact the student on gino.aytas@vub.be .

j. The student takes as many measures as possible to ensure the security and confidentiality of your data, including:

- the anonymization of your data, completely removing any link to your identity.
- your data will only be stored on OneDrive. Your data is therefore never stored on unprotected personal computers, handhelds or other end-user devices and is never forwarded by e-mail.

k. Finally, you also have the right to complain about how your data is being handled. You can do this with the

Belgian supervisory authority responsible for enforcing data protection legislation, in particular:

Gegevensbeschermingsautoriteit (GBA) Drukpersstraat 35 1000 Brussel Tel. +32 2 274 48 00

e-mail: contact@apd-gba.be Website: www.gegevensbeschermingsautoriteit.be

I have read this informed consent form and I understand the purpose of the study and the data that will be collected from me.

By agreeing to this informed con:

1. I consent to my participation in the study;

2. I confirm that I am 18 years or older;

3. I acknowledge that my participation is entirely voluntary;

4. I acknowledge that my data will be anonymised for publication, educational purposes and further research;

I agreeI do not agree

This study is targeted at people with the Belgian nationality. Do you have the Belgian nationality?

> o Yes ○ No

Please take your time to observe the following product. The product is shown as an image.

You are being shown a jar of Peanut Butter (350g) by the brand Blissful Bites.



You may proceed to the next page after 15 seconds.

Please answer the following questions with regards to the product you saw on the previous page.

At what price do you consider the product **to become inexpensive** but you would **still consider it to be a bargain**?



At what price do you consider the product **to become expensive** but you would **still consider buying** it?

 0
 2
 4
 6
 8
 10
 12
 14
 16
 18
 20

Above what price would the product **become too expensive** so that you would **not consider buying** it?

Below what price would the product **become so inexpensive** that you would **doubt its quality** and **not consider buying** it?



Please take your time to observe the following product. The product is shown as an image.

You are being shown a bar of Gingerbread (40g) by the brand Blissful Bites.



You may proceed to the next page after 15 seconds.

Please answer the following questions with regards to the product you saw on the previous page.

At what price do you consider the product **to become inexpensive** but you would **still consider it to be a bargain**?



At what price do you consider the product **to become expensive** but you would **still consider buying** it?

	0	2	4	6	8	10	12	14	16	18	20
Price in f											
File in e											

Above what price would the product **become too expensive** so that you would **not consider buying** it?

	0	2	4	6	8	10	12	14	16	18	20
Price in f											
The fire											

Below what price would the product **become so inexpensive** that you would **doubt its quality** and **not consider buying** it?

	0	2	4	6	8	10	12	14	16	18	20
Price in f											
Thee in e											

Please take your time to observe the following product. The product is shown as an image.

You are being shown a bag of Chocolate Chip Cookies (184g) by the brand Blissful Bites.



You may proceed to the next page after 15 seconds.

Please answer the following questions with regards to the product you saw on the previous page.

At what price do you consider the product **to become inexpensive** but you would **still consider it to be a bargain**?



At what price do you consider the product **to become expensive** but you would **still consider buying** it?

	0	2	4	6	8	10	12	14	16	18	20
Price in f											
FILE											

Above what price would the product **become too expensive** so that you would **not consider buying** it?

	0	2	4	6	8	10	12	14	16	18	20
Price in €	-										

Below what price would the product **become so inexpensive** that you would **doubt its quality** and **not consider buying** it?



Please take your time to observe the following product. The product is shown as an image.

You are being shown a package of Coffee (250g) by the brand Blissful Bites.



You may proceed to the next page after 15 seconds.

Please answer the following questions with regards to the product you saw on the previous page.

At what price do you consider the product **to become inexpensive** but you would **still consider it to be a bargain**?



At what price do you consider the product **to become expensive** but you would **still consider buying** it?

	0	2	4	6	8	10	12	14	16	18	20
Drice in f											
FILEINE											

Above what price would the product **become too expensive** so that you would **not consider buying** it?

	0	2	4	6	8	10	12	14	16	18	20
Drive in C											
Price in €											

Below what price would the product **become so inexpensive** that you would **doubt its quality** and **not consider buying** it?

	0	2	4	6	8	10	12	14	16	18	20
Drive in C											
Price in €											

Indicate to what extent you agree with this statement about the brand Blissful Bites, ranging from Strongly disagree (1) to Strongly agree (7).

	Strongly			Neither			Strongly
	disagree						agree
Historic cities	1	2	3	4	5	6	7
Heritage	1	2	3	4	5	6	7
Beautiful landscapes	1	2	3	4	5	6	7
Good food and drinks	1	2	3	4	5	6	7
Local products	1	2	3	4	5	6	7
Nature	1	2	3	4	5	6	7
Architecture	1	2	3	4	5	6	7
Parks and gardens	1	2	3	4	5	6	7
Beer	1	2	3	4	5	6	7

# Child-friendly 1 2 3 4 5 6 7

Indicate to what extent you agree with the following statements, ranging from Strongly disagree (1) to Strongly agree (7).

	Strongly			Neither			Strongly
	disagree						agree
Belgian people should always buy Belgian- made	1	2	2	4	5	6	7
products instead of imports.	1	2	3	4	3	0	1
Only those products that are unavailable in	1	2	3	4	5	6	7
Belgium should be imported.	1	2	5	4	5	0	/
Buy Belgian-made products. Keep Belgium working.	1	2	3	4	5	6	7
Belgian products, first, last, and foremost.	1	2	3	4	5	6	7
Purchasing foreign-made products is un-Belgian.	1	2	3	4	5	6	7
It is not right to purchase foreign products, because it puts Belgians out of jobs.	1	2	3	4	5	6	7
A real Belgian should always buy Belgian- made products.	1	2	3	4	5	6	7
We should purchase products manufactured in							
Belgium instead of letting other countries get rich off us.	1	2	3	4	5	6	7
It is always best to purchase Belgian products.	1	2	3	4	5	6	7
There should be very little trading or purchasing							
of goods from other countries unless out of	1	2	3	4	5	6	7
necessity.							
Belgians should not buy foreign products,							
because this hurts Belgian business and causes	1	2	3	4	5	6	7
unemployment.							
Curbs should be put on all imports.	1	2	3	4	5	6	7
It may cost me in the long-run but I prefer to support Belgian products.	1	2	3	4	5	6	7
Foreigners should not be allowed to put their							
products on our markets.	1	2	3	4	5	6	7
Foreign products should be taxed heavily to reduce their entry into Belgium.	1	2	3	4	5	6	7
We should buy from foreign countries only							
those products that we cannot obtain within our own country.	1	2	3	4	5	6	7

Belgian consumers who purchase products made							
in other countries arc responsible for putting their	1	2	3	4	5	6	7
fellow Belgians out of work.							

Indicate to what extent you agree with this statements below, ranging from Strongly disagree (1) to Strongly agree (7).

In general, what is your image of Belgium regarding ...

	Strongly			Neither			Strongly
	disagree						agree
People are well educated.	1	2	3	4	5	6	7
Technical skills of work force are high.	1	2	3	4	5	6	7
Products are unreasonably expensive.	1	2	3	4	5	6	7
Country produces highly technical products.	1	2	3	4	5	6	7
Products are made with meticulous workmanship.	1	2	3	4	5	6	7
Products are imitations, not innovations.	1	2	3	4	5	6	7
Products are distributed worldwide.	1	2	3	4	5	6	7
Products need frequent repairs.	1	2	3	4	5	6	7
Advertising of products is informative.	1	2	3	4	5	6	7
Friendly towards the USA international affairs.	1	2	3	4	5	6	7

How old are you?

ow old all you.

Under 18 18-24 years old

- 25-34 years old
- 35-44 years old
- $\circ$  45-54 years old
- $\circ$  55-64 years old
- $\circ$  65+ years old

How do you describe yourself?

- Male
- $\circ$  Female
- $\circ$  Non-binary / third gender
- $\circ$  Prefer to self-describe: ...
- $\circ$  Prefer not to say

What is the highest level of education you have completed?

- Some primary school
- $\circ$  Completed primary
- Some secondary school
- $\circ$  Completed secondary school
- $\circ$  Vocational or Similar
- Some university but no degree
- University Bachelors Degree
- Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS etc.)
- $\circ$  Prefer not to say

What best describes your employment status over the last three months?

- Working full-time
- $\circ$  Working part-time
- $\circ$  Unemployed and looking for work
- A homemaker or stay-at-home parent
- $\circ$  Student
- $\circ$  Retired
- $\circ$  Other

What was your total household income before taxes during the past 12 months in Euros?

- Less than 25,000 Euros
- $\odot$  25,000 49,999 Euros per year
- 50,000 99,999 Euros per year
- 100,000 199,999 Euros per year
- 200,000 Euros per year or more
- $\circ$  Prefer not to say

If you currently live in Belgium, in what region?

- Flemish Region
- Brussels-Capital Region
- $\circ$  Walloon Region
- I don't currently live in Belgium

### Appendix C: Van Westendorp Price Meter studies



Group 1 (3D, Label Present) - Jar of Peanut Butter (350g)

Group 1 (3D, Label Present) - Gingerbread Bar (40g)





Group 1 (3D, Label Present) - Bag of Chocolate Chip Cookies (184g)

Group 1 (3D, Label Present) - Package of Coffee (250g)





Group 2 (3D, No Label Present) - Jar of Peanut Butter (350g)

Group 2 (3D, No Label Present) - Gingerbread Bar (40g)





Group 2 (3D, No Label Present) - Bag of Chocolate Chip Cookies (184g)

Group 2 (3D, No Label Present) - Package of Coffee (250g)





Group 3 (2D, Label Present) - Jar of peanut butter (350g)

Group 3 (2D, Label Present) - Gingerbread bar (40g)





Group 3 (2D, Label Present) - Bag of Chocolate Chip Cookies (184g)

Group 3 (2D, Label Present) - Package of Coffee (250g)





Group 4 (2D, No Label Present) - Jar of Peanut Butter (350g)

Group 4 (2D, No Label Present) - Gingerbread Bar (40g)





Group 4 (2D, No Label Present) - Bag of Chocolate Chip Cookies (184g)

Group 4 (2D, No Label Present) - Package of Coffee (250g)

