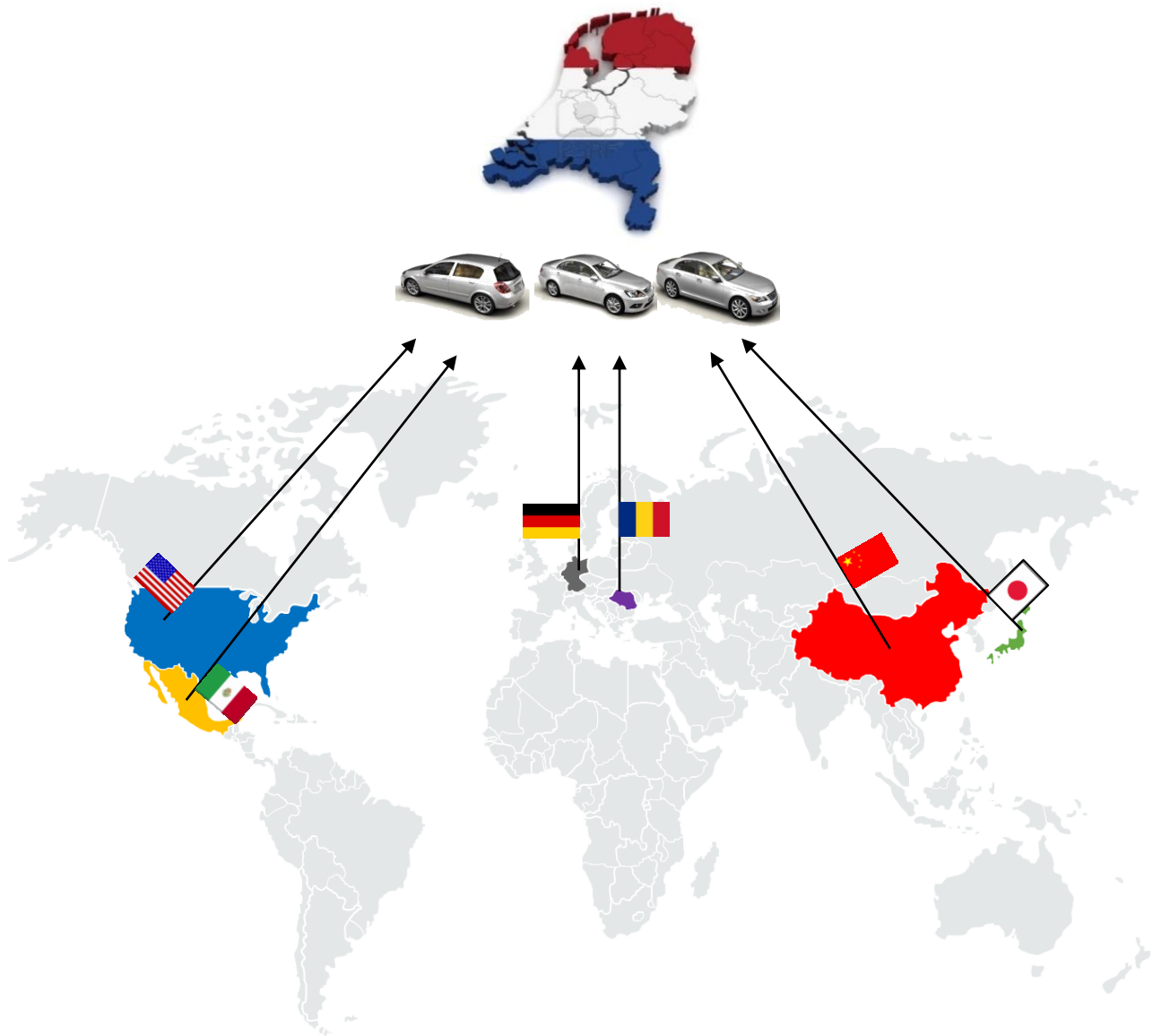# Country of Origin Effect on Dutch car market

What is, from a consumer perspective, the effect of the "country of origin" (COO) on quality perception, price perception, and purchase intention of cars?

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EXECUTIVE SUMMARY

Although many studies have been conducted in order to estimate country of origin (COO) effects for a variety of countries, products, and situations, no consensus is found in the literature on its importance. Some researchers are skeptical about the COO effect and reported that they did not find significant effects of COO on consumer's product evaluations. Others did find significant results for the influence of COO on product evaluations. The suggestion arises that the COO effect is context dependent and varies between different situations. This research estimates the COO effect in the Dutch passenger car market for six countries (e.g., USA, Germany, Japan, Mexico, Romania, and China) in and between three different segments of passenger cars (e.g., economy, electrical, and luxury). Thereby this research extends the existing literature concerning COO research.

Based on the results, obtained through an online questionnaire with 383 Dutch respondents, the effect of COO on quality perception, price perception, and purchase intention was confirmed. On average, Dutch consumers evaluated cars originating from Germany (+25%) the best, followed by cars originating from USA (+7%), Japan (-1%), Mexico (-3%), China (-10%), and Romania (-20%).

The results also revealed a significant interaction effect of segments in the relationship between COO and consumer's product evaluations. In other words, the COO effect differed when it is tested in several segments. For example, a car originating from China was perceived relatively high in terms of price and quality in the electrical segment, while cars originating from China are perceived relatively low in terms of price and quality in the economy and luxury segment.

A deviation between more developed countries and less developed countries showed that Dutch consumers evaluate cars originating from more developed countries better than cars originating from less developed countries in terms of quality perception, price perception, and purchase intentions.

For car manufacturers planning to become active on the Dutch passenger car market, it is advisable to consider COO information when positioning and pricing decisions are made. Furthermore, if the COO is positive, it should be used in marketing communications since it can increase perceptions of intrinsic product attributes. On the other hand, if the COO is negative, one should emphasize marketing communications on intrinsic product attributes, and should not emphasize the COO.

For manufacturers already present on the Dutch market, the COO effect can be used, if positive, to differentiate their product from others. The COO label, other aspects being equal, lead to better perceptions of price and quality and is therefore an opportunity to differentiate the car from similar cars originating from less favorable countries.

Overall, the COO effect has proven that it significantly influences consumer's quality perception, price perception, and purchase intention of cars in different segments of the Dutch passenger car market. As mentioned before, the COO effect is considered to be context dependent; therefore one should be careful with generalizations of the results. However, the presented results provide valuable insights of the COO effect of passenger cars from a Dutch consumer perspective.

CONTENT

1. INTRODUCTION

1.1 CONTEXT

Global car manufacturers are facing increasing competition from manufacturers and brands originating from emerging market countries (e.g., Kia, Tata, Dacia, Geely, Lifan) that are entering the global markets. These cars are cheaper and easily available due to the globalization trends (e.g. declining transportation costs).

Because of these low-priced new brands, established brands should think of ways they can differentiate themselves. It is possible to differentiate on intrinsic product attributes, such as quality or performance. However, you can also make use of extrinsic product attributes such as believes, brand image and perceptions of quality. The latter is influence by the country of origin (COO) effect, the subject of this thesis.

1.1.1 INTRODUCTION COUNTRY OF ORIGIN (COO) EFFECT

The COO effect is widely researched in the last decades. There are multiple findings suggesting that the COO can have a significant influence on consumers' quality perception, purchase intention and numerous other forms of product evaluations. There are also many papers that are critical about the COO effect; they argue that the country image is mainly caused by brand image and that the COO effect on itself has no significant influence on consumers' perceived quality. The critics and findings of prior COO research are further discussed in chapter 2.

As far as this research could find, the COO effect is never tested in the Dutch automobile market, probably because the size of the market is not large enough to have a high research priority for the car manufacturers. Nevertheless, it would be interesting to investigate how Dutch consumers are perceiving car brands and to see whether the COO effect may occur.

1.1.2 INTRODUCTION DUTCH AUTOMOBILE MARKET

The Dutch car industry is a small industry compared to the automobile industries of other European countries, regarding the production statistics (OICA, Production Statistics 2011). Possible explanations for the small size of the industry are the limited country – and population size and the absence of a mass-producing domestic car brand or manufacturer. Traditionally, Dutch car brands had difficulties facing competition from major industries like Germany, the United Kingdom and France. The only numerable brand from the Netherlands is DAF, a former producer of trailers, which eventually started with the production of commercial trucks and passenger cars. The passenger car division of DAF was not a success, mainly caused by image problems. Therefore, it was sold to the Swedish company Volvo in 1975 (dafmuseum.nl; Autogids.nl, 2008). The commercial truck division is still operating, although it is owned by the American company 'Paccar' since 1996 (daf.nl, 2012). Besides DAF, there are only a few small Dutch car brands which produce a small amount of special cars (e.g. Spyker). At the moment, there is no Dutch car brand that produces a substantial amount of passenger cars that should be taken into account in this study.

The production of passenger cars in the Netherlands was only 40.772 in 2011 according to the OICA (OICA, Production Statistics 2011). Regarding the usage of cars; there are currently 7.858.712

passenger cars registered in the Netherlands, which is an average of 470 cars per 1000 citizens. In comparison with commercial vehicles, passenger cars account for 73% of all vehicles whereas commercial vehicles only account for 20%, the remaining 7% is covered by 'other vehicles'. The numbers of registered vehicles from the last five years are listed in the following figure (CBS, 2012).

Figure 1-1: Number of registered vehicles and annual sales passenger in the Dutch automobile market
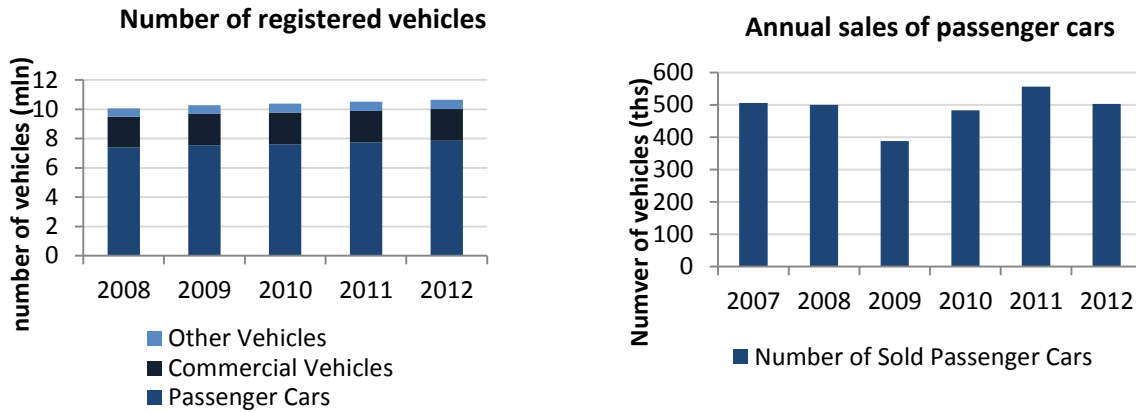
The annual consumption of new passenger cars in the Netherlands is around 500.000, with a huge drop of sales in 2009 when there were only 387.699 cars sold (Figure 1-1). Although this limited amount of cars is being purchased in the Netherlands, most global brands are available in the market. There is an extensive list of available car brands from Europe, but also many brands originating from the USA and Asia. Regularly, the brands from Asia and USA develop slightly different cars for each continent, adjusted to the preferences of that particular continent. This means, the Asian and U.S. cars that are available in the Dutch market have been designed for the European market.

1.2   CAUSE FOR THE RESEARCH

In the Dutch market, there is a large gap between the annual number of cars sold and the number of cars produced, which is probably caused by the absence of a domestic car manufacturer. It results in a relatively high amount of imported cars, which is interesting for foreign brands. The only countries in the European Union that have a higher net import of cars are Italy and the United Kingdom (Figure 1-2). The absence of a dominant home brand makes it even more interesting for foreign brands to target the Dutch consumer market, since Dutch consumers cannot be sticky to their domestic brand.

Figure 1-2: Net import and export of cars per country

7
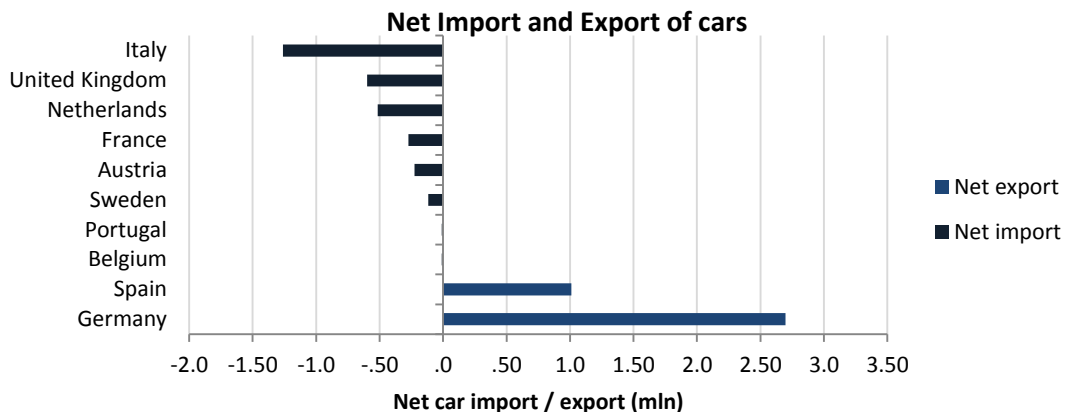
Traditionally, the Dutch automobile market is dominated by German and French cars, with top-selling brands as Volkswagen, Opel, Renault and Peugeot. According to BOVAG (www.bovag.nl, 2011), these brands are still dominant in the Dutch market. However, they are facing huge competition from Japanese, Korean and American brands. Especially the rise of Asian brands producing mainly small, efficient and usually cheap cars is remarkable (Figure 1-3). Examples of these brands are the brands Hyundai and Kia.

Figure 1-3: Market share of KIA and HYUNDAI in the Dutch passenger car market
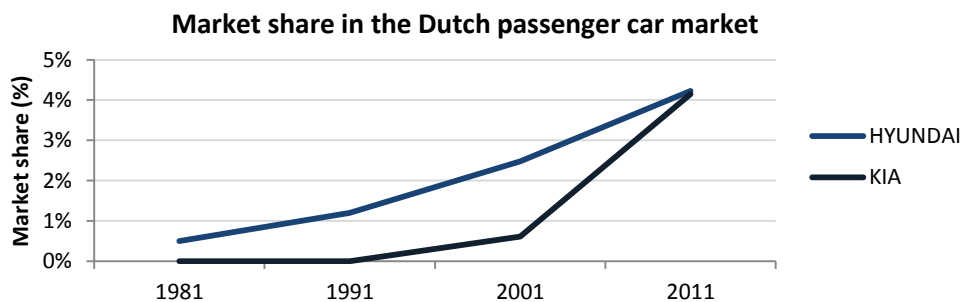
Since these Asian brands seems rather successful in the Dutch market, it is interesting for other Asian brands from less developed automobile markets such as India and China to enter the market as well. This would also be the case for brands originating from less developed automobile industries from other continents. To have a successful market introduction it is of paramount importance to analyze the current market and to collect as much information as possible. This information should be used to make strategically important decisions such as pricing and positioning.

For new entrants it would be definitely interesting to know how their brand and products will be perceived in terms of quality. One aspect, which can have a significant influence on quality perception, is the COO. It would be useful to know if the COO effect significantly influences consumer's quality perception, price perception, and purchase intention, and whether it is a positive or a negative effect.

On the other hand, the COO effect can be very important for established brands as well. Facing renewed and fierce competition from those new entrants in the market, it can be a way to differentiate the brand from others.

By measuring the COO effect for different countries, in different segments, and between less developed countries (LDCs) and more developed countries (MDCs) this study will provide valuable insights for new entrants and established brands in the Dutch automobile market.

1.3 PROBLEM STATEMENT AND RESEARCH QUESTIONS

The previous paragraph leads to the following problem statement and research question:

Research Question:

What is the effect of the "country of origin" (COO) measured over six countries and two levels of development, on consumers' quality perception, price perception, and purchase intention of cars in and between three different segments of the Dutch passenger car market?

1.4   PURPOSE OF THE RESEARCH

The main goal of this research is to provide valuable new insights of the COO effect on quality perception, price perception, and purchase intention of cars in the Dutch automobile market. The research is designed to provide information about the COO effect of multiple countries, and tested in multiple car segments. The research is relevant from an academic- as well as a practical point of view.

Relevance from an academic point of view:
There has been plenty of research on COO effects in recent decades, measured in a variety of situations. However, the phenomenon is still not well understood and there is no consensus in the literature about the significance and relevance of the effect. This is because the influence of the COO effect seems to be context dependent (Peterson & Jolibert, 1995). Therefore, the COO effect cannot be generalized in many situations. Estimating the COO effect on consumers' quality perception, price perception and purchase intentions of passenger cars from a Dutch perspective is unique, just as the use of three different segments (economy, luxury, electrical). Especially, the added electrical segment is a new and valuable dimension in the research of the COO effect on automobiles. Measuring the COO effect in a new situation from an interesting perspective is unambiguously of added value to the existing literature.

Relevance from a practical point of view:
In addition to the academic relevance, this research is also relevant from a practical point of view. The outcome of this study is interesting for marketeers and decision makers of global car manufacturers. Information about the effect of the COO on quality perception can be important for strategic decision making.

For new entrants to a specific market, these decisions can be about the positioning or pricing of the brand. For example, when a product's quality perception is low, it would be unfavorable to position this product in the high-end of the market.

For established brands in the market, the outcome of this study can be valuable for their marketing strategy. For example, when a brand is facing fierce competition from new low-cost manufacturers it can use the COO (if it is a positive effect) in their marketing and communication strategy to differentiate their brand.

1.5   RESEARCH SCOPE

The COO effect can be researched in many ways, in a variety of situations and with different dependent and independent variables. Because it is impossible to cover every side of the phenomenon, this study is limited to the following aspects:

Product group:
The COO effect can be estimated:

- Across different product categories (e.g. detergents, wine or cars)
- Between product categories (e.g. difference between the COO effect of detergents and cars)
- Within a product category (e.g. difference of the COO effect in one category, between different countries or situations)

This study will focus on (within) the product category 'passenger cars'. Due to the high level of product-differentiation in the market, the COO effect on cars is expected to be relatively large in comparison with other product categories where the level of product-differentiation is low (e.g. electricity or toothbrush). Furthermore, the automobile industry is a very important industry in the world economy and it is currently dynamic with many new globally active manufacturers.

Respondent group:
The COO effect on cars can be investigated in many different countries. This study is limited to the Dutch automobile market, because the respondent group will consist of mainly Dutch consumers.

Countries investigated:
This study will focus on the COO effect for six different countries, due to the limited amount of respondents and the statistical power that is necessary to draw conclusions about each country. The explanation of the chosen countries and segments are described in chapter 3.1.

1.6 RESEARCH METHOD

The research approach (Figure 1-4), helps to explain the research method and structure. The model is based on 4 sections derived from Field & Hole (2003). The first section answers the question *why?,* and includes chapters 1&2. The second section, which consists of chapters 3&4, is focused on answering the question *how?*. The third section is based on answering the question *what did I find?*, described in chapters 5 & 6. The last section is about the discussion and the conclusions, answering the question *so what?,* including chapters 7 & 8. The following table and the research approach provided in (Figure 1-4) gives a clear overview of the sections and corresponding chapters of this research.

Table 1-1: Overview of the sections and corresponding chapters.

Section	Answering the question	Including Chapters
1	Why?	1:Introduction, 2:LiteratureFoundations
2	How?	3:Conceptual Model, 4:Methodology
3	What did I find?	5:Data & Analysis, 6:Results
4	So what?	7:Discussion of Results, 8:Conclusions

Source: 'Answering question' derived from Field & Hole (2003).

The research method is described in relation to the 4 sections, the research structure (paragraph 1.7) is described on a chapter-level. The research method is mainly focused on section 2.

The first step in the research is to define the problem statement and research questions. Then, the research starts with the review of the theoretical background of the country of origin (COO) effect, including the description of commonly used terms and definitions in the field of research. After the review of all relevant literature, the findings and limitations of prior research are discussed, followed by the formulation of hypotheses and the conceptual model.

In order to test these hypotheses, an experiment with a 3 (segments) X 6 (countries) mixed design will be conducted. The independent variables used are segments and the country of origin (COO), the product group of interest is automobiles. The COO effect is tested for six countries which are divided by the level of development, more developed countries (MDC) versus less developed countries (LDC). The Dutch respondents will be asked to fill in an online questionnaire in which they receive identical

information about a car that is coming to the market; the only difference between the questionnaires of the respondents is the country of origin of the car. In order to measure the quality perception of the respondent, which is the first dependent variable, proven rating scales are used. Besides quality perception, the influence of the COO effect on price perception and purchase intention will be measured. Before the final questionnaire was handed out to the respondents, a pre-test was conducted on 12 people, next to a soft launch that was filled in by 30 respondents.

After the validation and the cleaning of the data obtained by the questionnaire, several statistical techniques were used to analyze the data. The constructs were tested on their reliability using Cronbach's Alpha, hypotheses were tested by using various parametric and non-parametric tests. Especially, Anova in many forms (one-way, two-way mixed, multivariate) is used for the analysis.

Finally, the results are discussed, conclusions are drawn, and practical implications are made.

1.7 RESEARCH STRUCTURE

The first chapter ('Introduction') describes the context and background of the subject, the cause and purpose of the research, and most important, the problem statement and research questions. Afterwards, a short outlook of the research scope, research method, and research structure is given.

The second chapter ('Literature Foundations'), starts with the explanation of important and commonly used terms in the field of this research, followed by the findings and limitations of prior research and the development of hypotheses.

The third chapter ('Conceptual Model Development') explains the independent variables, the dependent variables, the potential moderators, and the connection between them in the conceptual model. Next to the model, the hypotheses are summarized in the table of hypotheses.

The fourth chapter ('Methodology'), clarifies the methodology of the research, with the explanation of the research design, the experimental design, the stimuli, the sampling design and procedure, the construct measurements, and the questionnaire design.

In chapter 5 ('Data'), the data will be checked, cleaned and validated. Some general insights in the data will be discussed, for example the demographics of the respondent group, the validation and reliability of constructs, the assumptions of parametric tests, the manipulation checks and the control variables.

The analysis of the data and the results will be described in chapter 6 ('Analysis & Results'). This includes the explanation of all statistical tests that are used in this study. Furthermore, it shows the outcomes of the hypothesis testing.

The results are discussed in chapter seven ('Discussion of Results').

Finally, chapter eight ('Conclusions') describes the general conclusions and main findings of the research, the managerial implications, the limitations and the recommendations for future research.

Figure 1-4: Research Approach

Phase

1. Why?
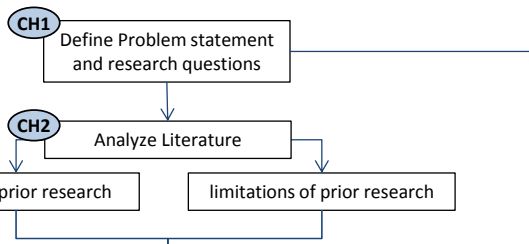
2. How?
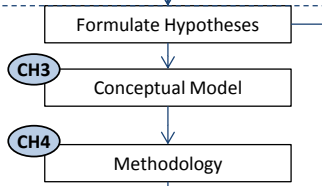
3. What did I find?

4. So what?

Source: The sections and the answering questions in the model are derived by Field & Hole (2003).

2. LITERATURE FOUNDATIONS

In this chapter relevant literature is discussed leading to the formulation of hypotheses of the research. First, specific terms are defined that are commonly used in this field of research. Secondly, the major important theoretical findings and limitations of prior research about COO effects are discussed. Third, the hypotheses are developed and formulated.

2.1 DEFINITIONS

Specific terms and common definitions used in this research area are clarified in the following paragraphs. These definitions serve as a basis for the extensive literature research.

2.1.1 STEREOTYPING

Stereotyping is an important underlying mechanism that is used by people to simplify the complexity of issues. It is a psychological activity to avoid information overload, therefore people will simplify the issues to a manageable level and will make assumptions about characteristics of other people, products, countries, etc. (Hinner, 2010). These stereotypes can be either positive or negative (Vito, 2002) and can lead to largely incorrect judgments (Chen & Starosta, 1998; Hinner, 2010; Vito, 2002).

2.1.2 INTRINSIC & EXTRINSIC CUES

The word 'cue' in a psychological context is defined as: *'A stimulus, either consciously or unconsciously perceived, that elicits or signals a type of behavior'* (The American Heritage, 2011).

Consumers use cues or signals to form judgments regarding products, brands, or services. They identify, evaluate and integrate the available cues to create a composite judgment (Szybillo & Jacoby, 1974). A distinction has been made between extrinsic cues and intrinsic cues (Jacoby, Olson, & Haddock, 1971). Intrinsic cues are product-related and cannot be changed without changing the physical characteristics of the product. Extrinsic cues are not related to the physical characteristics of a product (Olson & Jacoby, 1972). In the case of cars, intrinsic cues can relate to product attributes for example size, engine power and weight. Brand image, price and the COO image are examples of extrinsic cues.

2.1.3 COUNTRY OF ORIGIN (COO) EFFECT

The COO effect is defined and researched in many different ways. The most important research and their findings are described in paragraph 2.2. In general, the COO effect is used as a stereotype, an intangible extrinsic cue that influences consumers' evaluation of products and countries in a positive or a negative direction (Peterson & Jolibert, 1995).

The COO effect is commonly defined as:

"The extent to which the place of manufacture influences product evaluations" (Guhran-Canli & Maheswaran, 2000b) (Martin, Lee, & Lacey, 2011)

Due to the trend of increasing globalization, multi-national production and outsourcing strategies, most of the products are not designed, produced and branded in just one country (Seidenfuss,

Kathawala, & Dinnie, 2010). These hybrid models of Country-of-origin are even more complex to define; therefore it is divided into several types of Country-of-origin (COO):

country of brand (COB), country of assembly (COA), country of components (COC), country of design (COD), country of manufacturing (COM) and country of target (COT). This research will only focus on the general type of COO, defended by the article of Verlegh & Steenkamp (1999) which found no significant difference between the COO effect in the hybrid and in the non-hybrid model. Further explanation is provided in chapter 3.2.

2.1.4 COUNTRY IMAGE

Before the COO effect can occur, there must be a 'country image' in the consumers mind. For this research topic, the most suitable definition of country image is provided by Roth & Romeo (1992):

"Country image is the overall perception that consumers form of products from a particular country, based on their prior perceptions of the country's production and marketing strengths and weaknesses." (Roth & Romeo, 1992)

Country image can be divided into three groups (Hsieh, 2004):
1) Overall Country image (all beliefs about a particular country, i.e. 'I like Sweden').
2) Aggregate product-country image (all beliefs and feelings about and attitudes towards products coming from that particular country, i.e. 'I like products from Sweden').
3) Specific product-country image (all beliefs and feelings about and attitudes towards specific product coming from a particular country, i.e. 'I like cars from Sweden').

The country images can vary a lot between countries and between product groups, therefore this research will follow the specific product-country image approach. For instance, the country image of Japan as a producer of consumer electronics (TV's, Stereo's) could be totally different in comparison with the image of Japan as a producer of food or clothing. This study will focus on a specific product (automobiles)-country image.

2.1.5 QUALITY PERCEPTION

Many studies on COO effects are tested on quality perception or purchase intention (Peterson & Jolibert, 1995). Quality perception or perceived quality can be interpreted in different ways. Steenkamp (1990) provides several uses of perceived quality, a new definition and a conceptual framework which can be used for future research. He distinguishes:

- perceived quality in the context of value
- perceived quality as a Subject-Object Interaction
- perceived quality and the consumption experience, and
- perceived quality as an evaluative judgment.

This study will use the perceived quality as an evaluative judgment and leads to the following definition of perceived quality:

"Perceived quality is regarded as an overall unidimensional evaluative judgment. It is a higher-level abstraction instead of a specific product attribute, based on the perception of the product on the quality attributes." (Steenkamp, 1990)

For the selected attributes which are evaluated by the respondents, many different 'quality perception ratings' have been investigated such as the perceived quality indicators (Dodds, Monroe, & Grewal, 1991) and the perceived quality dimensions (Nagashima, 1970) (Han & Terpstra, 1988) (Srinivasan, Jain, & Sikand, 2004). The option that is chosen to use in this study will be discussed more extensively in section 3.2.

2.2   THEORY

This chapter describes the theoretical foundations that are investigated in prior research. After describing the most important findings, the limitations in prior research are reviewed and discussed.

2.2.1   FINDINGS OF PRIOR RESEARCH

Country of origin (COO) and product evaluation:
The COO effect is a widely researched item in the last five decades. It all started with Dichter (1962), he suggested that COO might have a significant influence on the succes and acceptance of products. The article written by Dichter was a trigger for many researchers (Schooler, 1965; Reierson, 1967; Nagashima, 1970) to investigate and to find empirical evidence for the effect of COO on product evaluations. Most conducted studies confirm the influence of the COO effect, although the effect varies in magnitude and significance. According to Bilkey & Nes (1982) there was found evidence of the COO effect for products in general (Krishnakumar, 1974; Dornoff, Clint, & White, 1974; Nagashima, 1970; Gaedeke, 1973), for classes of products (Dornoff, Clint, & White, 1974; Nagashima, 1970; Gaedeke, 1973), for specific types of products (Krishnakumar, 1974; Gaedeke, 1973), and for specific brands (Gaedeke, 1973; Yaprak, 1978; Kincaid, 1970).

Furthermore, Han (1989), Erickson et al. (1984) and Wyer & Hong (1989) suggest that product evaluation and purchasing behavior are influenced by COO directly, but also indirectly trough beliefs. The COO influence on product evalution is divided in two major effects: the halo effect and the summary effect (Han, 1989). The summary effect influences consumers product evaluation directly, oppositely the halo effect influences consumers product evaluation indirectly trough beliefs (Figure 2-1). People use COO to summarize product information when they get more familiar with a country's product and in the situation when there is a large amount of product information available, so it is difficult to integrate it in the decision making process. If there is only a small amount of product information available, people can use the halo effect of COO to create inferential beliefs about other product attributes that are not available or cannot be evaluated directly (Hsieh, 2004).

Figure 2-1: COO effect on Product evaluation and purchasing behavior.
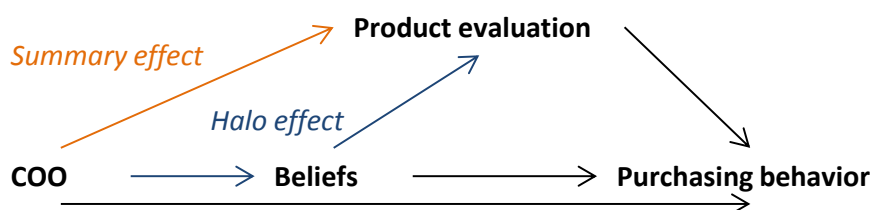
Source: based on Hsieh (2004)

After all these studies that examined the relationship between COO and product evaluations, researchers found evidence for the COO effect in a variety of situations with different independent and dependent variables.

Country of Origin (COO) and hybrid-products:
Due to globalization and multinational production trends, products do not always originate from just one country. The COO effect is divided in a hybrid model and used in multiple ways; Country of Brand (COB), Country of Design (COD), Country of Components (COC), Country of Assembly (COA), Country of Target (COT) and Country of Manufacturing (COM).

Chao (1993) discovered that in the case of televisions, the COA was very important to the perception of building quality, a positive COD could not compensate for a negative COA. The importance of COA differs per product category: According to Insch & McBride (1998) the COA of athletic shoes is more important than the COA of mountainbikes. Shoes assembled in USA and Japan are preferred to shoes assembled in Mexico. In the case of cars, COA is also a widely researched issue. Johansson & Nebenzahl (1986) researched the value of Buick and Chevrolet automobiles when their production moved from the USA to Mexico and Korea: it resulted in a 17% drop of perceived value. Additional research from Seaton & Laskey (1999) found that moving production of mid-size automobiles to Korea or Mexico lead to respectively 10.6% and 11.5% reduction in perceived value.

Srinivasan, Jain, & Sikand (2004) decomposed COO into branding country (COB) and manufacturing country (COM). They found a negative effect on consumers' quality perception when the manufacturing country was less developed (Mexico & Malaysia) and positive effect when the manufacturing country was developed (USA & Japan). The overall suggestion of Srinivasan, Jain, & Sikand (2004) is that the seller should choose a developed country as COB to compensate the negative effect on quality perception when manufacturing in a less-developed country to reduce production costs. Similar COA results are shown from a Thai consumer perspective by the research of Chandrasen & Paliwoda (2009). Seidenfuss, Kathawala, & Dinnie (2010) divided COO in COA, COC, COB and COT. Country of Target (COT) is a synonym for 'home country' or the country of the respondents . They found empirical evidence to support the hypothesis that 'there will be no difference in perceived quality / perceived image of cars depending on COT' (Chandrasen & Paliwoda, 2009). Furthermore, they confirm the COA findings of other studies with similar results from an ASEAN (Association of South East Asian Nations) perspective. There where no significant results for the COC suggestions, probably caused by the home bias, which is discussed later in this chapter.

Although many researchers recognize and use these hybrid models of COO, it is not always necessary to decompose COO and we should be careful with the interpretation of the results. It suggests that the COO effect differs between hybrid and non-hybrid products but this hypothesis was rejected by Verlegh & Steenkamp (1999). There is no significant difference between the hybrid-model and the non-hybrid model of COO.

Country of origin (COO) effect and the underlying mechanisms:
As already mentioned shortly in chapter 2.1, the COO effect is a result of some psychological activities that arise before the COO effect occurs. Consumers are exposed to cues, in combination with stereotyping this will lead to a judgment or evaluation of products, people or countries. This automatic activation in consumers mind is confirmed by Martin, Lee, & Lacey (2011) who found evidence to support the following hypothesis:

"Exposure to a COO cue will result in individuals demonstrating the automatic activation of COO stereotypes" (Martin, Lee, & Lacey, 2011)

The distinction between extrinsic and intrinsic cues was already made in the beginning of the 70's by Jacoby et al. (1971) and Olson & Jacoby (1972) . Extrinsic cues are product related, but not physically part of the product (Store name, Brand name, Price, COO). Conversely, intrinsic cues are product attributes that physically relate to the product (Length, Weight, Engine Power, Color). Despite a lack of actual effect on product quality, there are several extrinsic cues that can have a significant influence on product evaluations. In general, intrinsic quality cues have a greater effect on product quality perceptions than extrinsic cues (Szybillo & Jacoby, 1974; Veale & Quester, 2009). However, Richardson, Dick, & Jain (1994) found in their study that extrinsic cues are relatively more important than intrinsic cues. Extrinsic cues like the COO image are even more important when there is less information available or when the available information is not evaluated correctly (Srinivasan, Jain, & Sikand, 2004) . Additionally, in multi-cue studies the COO effect is smaller in comparison with the COO effect in single-cue studies (Heslop, Liefeld, & Wall, 1987; Verlegh & Steenkamp, 1999).

Besides the cues, there is another important mechanism that eventually leads to the COO effect: stereotypes. Consumers tend to simplify information to a manageble level and therefore will make assumptions about countries, products or people. For example, the generally used stereotypes of country image are: 'high quality' with Germany and Japan, 'attractive design' with Italy, 'good value' with South Korea and 'special appeal' with Sweden (Keegan & Schlegelmilch, 2001). Stereotypes are created through earlier experiences, advertizing, categorization, hearsay, etc. The country image stereotypes can be influenced by the level of economical, culutral and political development which are discussed in the next paragraph.

The processing of the COO cue can be categorized in cognitive, affective and normative mechanisms (Obermiller & Spangenberg, 1989; Verlegh & Steenkamp, 1999); The following table shows the different mechanims, their descriptions and major findings.

Table 2-1: Examples of cognitive, affective and normative mechanisms for country of origin (COO) effect

Mechanism	Description	Major Findings
Cognitive	Country of Origin is a cue for product quality	Country of Origin is used as a 'signal' for overall product quality and quality attributes, such as reliability and durability (Li & Wyer, 1994; Steenkamp, 1989).
Affective	Country of Origin has symbolic and emotional value to consumers	Country of Origin is an image attribute that links the product to symbolic and emotional benefits, including social status and national pride (Askegaard & Ger 1998; Batra et al., 1998).
Normative	Consumers hold social and personal norms related to country of origin	Purchasing domestic products may be regarded as 'right way of conduct', because it supports the domestic economy (Shimp & Sharma, 1987). By the same token, consumers may refrain from buying goods from countries with objectionable activities or regimes (Smith, 1990; Klein, Ettenson & Morris, 1998).

Source: (Verlegh & Steenkamp, 1999)

For this study, the cognitive processing mechanism suits the best. It is the least extreme and it is in line with the definition of COO and the variables that are used. Furthermore, the affective and normative mechanisms are more intense. People who use the affective or normative processing of COO are also assumed to display behavior of cognitive processing.

Country of Origin (COO) and the level of economical-, cultural-, political-, and market development:

The COO effect varies between (economically) more developed countries (MDCs) and less developed countries (LDCs). In general, products from a MDC receive better evaluation in comparison with products from LDCs (Krishnakumar, 1974; Srinivasan, Jain, & Sikand, 2004). Highly industrialized countries are evaluated better than low industrialized countries (Thanasuta, Patoomsuwan, Chaimahawong, & Chiaravutthi, 2009). The countries with a high level of market-development in the specific product-group also receive better evaluations by the consumers and the level of cultural or political development can positively influence consumers perceptions, according to Wang (1978). A study by Watson & Wright (2000) shows that when people buy foreign products, they prefer products from culturally similar countries. Furthermore, Brown (1986)indicates that when a country's political, social, cultural and economic conditions change, the influence of the COO might change as well.

Country of origin (COO) effect and home bias:
The home bias is a widely researched phenomenom within the COO subject. People prefer to buy domestic products instead of buying products from foreign countries (Peterson & Jolibert, 1995). When they buy products from foreign countries they prefer countries with similar social or cultural norms (Watson & Wright, 2000). Consumers with a vey strong home bias are called 'ethnocentric', this means that they not only prefer domestic products, they consider buying foreign products as immoral and wrong. In their opinion it can cause higher unemployment rates and hurts the domestic economy (Hinner, 2010). According to Srinivasan et al. (2004), ethnocentric consumers will discount the attributes of foreign-made products and highlight the positive aspects of domestic products. Other researchers call these consumers 'patriotic', the consumer behavior and attitude towards domestic and foreign products is moreless the same for patriotic and etnocentric consumers.

As already mentioned, when people buy foreign products they prefer products from countries with similar social and cultural values. Assuming that the social and cultural values differ across geographic areas (Takada & Jain, 1991), the suggestion arises that people preferrably buy products from their own geographic region. This suggestion can be supported by the fact that in many cases barriers of trade are already eliminated between countries in the same trading bloc (Schott, 1991). The availability of the international products within the trading bloc might influence the product or brand awareness, familiarity and acceptance. Hsieh (2004) found some evidence of consumers who preferrably buy foreign products from their own geographic region (Europe, North America) but it only partially holds for Asia and did not hold at all for South America.

Country of origin (COO) and different dependent variables (DVs):
The COO effect is tested on many different dependent variables (DVs). Next, some findings are discussed that relate to the differences of the COO effect when tested on commonly used DVs which are eventually all related to product evaluations. In most studies COO is tested on consumer's purchase intention/likelyhood or quality perception (Chandrasen & Paliwoda, 2009; Chinen & Sun, 2011). An example of a conceptual model used in prior COO research on quality perception by Chandrasen & Paliwoda (2009) can be found in Figure 2-2.

Other used DVs are: price perception, the brand personality perception (Aaker J. , 1996) and willingness to pay (WTP) with the Hedonic Price model to valuate product's COO. Thanasuta et al. (2009) used the hedonic price model to draw conclusions about brand and COO valuations of automobiles from a Thai perspective. They found that brands and countries with a positive COO

receive a higher price premium. The effect of COO on price perception is investigated by Pecotich & Rosenthal (2001) and Ahmed & d'Astous (1993), who found that the price perception of products varied by the level of development of the product's country of origin.

Figure 2-2: Example of conceptual model that tests COO effect on quality perception
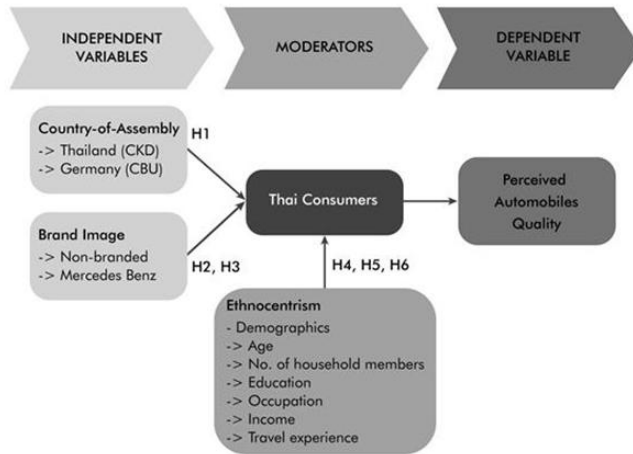
Source: Chandrasen & Paliwoda (2009)

The Brand Personality model (Aaker J. , 1996) is used by (Fetscherin & Toncar, 2009;2010) to show differences in perceived brand personality between automobiles from China, India and the USA. Their results indicate that American consumers perceive the Chinese car as more daring, up-to-date and outdoorsy than the Indian and the US car (see figure 2.3 for the dimensions and facets of brand personality). Additionally the Chinese car is perceived more charming than the US car, and more succesful, upperclass and intelligent than the Indian car. In turn, the USA car is perceived as more succesful than the Indian car (Fetscherin & Toncar, 2009).

Figure 2-3: Brand Personality dimensions and facets
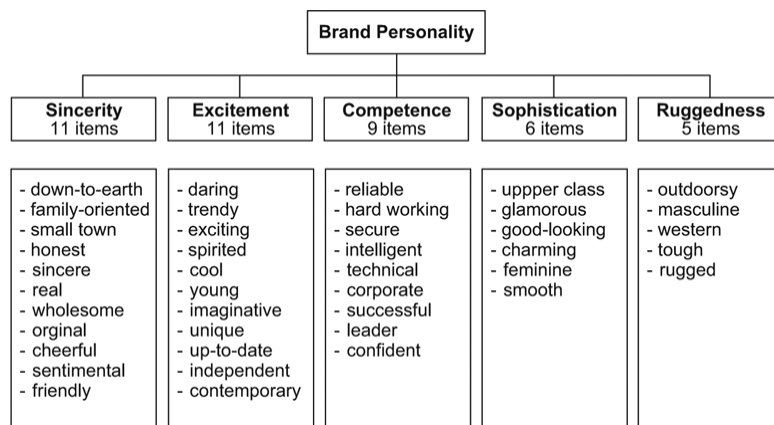
Source: Aaker J., (1996)

There are also studies that investigated the difference between the used DVs and the COO effect. In general, the COO effect is greater when it is tested on consumers' quality perception in comparison with consumer attitudes and consumers' purchase intention (Verlegh & Steenkamp, 1999). Furthermore, Peterson & Jolibert (1995) conclude that for eight out of ten study characteristics a significantly difference was found for one dependent variable, but not for the other. Therefore, the

suggestion is made that perception and intention variables should be treated and analyzed separately. Following the suggestion of Peterson & Jolibert, this study will measure the COO effect on quality perception and purchase intention separately. After the data is obtained and analyzed, a comparison between the dependent variables is made.

Country of origin (COO) effect and brands
In the COO researches, there is a focus on the impact of brands, by using a few brands as a national sample, or the focus is on the impact of nationality. In the first case, it can be very interesting for automobile brands to know whether they receive a positive or a negative COO effect and thus, if they should emphasize it in their marketing communication (advertizing, commercials etc.) or not. The COO is widely researched on brands, for instance Thanasuta et al. (2009) found out that Mercedes-Benz, BMW and Audi receive the highest price premium from Thai consumers among 17 other car brands. The results of the study of Hsieh(2004) indicate that consumers attitude towards a brand's COO is positively related with consumer brand purchase behavior. Although the studies of the COO effect on brands are of great value for scientists, marketeers and companies, there are also some critic notes about the validity of the studies. For instance, it is hard to measure if consumer perceptions are caused by COO associations or by brand associations and how they influence eachother. The limitations of COO studies on brands are more extensively described in section 2.2.2.

Country of Origin (COO) effect in different product categories
The COO effect varies across product categories and the attitude of a consumer towards a specific country varies per product category (Roth & Romeo, 1992; Bilkey & Nes, 1982). Although this study will focus on the COO effect on cars, it is interesting to know how the COO effect differs between product groups and how to categorize them. Cars and COO are investigated by many researchers but the majority of COO studies have focused on the comparison between product categories. For example Cars are compared with TVs (Han & Terpstra, 1988), cameras and calculators (Yaprak, 1978), beer, shoes, crystal, bicycles, watches (Roth & Romeo, 1992) and so on.

In general, some conclusions can be drawn about differences between product groups which are confirmed by multiple studies. The magnitude of the COO effect is positively related with the differentiation level in a product category. For instance, with standardized and homogenous products such as electricity, the COO effect will have less or no influence on product image (Lampert & Jaffe, 1998). Piron(2000) investigated the difference of COO effect between necessity products and luxury products. He discovered that the COO effect had more influence on the evaluation of product attributes for luxury products (sportscar) than for necessity products (toothpaste). Furthermore the literature suggests a difference in the COO effect between consumer products and industrial products (Ahmed & d'Astous, 1993) . Because buying agents are in general more rational and better informed than household buyers (Webster & Wind, 1972), they will be less sensitive to the COO effect. Verlegh & Steenkamp(1999) tested this hypothesis as well, although the effect was in the suspected direction, there was not enough significance to support the hypothesis. A difference is also found in the COO effect between durable vs non-durable products and high involvement vs low involvement of the consumers. The study written by Maheswaran(1994) indicates that when people are buying non-durable products (i.e. Fast Moving Consumer Goods) and the level of involvement is low, the COO effect will be greater because consumers are less motivated to process available product information. In the case of durable products in combination with a higher level of involvement (i.e. cars), the COO effect could be smaller.

Country of origin (COO) effect and findings in the automotive industry

Previous literature research was done on the COO effect in a more general way. This thesis is focused on the COO effect in the automobile industry. Although all previous findings are very important for the understanding of the COO effect and the differences between products, the following research will specifically focus on the COO effect in the automobile industry. A summary of automobile COO research (Table 2-2) is provided by Al-Sulaitu & Baker (1998) and is used in multiple other studies to summarize the COO research on automobiles before 1998. In the table you can find the relevant studies, the areas investigated and the key findings of the studies.

Table 2-2: Summary of Automobile Researches until 1998.

Author(s)	Area investigated	Key findings
Nagashima (1970) / (1977)	USA/ Japan	Japanese and US attitudes towards foreign products. Product evaluations based on 'made in' product-country image.
Johansson et al. (1985)	USA/Japan	COO is used as a surrogate variable to evaluate a product when subjects have limited knowledge about the automobile.
Han & Terpstra (1988) / Han (1989)	USA	COO effects are product-dimension specific. Sourcing country has greater effects on consumer evaluations of product quality than does brand name.
Stoltman et al. (1991)	USA	COO interacts significantly with both product familiarity and consumer ethnocentrism.
Lawrence et al. (1992)	New Zealand	COO is a determining factor in the buying process and respondents evaluate automobiles 'made in Germany' as the favourite ones.
Erickson & Johansson (1992)	USA	In terms of country-specific invisible assets, Japanese brands seem to be perceived as more reliable, while American brands are perceived as more roomy and safer in the event of a collision.
Akaah & Yaprak (1993)	USA/Turkey/Ghana	The influence of COO effect is weak when it is evaluated as one among an array of product cues.
Kochunny et al. (1993)	USA	Consumers possess a COO schema; this affects consumers' retention of information about cars, as well as their judgement.
Peris et al. (1993)	UK/Spain	Over two-thirds in each sample show preference for homemade over foreign products.
Okechuku (1994)	USA/CAN/GER/ NL	In terms of origin, developing countries are evaluated unfavourably.
Strutton et al. (1994)	USA	American consumers evaluate Japanese cars more favourably than their home-produced cars.
Peterson & Jolibert (1995)	32 countries	The COO effect is only somewhat generalizable, the effect is context dependent, effect sizes are larger for quality perception than for purchase intentions.
Baker & Michie (1995)	UK	The findings reveal home-country selection bias.
Diamantopoulos et al. (1995)	UK/GER	Both British and German consumers hold stereotypical images about different countries (France, Japan, Spain and the UK) and these images affect the way in which the car is purchased.
Kim & Chung (1997)	USA	The findings show that country-specific intangible assets exist and that they interact with marketing variables differently for US and Japanese brands.

Source: Al-Sulaitu & Baker (1998).

Al-Sulaitu & Baker 's summary of the COO research before 1998 is important to review and understand the development of the COO research. Nonetheless, a large number of COO research in

the automobile industry have been conducted since 1998, providing new insights. The most relevant studies from recent years are summarized in Table 2-3.

Table 2-3: Summary of Automobile Researches from 1998 until 2012.

Author(s)	Area investigated	Key findings
Ming-Huei Hsieh (2004)	20 countries	Attitude towards a brand's COO has a positive relationship with consumer brand purchase behavior. The COO effect is more influential where the availability of international brands is low. Consumers from European and North American countries tend to accept not only domestic products, but also products that originate from the same regional bloc.
Srinivasan (2004)	USA	Manufacturing country, branding country, intrinsic quality, price, and ethnocentrism have significant influence on product evaluations.
Chandrasen & Paliwoda (2009)	Thailand	Automobiles assembled in a highly industrialized country are evaluated better than those from an industrializing country. Brand image can lessen the COA bias on perceived quality when evaluating automobiles from a country with an unfavourable image. Ethnocentric consumers would tend to have a lower education level, live in larger households. Travelling or living abroad can lessen the etnocentric behavior.
Fetscherin & Toncar (2009)	USA	American consumers perceive the Chinese car as more daring, up-to-date and outdoorsy than the Indian and the US car. Additionally the Chinese car is perceived more charming than the US car, and more succesful, upperclass and intelligent than the Indian car. In turn, the US car is perceived as more succesful than the Indian car.
Thanasuta et al. (2009)	Thailand	Brands which consumers perceive to have a higher value receive a positive and significant premium. Brands originating from highly industrialized countries obtain a higher price premium.
Seidenfuss et al. (2010)	Thailand/Malaysia/ Indonesia	COA is shown to affect perceived quality as well as perceived image. Warranty extension can moderate the quality effects to some extent, whilst buyers of luxury models display a smaller positive home bias in terms of perceived image than those of non-luxury models. Such home region bias is not demonstrated to be significant for country-of-components.
Fetscherin & Toncar (2010)	USA	Consumers' brand personality perceptions varied according to the COB and the COM . The COM of a car influenced the perceived brand personality of the car more than the COB. In some aspects the Chinese car made in the USA was perceived to have a stronger brand personality than the US car made in China.
Sohail & Sahin (2010)	Saudi Arabia	Central product attributes of Japanese, American, European and South-Korean cars determine consumers' preference, peripheral product attributes will not.
Chinen & Sun (2011)	USA	Consumers are rational buyers, they are more receptive to products made in most advanced countries like Japan, Germany, and the US, than those from advanced countries such as South Korea and China, and the least receptive to those from developing countries.

Both tables provide an overview of the development of the COO research, and help to formulate the limitations of previous research and the suggestions for future research.

COO effect and different car segments

Consumers have different preferences, needs, and values. Therefore the consumer market is divideed into segments. This research examines the COO effect in three segments: economy, luxury, and electrical. Luxury cars may be mainly purchased for value expressive reasons, whereas economy cars are mainly purchased for its functional reasons (Aaker, Batra, & Myers, 1992). Several other researchers found that consumer's values are related to the purchase of cars (Henry, 1977; Vinson, Scott, & Lamont, 1977). Consumers use values as a criteria for evaluating importance of product attributes (Vinson, Scott, and Lamont, 1977); and they associate certain attributes with products, depending upon their country of origin (Bilkey and Ness, 1982). Furthermore, Thanasuta et al. (2009), tested the COO effect separating economy and luxury car segment and found that the effect was larger in the luxury segment. Seidenfuss et al. (2010) found that the home bias was smaller for ASEAN-based consumers of luxury cars than it was for ASEAN-based consumers of non-luxury cars. Besides the difference of the effect size of the COO effect between different segments, it is also interesting to see which countries are evaluated better in which segments. There is not much research done relating to the COO effect in the electrical segment, one of the purposes of this study. The definitions of the segments, as they are used in this study, are clarified in paragraph 3.1.2..

Summary of important findings from prior research

In the following summary tables, the most important studies of the literature research are shown, especially the ones which tested the COO effect with similar independent and dependent variables.

Table 2-4: Tested COO effect between multiple segments

Author	Main findings	Area investigated
Thanasuta et al. (2009)	COO effect was larger in the luxury segment than in the economy segment.	Thailand.
Seidenfuss et al. (2010)	Home bias was smaller for consumers of luxury cars than it was for consumers of economy cars.	Thailand/Malaysia/Indonesia.

Table 2-5 : Tested COO effect between multiple countries

Author	Main findings	Area investigated
Peterson & Jolibert (1995)	The COO effect is only somewhat generalizable, the effect is context dependent. Effect sizes are larger for quality perception than for purchase intentions.	32 countries
Han & Terpstra (1988	COO effects are product-dimension specific. Sourcing country has greater effects on consumer evaluations of product quality than does brand name.	USA
Ming-Huei Hsieh (2004)	Consumers from European and North American countries tend to accept not only domestic products, but also products that originate from the same regional bloc.	20 countries

Table 2-6: Tested COO effect between different levels of development

Author	Main findings	Area investigated
Srinivasan (2004)	Consumers from MDCs prefer products originating from MDCs more than products originating from LDCs.	USA
Chandrasen & Paliwoda (2009)	Cars from highly industrialized countries are better evaluated than cars from industrializing countries.	Thailand

2.2.2 LIMITATIONS OF PRIOR RESEARCH

Although many studies confirm the influence of the COO effect on product evaluations in a variety of situations, there are also some critical notes and limitations. Especially the research from 1960 until 1990 is doubted on their validity and research methods. The research methods used in prior research led to findings that did not hold in other situations. Hence, the claims about the COO effects were useful in that particular situation but they were not generalizable.

Peterson & Jolibert (1995) concluded: 'Country of Origin effects are only somewhat generalizable' and 'the phenomenon is still not well understood'.

Generalization of the country of origin (COO) effect
The COO effect is a difficult phenomenon to draw broad conclusions about. The construct itself is widely interpreted and operationalized in many ways in the literature. Researchers have used a variety of research designs and methodologies. For example, differences in studied products, respondent base, areas or countries investigated, data collection, etc. (Peterson & Jolibert, 1995). The COO effect tends to be context-dependent and therefore investigators should not seek to find COO generalizations because they will probably not hold in a different setting.

Validity of the country of origin (COO) effect
Other researchers such as Agrawal & Kamakura (1999) argued the findings of prior research, especially those with single cue study designs. They suggest that COO is only one extrinsic cue among many extrinsic and intrinsic cues available to the consumer in a real purchase situation'. The level of information search would further dilute the influence of COO. After controlling for quality differences across brands, there is no significant influence left and the differences in pricing (premium or discount) are justified by product quality instead of by the COO effect (Agrawal & Kamakura, 1999).

Furthermore, Johansson et al. (1985) stated: "most studies have involved only a single cue, that is, the COO was the only information supplied to respondents on which to base their evaluations. This single cue approach tends to bias results in favor of finding a significant country-of-origin effect."

Studies that have analyzed COO effect on a brand-level, comparing brands from different countries, mostly fail to isolate the portion of difference in perceived quality only caused by the COO. In those cases it is difficult to ascribe the observed difference in product evalutions to brand name or to the COO. Prior research have proved that brand name (i.a. Jacoby, Olson, & Haddock, 1971) and COO are both important stimuli for consumers product evaluations. Han & Terpstra (1988) investigated both stimuli on product evaluations and found out that: 'the sourcing country has greater effects on consumer evaluations of product quality than does the brand name'. To ensure we only measure the COO effect, this study will eliminate brand interferences and will not mention any known brand to the respondents. Other influences on the respondents (i.e. showing the objective of the questionnaire, the order of the questionnaire etc.) which were limitations of some prior research will be eliminated as well. These matters that can possibly have an influence on the respondents will be discussed more extensively in the method section.

The findings of Agrawal & Kamakura (1999) suggest that we should be really careful with the interpretation and generalization of the COO effect. The magnitude of the effect depends on how the research is designed. The COO effect is interpreted in many ways and tested in varying situations with different independent and dependent variables. Therefore, it is hard to generalize the findings

of single studies. On the other hand, because the phenomenon is only somewhat generizable it is still interesting to test it in different situations because it can lead to new and different insights.

Regarding the overview of the prior automobile COO research (Table 2-2, Table 2-3), most of the research have been conducted in the USA. Other frequently investigated countries are: Japan, China and Thailand. This could be expected because China, USA and Japan are the largest automotive industries (OICA, Production Statistics 2011) and Thailand is a very important automobile consumer market in the ASEAN region. In Europe, which is less investigated, the United Kingdom (UK) and Germany are the most researched countries. Cars from Germany are mentioned often as an example in COO studies. One of the few researchers who investigated the Netherlands is Okechuku (1994). He did a research on consumers from the Netherlands, although this was about car radios (and TV's), not actually on cars itself. Because of this absence, it will be interesting to test the COO effect on cars from a Dutch perspective.

2.3   HYPOTHESES DEVELOPMENT

The combination of the research question and the findings and limitations of prior research lead to formulation of the hypotheses. First, hypotheses related to the direct effects of COO on quality perception are described. Second, hypotheses related to the direct effect of COO on purchase intention are described. Third, hypotheses are formed related to the difference between the two dependent variables.

2.3.1   EFFECT OF THE COUNTRY OF ORIGIN ON QUALITY PERCEPTION:

The COO effect has been widely researched in the field of international marketing, most studies found evidence that the COO effect has a significant influence on consumers product evaluations (Hsieh, 2004; Peterson & Jolibert, 1995; Fetscherin & Toncar, 2009). Other studies argued these statements and suggested that the COO effect will have no significant influence on product evaluations when other extrinsic and intrinsic product attributes are also taken into account (Johansson, Douglas, & Nonaka, 1985; Agrawal & Kamakura, 1999). In other words, the influence of the COO is proved in some cases, but disproved in other cases. That leads to the suggestion that the COO effect and its influence on consumers' product evaluations is context dependent. In this study, the COO effect will be tested on quality perception of cars from a Dutch consumer perspective. Because of the combination of the investigated product group and the country of respondents, it is interesting to test whether the COO effect has a significant influence in this context. This lead to the first hypothesis:

H_1: The Country of Origin (COO) has a significant effect on consumers' quality perception of cars.

In the following hypotheses related to the different segments (H2A&B), LDCs and MDCs (H3A&B) there will be measured two different effects A and B: First effect A, the differences between the average scores of quality perception given by the respondents, caused by the COO effect (because it is the only product attribute that differed in the questionnaire). Second effect B, the differences between the average deviation from the average score in quality perception, which concludes that the COO effect is larger or smaller in the particular situation. The importance of effect A and effect B varies between the hypotheses related to the different segments, MDCs and LDCs.

Only a few COO studies on automobiles tested the difference between the COO effect in the economy segment and the COO effect in the luxury segment. In this study, a third and very

interesting segment is added; the electrical segment. The average scores of quality perception (effect A) between the segments are not especially important, because the respondents answers are based on different information, but it can be useful as a control question. Respondents should rate the information given in the luxury segment higher than the given information in the economy segment, with the electrical segment in between. Therefore hypothesis 2A is as follows:

H_{2A}: The quality perception is higher for more expensive segments, in this research: The overall quality perception is the highest for the luxury segment, the lowest for the economical segment, with the electrical segment in between.

In contrast to effect A, the measurement of the size of the COO effect (effect B) is very relevant between segments. Based on prior research by Seidenfuss et al. (2010) and Thanasuta et al. (2009), the hypothesis is as follows:

H_{2B}: The COO effect on quality perception is larger in more expensive segments, in this research: The COO effect on quality perception is the largest in the luxury segment, the smallest in the economy segment, with the electrical segment in between.

Several researchers (Srinivasan, Jain, & Sikand, 2004) investigated the difference of the COO effect between more developed countries (MDCs) and less developed countries (LDCs). Whereas, the Netherlands itself is a MDC, the expectation is that the Dutch consumers evaluate cars originating from MDCs higher than cars originating from LDCs.

H_{3A}: The overall quality perception is significantly higher in more developed countries (MDC's) than in less developed countries (LDC's).

Assuming that the Dutch consumers have more knowledge about cars originating from MDCs, for example through prior experiences, the expectation is that the size of the effect is larger for MDCs than it is for LDCs.

H_{3B}: The Country of Origin (COO) effect is larger for more developed countries (MDC's) than for less developed countries (LDC's).

2.3.2 EFFECT OF THE COUNTRY OF ORIGIN ON PRICE PERCEPTION:

In order to compare the relationships between the different dependent variables, and based on the literature research, the hypotheses for price perception are similar to the ones for quality perception.

H_4: The Country of Origin (COO) has a significant effect on consumers' price perception of cars.

H_{5A}: The price perception is higher for more expensive segments, in this research: The overall price perception is the highest for the luxury segment, the lowest for the economical segment, with the electrical segment in between.

H_{5B}: The COO effect on price perception is larger in more expensive segments, in this research: The COO effect on price perception is the largest in the luxury segment, the smallest in the economy segment, with the electrical segment in between.

H_{6A}: *The price perception is significantly higher for cars originating from more developed countries (MDC's) than for less developed countries (LDC's).*

H_{6B}: *The Country of Origin (COO) effect on price perception is larger for more developed countries (MDC's) than for less developed countries (LDC's).*

2.3.3 EFFECT OF THE COUNTRY OF ORIGIN ON PURCHASE INTENTION:

Regarding the literature research, the effect of COO on quality perception and the effect of COO on purchase intention should be measured separately. In order to compare the outcomes of both dependent variables, the hypotheses related to the effect of COO on quality perception and the effects of COO on purchase intention are almost similar, leading to the formulation of the following hypotheses:

H_7: *The Country of Origin (COO) has a significant effect on consumers' purchase intention of cars.*

The hypothesis regarding the purchase intention for different segments is turned, because of the pricing of the cars. Furthermore, the main part of the respondents is expected to be students that will show relatively lower scores for the more expensive segments. Therefore, the following hypothesis is drawn.

H_{8A}: *The purchase intention is lower for more expensive segments, in this research: The purchase intention is the highest for the economy segment, the lowest for the luxury segment, with the electrical segment in between.*

H_{8B}: *The COO effect on purchase intention is larger in more expensive segments, in this research: The Country of Origin (COO) effect on purchase intention is the largest in the luxury segment, the smallest in the economy segment, with the electrical segment in between.*

H_{9A}: *The purchase intention is significantly higher for cars originating from more developed countries (MDC's) than from less developed countries (LDC's).*

H_{9B}: *The Country of Origin (COO) effect on purchase intention is larger for more developed countries (MDC's) than for less developed countries (LDC's).*

2.3.4 DIFFERENCES BETWEEN THE COO EFFECTS ON QUALITY PERCEPTION, PRICE PERCEPTION, AND PURCHASE INTENTION

Although the main purpose of this research is to investigate the COO effect on consumers' quality perception, price perception, and purchase intention, it is interesting to compare the outcomes of the dependent variables. Following suggestions of prior research (Fishbein & Ajzen, 1975), the DVs quality perception and purchase intention are measured and analyzed separately. Afterwards, they are compared to each other, together with the outcomes for price perceptions. This leads to the following hypotheses:

H_{10}: *There is a positive relationship between quality perception, price perception and purchase intention*.

According to the meta-analysis of Country of Origin effects by Peterson & Jolibert (1995), the mean effect of COO on quality perception is higher than the mean effect of COO on purchase intention. Therefore the following expectation is formulated:

H_{11}: The main effect of COO on quality perception is higher than the main effect of COO on purchase intention.

3. CONCEPTUAL MODEL DEVELOPMENT

In this chapter, the conceptual model is discussed, including the explanations of the independent variables (IV), dependent variables (DVs), (potential) moderators, and the relationships between them which lead to formation of the total conceptual model and its hypotheses.

The conceptual model is to clarify visually what relationship is tested in the research. After reviewing many models used in prior research, the conceptual model of Chandrasen & Paliwoda (2009) seemed to be the most suitable to use as an example model for this research (Figure 2-2). The conceptual model development is based on that model, adjusted to the specific variables that are relevant in this research. First, a basic model is shown. The basic model is extended during this chapter, which eventually leads to the final conceptual model of this research.

This study aims to measure the effect of COO in the Dutch automobile market. The effect of COO is measured on quality perception, price perception, and purchase intention. After a separate analysis of the dependent variables, comparisons between them are made. Therefore, the basic model is drawn as follows:

Figure 3-1: Basic conceptual model
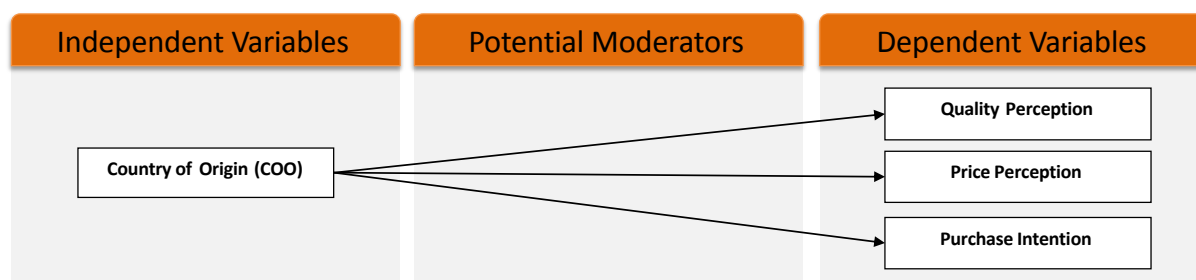
3.1 INDEPENDENT VARIABLES

In this paragraph, the independent variables used in the study will be defined, discussed and substantiated.

The Country of Origin (COO):
The independent variable country of origin (COO) is the focus of this thesis. The definition and the several hybrid models of COO are already discussed in paragraph 2.1.3. Although it is important to distinguish the several hybrid models of COO, it is also difficult to integrate them all in this research. It would result in a very high amount of required respondents or would lower the statistical power of the analysis diminishing the validity and reliability of the drawn conclusions. Furthermore, Verlegh & Steenkamp (1999) rejected their hypothesis which suggested that the COO effect differs between hybrid and non-hybrid products. In order to keep a manageable amount of required respondents, and based on the findings of Verlegh & Steenkamp, this study will use the non-hybrid model of COO.

Several researchers (Han, 1989; Erickson, Johansson, & Chao, 1984; Wyer & Hong, 1989) suggest that the COO effect influences product evaluations and purchase intentions directly, but also indirectly.

Han (1989) divided the COO effect into the summary effect and the halo effect (Figure 3-2). Although this model might be plausible and is important for the understanding of the COO effect, this study will not make a difference between the summary effect and the halo effect. It will be difficult to subscribe a certain extent of the overall COO effect to either the summary effect or the halo effect, therefore this study will measure only the overall COO effect.

Figure 3-2: COO effect on Product evaluation and purchasing behavior.
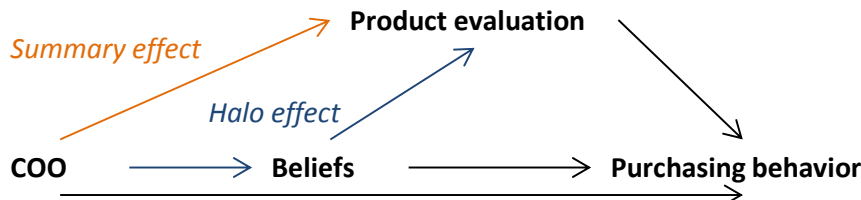
Source: based on Hsieh (2004)

The COO effect will be measured for cars originating from multiple countries, for two levels of development, and in three different segments. The overview of all these dimensions are shown in the following figure:

Table 3-1: Overview of countries, segments, and levels of development.

	Economy segment	Luxury segment	Electrical Segment
More Developed Countries	USA	USA	USA
	GER	GER	GER
	JPN	JPN	JPN
Less Developed Countries	MEX	MEX	MEX
	ROM	ROM	ROM
	CHN	CHN	CHN

The following paragraphs will clarify each of the chosen countries, segments, and levels of development.

3.1.1 COUNTRIES

In order to give valuable and new insights of the COO effect on (Dutch) consumers quality perception of cars it is important to test several countries of origin. Unfortunately, it is difficult to investigate all interesting countries because that would extensively increase the amount of required respondents or lower the statistical power of the analysis. Therefore, this study will investigate a limited selection of six countries that are important to the Dutch automobile consumer market. The selected countries are listed below.

United States of America (USA):
Although the USA is not the largest production country anymore, it is still the second largest of the world according to the OICA production statistics 2011. With some enormous manufacturers (i.e. General Motors (GM), Ford, Chrysler), they are very important in the global automobile industry and in the Dutch automobile market, and should be definitely taken into account in this study.

Germany (GER):

Germany is ranked 4th on the list of major production countries of cars (OICA 2011). In general Germany is seen as the country where the first automobile was invented, by Carl Benz in 1885. Furthermore, Germany is an important country in the global automobile industry with well-known brands and manufacturers (i.e. Mercedes-Benz, BMW, Audi, Porsche, and Volkswagen). In the Netherlands, cars from German manufacturers are sold the most (www.bovag.nl,2011).

Japan (JPN):

Japan is ranked 3rd on the list of production countries of cars (OICA 2011). The influence of Japanese automobiles on the global industry is enormous with several cars winning global awards for best car of the world. Japan is especially interesting because they were the home country of the first and bestselling mass-produced hybrid car (Toyota Prius). This might have an effect on the perception of cars originating from Japan, when evaluating cars in the electrical car segment. Japan is presented in the Dutch automobile market with many brands and manufacturers (i.e. Toyota, Honda, Suzuki, Nissan, Mazda, and Mitsubishi).

Mexico (MEX):

Mexico is chosen as the less developed country (LDC) of America, which will be further discussed in paragraph 3.1.4. Although their automobile industry is less developed than the USA it is still a very huge industry, ranked 6th on the list of production countries of cars (OICA 2011). There are currently no car brands available in the Dutch market that originates from Mexico.

Romania (ROM):

Romania is chosen as the less developed country (LDC) of Europe. There is only one well-known brand originating from Romania, which is Dacia. Romania is ranked 27th on the list of production countries of cars (OICA 2011). Romania is since 2005 presented in the Dutch automobile market by the brand Dacia, which is a subsidiary of the French manufacturer Renault. Dacia sells extremely low-priced cars; therefore it is interesting to investigate whether consumers relate the brand and its country of origin to perceived quality.

China (CHN):

China is chosen as the less developed country (LDC) of Asia. China has taken over the lead in the list of production countries of cars (OICA 2011). However, the cars they are producing are mainly sold in China itself, because the quality is still not good enough to compete with current global car manufacturers. The Chinese government protects their home market, by setting up restrictions for foreign manufacturers to sell cars in China. Chinese manufacturers are planning to operate globally in the near future; therefore it is interesting for them and for the currently available car manufacturers to have an insight of the COO effect on the quality perception, price perception, and purchase intention of cars originating from China.

3.1.2 SEGMENTS

In order to give valuable and new insights of the COO effect on (Dutch) consumers quality perception, price perception, and purchase intention of cars it is important to test the COO effect in different car segments. As already mentioned in chapter 2.2.1., Thanasuta et al. (2009), tested the COO effect separating economy and luxury car segment and found that the effect was larger in the luxury segment. Furthermore, Seidenfuss et al. (2010) found that the home bias was smaller for ASEAN-based consumers of luxury cars than it was for ASEAN-based consumers of non-luxury cars.

This study will research both segments in the Netherlands in order to confirm or disconfirm the findings of earlier studies held in the ASEAN-region. Besides the economy and the luxury segment, it would be very interesting to add the electrical segment because this segment is rapidly growing and will possibly be the most important segment in the future. The selected segments are listed below.

Economy segment:
The economy segment as it is used in this study is defined by the car segmentation used in the Netherlands, provided by Bovag. The segments A and B are described as 'sub-minis' and 'minis' respectively. Examples of cars in the A segment are the Fiat Panda and Ford Ka, examples for the B segment are the Peugeot 207 and Opel Corsa. The A segment and the B segment are both considered as the economy segment in this study and are characterized by being small, fuel efficient and relatively cheap cars ranging from €8.000 to €20.000.

Luxury segment:
The luxury segment as it is used in this study consists of the Bovag segments E & F, which are described as 'luxury medium size' and 'large' respectively. Examples of cars in the E segment are the Volvo V70 and BMW 5-series, examples for the F segment are the Audi A8 and Mercedes S-class. The cars in these segments are considered to be relatively large, luxurious, and expensive cars with prices from €50.000 and over.

Electrical segment:
The most important boundary for this segment is that the car should by driven by electricity or a combination of petrol and electricity (hybrid). In this research the term 'electrical' will be used, including partially electrical driven cars (hybrids) and totally electrical driven cars. The car segment is still very small (only 3,4% of sold cars in 2010), but growing due to governmental subsidies making the car financially attractive. Furthermore, the improving techniques of the electrical and hybrid cars increase the consideration of these alternative cars in relation to the cars driven by diesel or petrol. The cars in this segment can be small, medium, or large, but the study will focus on medium size electrical cars. Examples of cars in the electrical segment are the Toyota Prius and Opel Ampera. These models range from €20.000. to €50.000.

3.1.3 LEVEL OF DEVELOPMENT

In order to give valuable and new insights of the COO effect on (Dutch) consumers quality perception and purchase intention of cars it is important to test the effect in and between countries with different levels of development. Prior research (Srinivasan, Jain, & Sikand, 2004; Chandrasen & Paliwoda, 2009) suggests that consumers from MDCs prefer products originating from MDCs more than products originating from LDCs. It is interesting to test the COO effect between LDCs and MDCs to confirm or disconfirm the findings of prior research, from a Dutch perspective. The two types of countries (LDC & MDC) are divided using the GDP per capita statistics provided by the International Monetary Fund (IMF). The division of countries in LDC or MDC is discussed below.

Less Developed Countries (LDC):
The LDCs in this study are: Mexico, Romania and China. All countries have a relatively low GDP per capita (table 3-2), which is used as an indicator for the level of development.

More Developed Countries (MDC):
The MDCs in this study are: USA, Germany, and Japan. All countries have a relatively high GDP per capita (table 3-2), which is used as an indicator for the level of development.

Table 3-2: GDP per Capita

	Less developed Countries (LDC)			More developed countries (MDC)		
	Mexico	**Romania**	**China**	**USA**	**Germany**	**Japan**
GDP per capita*	10.153	8.862	5.413	48.386	43.741	45.920

*: Based on current prices, in US dollars.
Source: International Monetary Fund (IMF)

The country of origin effect is investigated in 3 segments, for 6 countries, of which 3 LDCs and 3 MDCs. This results in the following figure:

Figure 3-5: Conceptual model with focus on segments, countries, and levels of development.
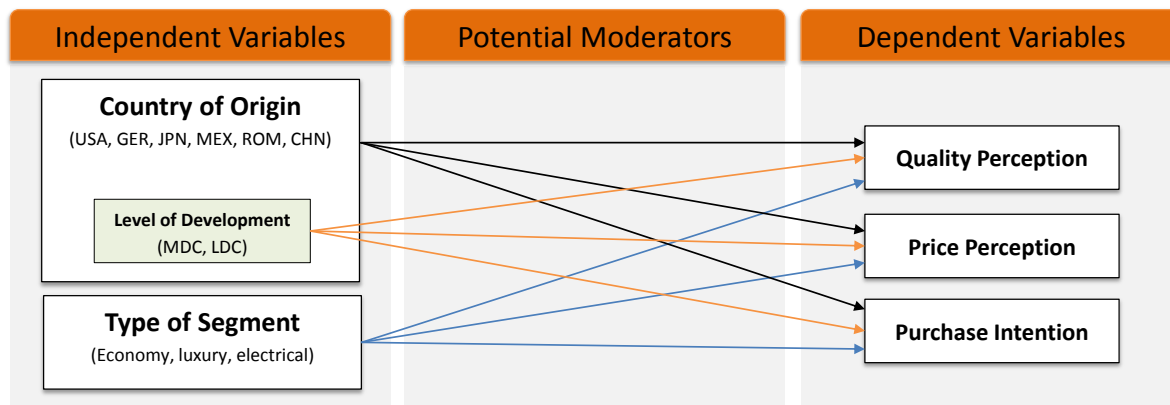
3.2   DEPENDENT VARIABLES

In this paragraph, the dependent variables used in the study are defined, discussed and substantiated.

Quality Perception:
The definition of quality perception as it is used in this study is already discussed in paragraph 2.1.5, following the definition of Steenkamp (1990) and using the term as an evaluative judgment. The overall score of quality perception will be derived by the answers given to the quality indicators. Various ratings, indicators, and dimensions are being used in order to measure perceived quality, for example the ratings of Nagashima (1970), the items of Maynes (1976) and the quality indicators by Dodds, et al. (1991). Han & Terpstra (1988) used the 14 measures from Nagashima in a pre-test on 92 respondents, and conducted a factor analysis to reduce the number of measures to a manageable account, keeping the most influential measures (technical advanceness, prestige, workmanship, and economy). Serviceability and overall quality were added to this list, which resulted in 6 measures that are substantiated on previous literature and statistical evidence. Furthermore, there were found two other scales by Grewal et al.(1998) and Klein et al. (1998) with overlapping dimensions. A combination of the three constructs suited best for this study. The indicators of quality perception used in the research are: techonological advanceness, workmanship, prestige, reliability, design, and overall quality.

Price Perception:
Price perception is less commonly used as a dependent variable in COO research. Following Pecotich & Rosenthal (2001) and Kulwani & Chi (1992) respondents were asked to indicate the maximum amount they would be willing to pay for the car. The second question is asking the respondents how much they think the car will cost. The combination of both questions is used for the measurement of price perception. The graphic rating scale used by previously mentioned authors would have been appropriate for this research as well, however the thesistool did not offer this option. Therefore, an alternative option is used. The questions could be answered with blank boxes where respondents could fill in the amount they would like.

Purchase Intention:
Purchase intention is used many times as a dependent variable in COO research. Although it is quite a speculative term, it is still widely regarded as a meaningful variable. The COO effect on purchase intention is measured by using a scale, written by Grewal, Monroe, & Krishnan (1998). The main items of the scale are: 1) the likelyhood of purchasing the product. 2) The probability of considering buying the product. 3) The probability of buying this model, when buying a car.

The quality perception will be measured by using the ratings of quality indicators. Purchase intention is measured separately based on a proven measurement construct with three items. The basic conceptual model, including the indicators of quality perception, is shown in the following figure:

Figure 3-6: Conceptual model including indicators of quality perception
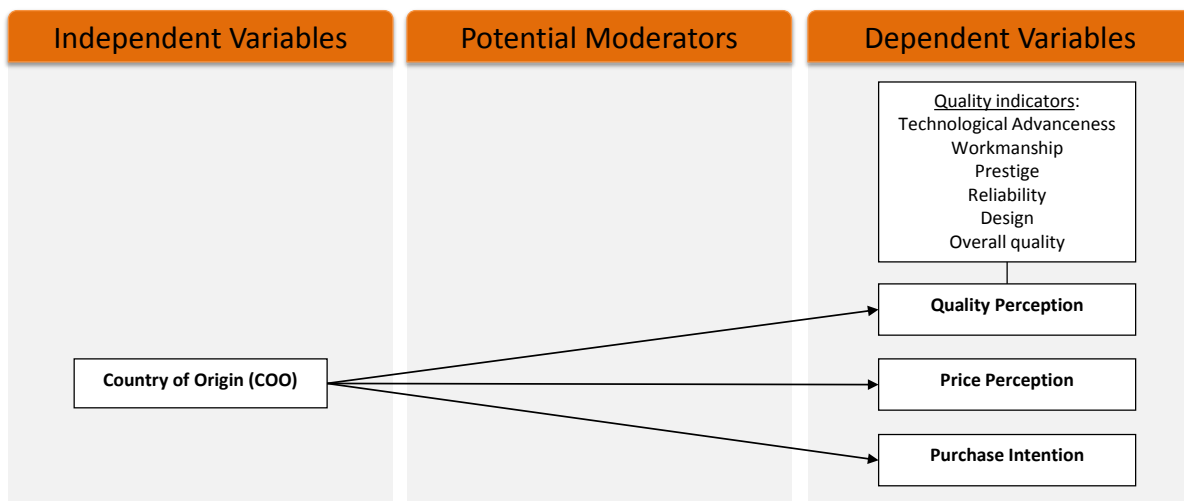
3.3   MODERATORS

The following figure, based on the basic conceptual model, shows visually the potential moderators which could have an influence on the quality perception and purchase intention.

Figure 3-7: Conceptual model with focus on potential moderators.
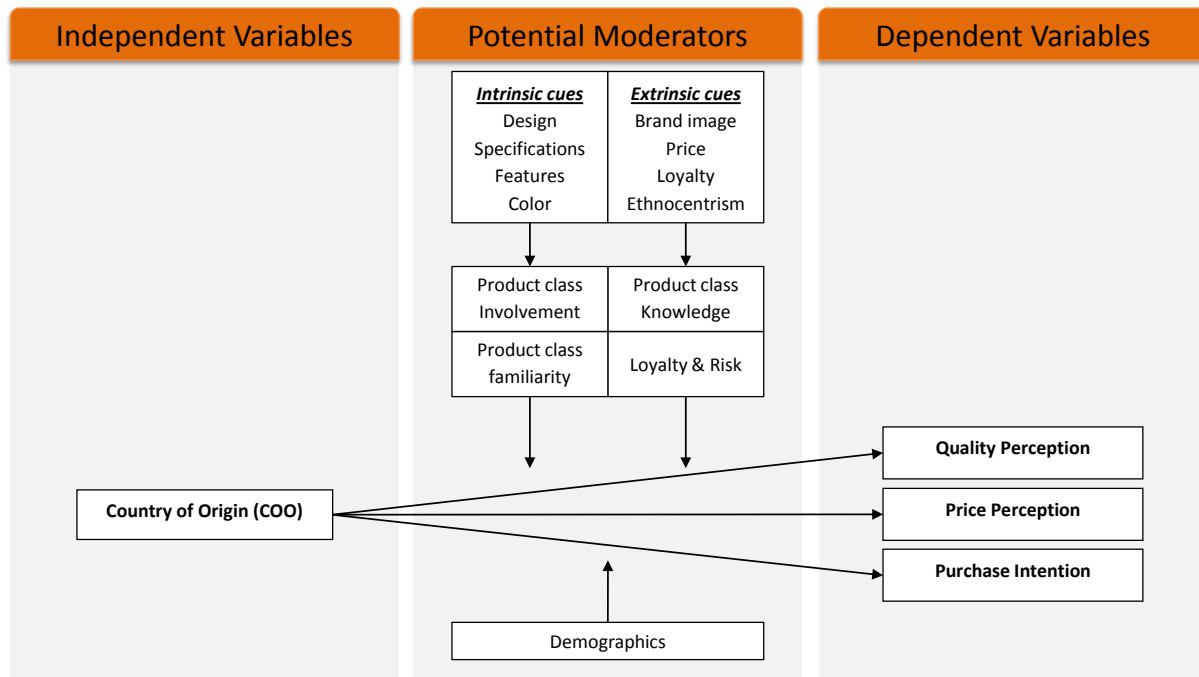
As commonly discussed in prior research, COO is only one extrinsic product cue among many other intrinsic and extrinsic cues that are used for product evaluations (Agrawal & Kamakura, 1999). Between the experimental setting in this research and the 'natural' purchase situation there are some influences that can moderate the effect of COO on quality perception or purchase intention. For example the level of perceived risk and the level of involvement are expected to be much higher in the natural situation than in the experimental situation. These differences are inevitable. However, this research aims to create an experimental setting that is as realistic as possible given the budget and sample size constraints.

The potential moderators 'product class familiarity', 'product class knowledge', and 'product class involvement', are considered. The three variables can have dual influences on the quality perception, price perception, and purchase intention. When a respondent is extremely familiar/ knowledgeable / involved, he or she might valuate the specifications more objectively which lead to smaller COO effects. On the other hand, the respondent might value the importance of the COO more because of his or her high level of familiarity / knowledge / involvement in the product category, which leads to larger COO effects. Because the respondents are randomly ordered, it is assumed that the respondents that show high/low levels of familiarity / knowledge / involvement are equally divided. In order to control this assumption, the variables are taken into account and the outcome between the groups will be tested on their equality. Furthermore, consumer's level of loyalty towards a product from a specific country and his or her level of risk can both influence the effect of COO on quality perception or purchase intention as well. Therefore, these two variables are also taken into account, in order to control for differences between the respondent groups.

Since COO is only one product cue among many others, the other cues are expected to have an influence on quality perception, price perception and purchase intention as well. The cues are divided in to intrinsic and extrinsic cues, and are discussed separately.

Relationship between COO and Quality perception and Price Perception:
Intrinsic cues:
Single cue design studies, in which respondents are presented only with information related to the product's COO, are criticized for their lack of realism (Verlegh & Steenkamp, 1999). Therefore, this study provides the respondents with information about other cues that are related to the product and which might be important for consumer's evaluation. In order to eliminate the influence of intrinsic cues such as design, specifications, and features they are provided to the respondent, however, they are kept constant, while the COO cue was manipulated. In this way, the difference in the outcome between the groups cannot be subscribed to the other cues. Showing the conceptual cars in the same color, will eliminate any color preference influencing the outcome.

Extrinsic cues:
Examples of other extrinsic cues are brand image, ethnocentrism, and price. Prior research that measured COO effects by using a sample of national brands, representing the particular country, had difficulties with subscribing the effect to the COO image or to the brand image and to what degree. Therefore, this study will follow the approach of Srinivasan et al. (2004) and Fetscherin & Toncar (2009;2010) to make no references to any known brand in the experiment and to deminish brand interferences by specifying that the product will be introduced in the market. Ethnocentrism is not likely to occur in the Dutch market, because there is no home brand to consider. Only in the case that the respondent is a dutch consumer with an ethnic origin similar to one of the investigated countries, ethnocentrism can play a role in this research. However, this is assumed to be unlikely. In order to control for this unlikely condition, respondents will be asked about their ehtnic background. Another important moderator of quality perception and purchase intention is the price of the product. In order to control the quality perception and purchase intention for the influence of price, the respondents are told that this price is comparable to the average price of cars in that particular segment.

Relationship between COO and Purchase intention:
The previously mentioned moderators that potentially have an influence on the relationship between COO and quality perception are also present in the relationship between COO and purchase intention. However, in the relationship between COO and purchase intention some moderators are expected to have a stronger influence on purchase intention. Furthermore, it is expected that a few more moderators could potentially affect purchase intention. Examples of moderators that have a (different) influence on purchase intention are: loyalty, price, and risk.

The loyalty of the respondents towards cars from a specific country can be expected to have an influence on the purchase intention. When the respondent is assigned to evaluate the country which he or she is loyal to, it is likely to have a positive influence. When the respondent is assigned to evaluate a different country it is likely to have a negative influence. Therefore, consumer loyalty is taken into account, to control the equality between groups.

Althoug the perceived risk in this experiment is not comparable with the real purchase situation, there can be expected that risk will influence the quality perception less than it would influence purchase intention. The level of risk depends on the respondents characteristics. Because the respondents are randomly assigned to the different groups, the level of risk is not expected to have a significant influence in this research. However, the equality in the level of risk will be checked between groups.

3.4 FINAL CONCEPTUAL MODEL AND SUMMARY OF HYPOTHESES

The combination of the basic model and all the adjustments based on the previously discussed IVs, DVs, (potential) moderators, and the relationships between them are drawn in the following figure, representing the final conceptual model of this research:

Figure 3-8: Final conceptual model
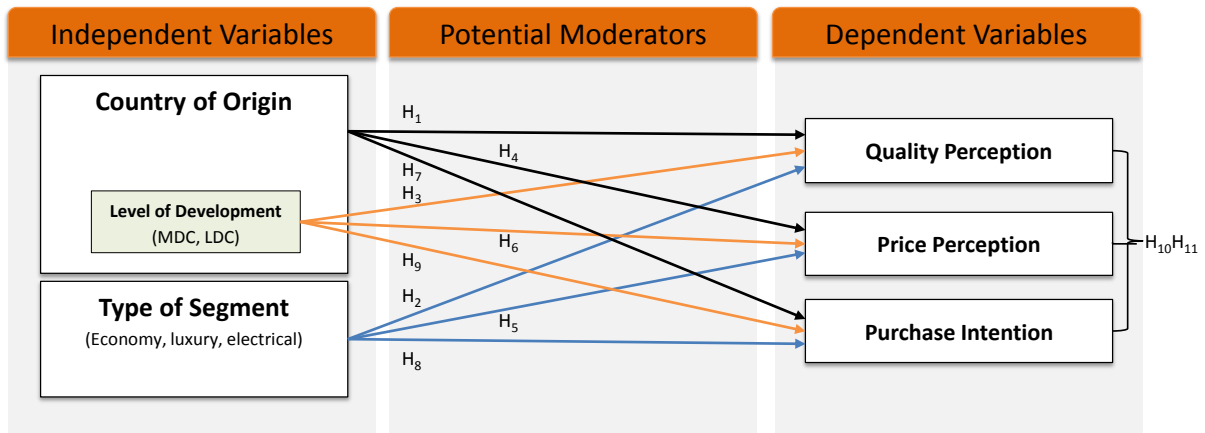
Since the potential moderators are only taken into account to control whether they are equal between groups, they are not included in the final conceptual model. If potential moderators turn out to be unequal between groups and do have a significant influence on the dependent variables, they are included in the analysis.

The overall hypotheses and the hypotheses between different segments, different levels of development, with effect A and effect B are summarized in the following table.

Figure 3-9: Table of Hypotheses

	Table of Hypotheses
H_1	The Country of Origin (COO) has a significant effect on consumers' quality perception of cars.
H_{2A}	The quality perception is higher for more expensive segments, in this research: The overall quality perception is the highest for the luxury segment, the lowest for the economical segment, with the electrical segment in between.
H_{2B}	The COO effect on quality perception is larger in more expensive segments, in this research: The COO effect on quality perception is the largest in the luxury segment, the smallest in the economy segment, with the electrical segment in between.
H_{3A}	The overall quality perception is significantly higher for cars originating from more developed countries (MDC's) than from less developed countries (LDC's).
H_{3B}	The Country of Origin (COO) effect on quality perception is larger for more developed countries (MDC's) than for less developed countries (LDC's).
H_4	The Country of Origin (COO) has a significant effect on consumers' price perception of cars.
H_{5A}	The price perception is higher for more expensive segments, in this research: The overall price perception is the highest for the luxury segment, the lowest for the economical segment, with the electrical segment in between.
H_{5B}	The COO effect on price perception is larger in more expensive segments, in this research: The COO effect on price perception is the largest in the luxury segment, the smallest in the economy segment, with the electrical segment in between.
H_{6A}	The overall price perception is significantly higher for cars originating from more developed countries (MDC's) than for less developed countries (LDC's).
H_{6B}	The Country of Origin (COO) effect on price perception is larger for more developed countries (MDC's) than for less developed countries (LDC's).
H_7	The Country of Origin (COO) has a significant effect on consumers' purchase intention of cars.
H_{8A}	The purchase intention is lower for more expensive segments, in this research: The purchase intention is the highest for the economy segment, the lowest for the luxury segment, with the electrical segment in between.
H_{8B}	The COO effect on purchase intention is larger in more expensive segments, in this research: The Country of Origin (COO) effect on purchase intention is the largest in the luxury segment, the smallest in the economy segment, with the electrical segment in between.
H_{9A}	The purchase intention is significantly higher for cars originating from more developed countries (MDC's) than for less developed countries (LDC's).
H_{9B}	The Country of Origin (COO) effect on purchase intention is larger for more developed countries (MDC's) than for less developed countries (LDC's).
H_{10}	There is a positive relationship between the outcome of the COO effect on quality perception, price perception, and purchase intentions.
H_{11}	The mean effect of COO on quality perception is larger than the mean effect of COO on purchase intention.

4. METHODOLOGY

In this chapter, the methodology is described. The methodology part consists of the research design, experimental design, stimuli, sampling design and procedure, construct measurement, and the questionnaire design.

4.1 RESEARCH DESIGN

According to Kotler & Armstrong (2011) research can be divided in three types, dependent on the objectives of the research. Exploratory research (1) is conducted to collect preliminary information in order to define problems and develop hypotheses. Descriptive research (2) is used to describe a product's market potential, or information related to potential customers such as buying behavior and demographics. Causal research (3) is used to investigate relationships between certain causes and effects. Hypotheses are formed to reject or support the relationship. Although this research has interfaces with all types, the main objective is to investigate the relationship between a products' COO and its effect on consumers' quality perception and purchase intention. Therefore, this research should be classified as a causal research.

There are no secondary data available since the COO effect on cars is never tested from a Dutch perspective; therefore the gathering of primary data is required to estimate the COO effect on cars from a Dutch consumer perspective. Primary data can be collected by observational research, survey research, and experimental research. Observational research collects primary data by observing relevant actions, people, or situations without interference of the researcher. Survey research collects primary data by asking questions about people's preferences, buying behavior etc. Experimental research can be defined as: *"Gathering primary data by selecting groups of subjects, giving them different treatments, controlling related factors, and checking for differences in group responses"* (Kotler & Armstrong, 2011).

Regarding the objectives and the type of this research, the experimental research approach is chosen to collect the data.

4.2 EXPERIMENTAL DESIGN

According to Field & Hole (2003), there a two main types of experimental designs: within-subjects design (or 'repeated measures') and between-subjects design (or 'independent measures'). At within-subjects designs, the respondent is assigned to all conditions of the experiment. Oppositely, when performing an experiment with a between subjects design, each respondent is tested in one condition only. Besides these two main types of experimental designs, there are many mixed (or 'hybrid') forms of experimental designs. The main strengths and weaknesses of between-subjects designs and within-subjects designs are described in the following table:

Table 4-1: Strengths and weaknesses of between-subjects designs and within-subjects designs.

	Between Subject Designs	Within Subject Design
Strenghts	Simplicity; Less chanceof practice and fatique effects; useful when it is impossible to participate in all experimental conditions.	More power or less required respondents; more sensitive to manipulations than between-subjects designs.
Weaknesses	Expense of participant numbers; less sensitive to manipulations than within-subject designs.	Carry-over effects from one condition to another (practice and fatique); Need for reversible conditions; demand artifacts.

Regarding the strenghts and weaknesses of both types of designs, the designs used in prior research (Chao, 1993; Seidenfuss, Kathawala, & Dinnie, 2010), and the variables that are used in this study, a multifactorial mixed design is chosen. Multifactorial because this study will research multiple independent variables. The mixed design is chosen in order to use the strenghts of the between subjects design in combination with a realistic amount of required respondents, by using the within-subjects design for one independent variable.

For this research, a 3 X 6 mixed factorial design is chosen. The variable 'type of segment' of the car which can be economy, luxury, or electrical is specified as a within-subjects factor. The variable country of origin (COO) of the car is specified as a between-subjects variable and consists of a subordinate variable: level of development. The two levels of development are: more developed countries (MDC) and less developed countries (LDC). The country of origin factor consists of six levels, which are: USA, Mexico, Germany, Romania, Japan, or China.

The respondent is assigned to each segment once, ordered randomly. Each respondent is randomly assigned to 1 of the 6 countries of origin, which he or she will get in every segment. After completing the questionnaire, the respondent has been assigned in 3 of the 18 possible conditions (Table 4-2 & figure 4.1).

Table 4-2: Overview of the factors segment and countries

	More Developed Countries (MDC)			Less Developed Countries (LDC)		
	USA (1)	GER(2)	JPN (3)	MEX (4)	ROM (5)	CHN (6)
Economy (A)	A1	A2	A3	A4	A5	A6
Luxury (B)	B1	B2	B3	B4	B5	B6
Electrical (C)	C1	C2	C3	C4	C5	C6

Figure 4-1: Overview of segments and countries which results in 18 conditions.
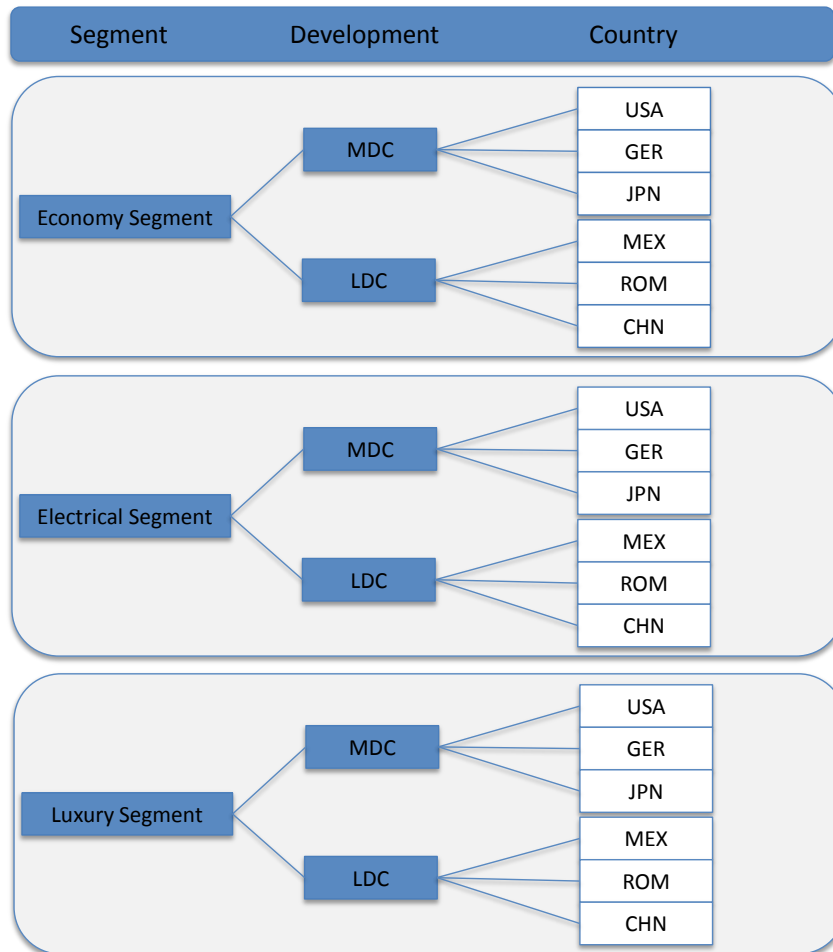
4.3 STIMULI

4.3.1 SEGMENTS

In this study three different car segments have been selected in which the COO effect will be tested. It is interesting to investigate the differences between and within several segments. Besides, it might also increase the generalizability of the results. The segments that are selected include: economy segment, luxury segment, and electrical segment. As already mentioned in chapter 3.1.2, the difference between the economy segment and the luxury segment is investigated before (Thanasuta et al. (2009); Seidenfuss et al. (2010)). The differences between the economy and luxury segment were tested on the level of home-bias and price premiums. This study will measure the difference in quality perception and purchase intention. In addition to the economy – and the luxury segment, the electrical segment is added to the model, because it might be an important segment in the future. These three segments are also selected because the expectation is that there will be a significant difference between them. All segments contain products that are durable and costly, however the average costs of a car in the luxury segment is a lot higher than a relatively cheap car in the economy segment. Therefore, differences in consumers' behavior towards the cars from different segments are expected.

For each segment, a photograph will be shown of a concept car that is coming to the Dutch market shortly. Next to the photographs, some specifications and features are presented that are related to

the car. The selected photographs, specifications, and features should be realistic for the segment for which they are used. Furthermore, the photographs should not show any color or brand images, otherwise brand image can interact, and the research will fail to isolate the COO effect (Fetscherin & Toncar, 2010). Therefore, this study will use three pictures of generic cars that are realistic in the segment they are used. The specifications and features presented are based on existing specifications and features from a an average car in the particular segment. According to Fetscherin & Toncar (2010), it is important to show enough relevant product information, however, do not show to much information to make sure that only the COO effect is measured and nothing else. Furthermore, too much detailed product information can lead to respondents boredom, and might influence the quality of their answers. The specifications and features are corrected for specific terms, that can be recognized by a respondent as being brand-owned systems (i.e. terms like 'tiptronic', which can be recognized as a transmission system used by Audi and VW).

The photographs of the concept car in the economy, luxury, and electrical segment are selected on previously mentioned criteria and are derived by searching the web for pictures of generic cars. Eventually, three generically designed cars that matches the requirements, were found at: www.turbosquid.com.

The specifiactions and features presented in the economy segment are based on the Opel Corsa, a typical car in the economy segment. An example of the presented information for the economy segment can be found in figure 4.2.

Figure 4-2: Example of information provided to the respondent

Economy segment:

CHINESE CAR

Specifications:

Fuel type: **Petrol**
Body style: **Hatchback**
Transmission: **5-speed manual**
Engine: **1229 cc 4 cylinder**
Power: **63 kW / 86 HP**
Weight: **1020 kg**
Fuel consumption: **5,1 L / 100 km**

Features:

• ABS, Cruise control, Traction control
• Front airbags, Side airbags
• Power steering, steering Wheel adjustability
• Airconditioning
• Board computer
• Powered Windows
• Remote control with alarm system
• 16 inch alloy wheels
• AM/FM single CD Audio system

The specifiactions and features presented in the luxury segment are based on the Audi A8, a typical car in the luxury segment. An example of the presented information for the luxury segment can be found in figure 4.3.

Figure 4-3: Example of information provided to the respondent

Luxury Segment:

🔴 JAPANESE CAR
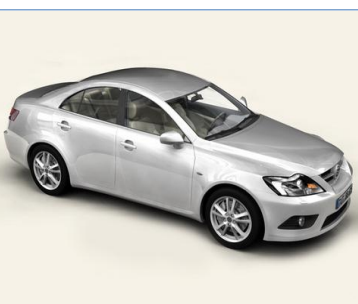
Specifications:

Fuel Type: **Diesel**
Body Style: **Sedan**
Transmission: **7-speed Automatic**
Engine: **3000 cc 6 cylinder**
Power: **184 kW / 250 HP**
Weight: **1720 kg**
Fuel consumption: **6.5 L / 100 km**

Features:

- ABS, Cruise control, Traction control
- Front Airbags, Side-airbags
- Powersteering, steeringwheel adjustability
- Climate control
- Boardcomputer + telephone and bluetooth
- Parkingassistance
- Remote control with alarm system
- Electrically adjustable and heated seats
- Electric mirrors
- 20 inch alloy wheels
- Xenon light + LED lighting
- AM/FM /CD/DVD Multimedia system

The specifiactions and features presented in the electrical segment are based on the Opel Ampera, one of the few mass-produced cars in the electrical segment. An example of the presented information for the electrical segment can be found in figure 4.4.

Figure 4-4: Example of information provided to the respondent

Electrical segment:

GERMAN CAR

Specifications:

Fuel type: **Hybrid**
Body style: **5-door hatchback**
Transmission: **Automatic**
Fuel engine: **1400 cc 4 cilinder**
Electric motor: **permanent magnet generator**
Combined power: **111kW / 150 HP**
Charging time: (230V/16A): **3.5 hours**
Weight: **1735 kg**
Fuel consumption**: 1.2 L / 100 km**

Features:

- ABS, Cruise control, Traction control
- Front Airbag, Side airbags
- Multifuntional steeringwheel
- Airconditioning
- Boardcomputer / navigation / bluetooth
- Remote control + alarmsystem
- Heated Seats
- 17 inch alloy wheels
- AM/FM /CD player
- Parkassist (rear)
- LED lighting

In order to check the (generic) concept cars, the photographs, and the presented specifications and features on their credibility and understandability, a pre-test is conducted. The pre-test is described in chapter (4.6.8) and can be found in appendix A.

4.3.2 COUNTRY OF ORIGIN (COO)

The second variable that is manipulated in this study is the country of origin of the car, with a variety of six countries. The six countries are selected based on their level of development, geography (different continents), importance in the global automobile market, and importance in the Dutch automobile market. The countries can be divided in three continents, with two countries per continent. The two countries per continent consist of a more developed country (MDC) and a less developed country (LDC). The selected countries are USA, Mexico, Germany, Romania, Japan, and China. The clarifications of the selected countries, based on the criteria mentioned above, are discussed in chapter 3.1.1.

The estimation of the COO effect for cars originating from multiple countries is needed not only to confirm or disconfirm the occurrence of the effect in a broader perspective, but also to compare different COO's with each other. Many research has been done (especially in the USA) comparing USA cars with Japanese - or Chinese cars (Srinivasan, Jain, & Sikand, 2004; Fetscherin & Toncar, 2010; Chinen & Sun, 2011). However, most experimental studies do not take into account more than three countries; the studies that did compare more than three countries are usually based on secondary data provided by databases. Since the COO effect on cars is never tested from a Dutch consumer perspective before, suitable data for this study was unavailable. Prior research findings, limitations and arguments were reviewed in order to choose a suitable experimental design for this study. The main argument against the elderly studies on COO is that the only information provided to the respondents was the COO, while COO is just one cue among many product cues. In order to find suitable research designs for this study, several designs used in prior research are compared. They have to meet at least some of the following criteria:

1) The research design is used to measure the COO effect on consumers' product evaluation.
2) The research uses primary data by conducting an experiment.
3) The research design includes more information than only the COO.
4) The research investigates multiple COO.

There were a few researchers who used a design which met the criteria. These designs are listed in the table below:

Table 4-3: Prior research with similar designs

Relationship tested	Used experimental design	Information provided	Author
COO on Brand Personality perception	2x2 factorial design between subjects	Photographs, features, and COO	(Fetscherin & Toncar, 2010)
COA and COC on perceived quality / image	3x2x2x2 Factorial design, between and within subjects	Multiple cues	(Seidenfuss, Kathawala, & Dinnie, 2010)
COO on consumer attitude	2x3x3x3 factorial design between subjects	Only Intrinsic product cues	(Srinivasan, Jain, & Sikand, 2004)
Price, design location, and manufacturing location on consumer evaluations	2x3x3 between and within subject design.	Photographs + features of a TV.	(Chao, 1993)

The experimental design of this research is based on studies by Chao (1993), Fetscherin & Toncar (2010), and Seidenfuss, Kathawala, & Dinnie (2010). Chao (1993) used a 2 x 3 x 3 mixed design to test COO effects on product evaluations of TVs. Seidenfuss, Kathawala, & Dinnie (2010) also used a mixed factorial design with 3 x 2 x 2 x 2 conditions. The factors COA and COC were specified as between subjects-design and the factors warranty level and model (luxury / non-luxury) were specified as within-subjects design. The research by Fetscherin & Toncar (2010) used a questionnaire providing information of a car to the respondents, changing the COO. They meausured the relationship between COO and brand personality perception, while this study will focus on the COO effect on consumers' quality perception, price perception, and purchase intention. Furthermore, they did not test the COO in different segments. However, parts of their research design have been an inspiration for this study.

Within each segment, the given information to the respondent is identical, except for the country of origin of the car which is communicated by an image of the country's flag, and the phrase: '{country} car '. It is stated in the middle, on top of the presented information (Figure 4-2, 4-3, and 4-4). In prior research by Fetscherin & Toncar (2010) the product information was titled with a huge heading ('Chinese car'), communicating the country of origin of the car. In order to communicate the COO of the car properly, this study follows the approach of Fetscherin & Toncar (2010) with the small complement of the flag-image. The type of segment is stated in the left corner above the COO communication, however a bit smaller than the COO communication.

The six possible countries of origin are randomly assigned to the respondent, as already mentioned, within each segment, the only changing aspect of the information provided to the respondent is the COO. An example of the COO manipulation within a segment is shown in the following figure:

Figure 4-5: Manipulation of the COO
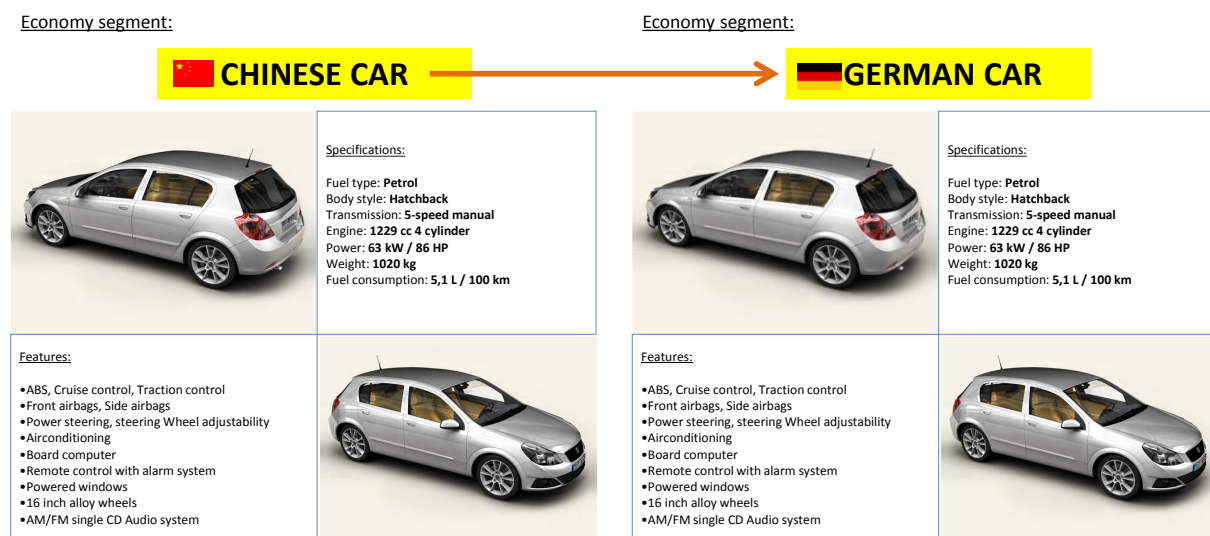
The effect of the manipulations will be checked by the performance of a pre-test.

4.3.3 EXPERIMENTAL PRODUCT

The experimental products in this research are: economy car, luxury car, electrical car. Cars are chosen as the experimental object because the importance of (product/ country) image for this product class is the highest among several other product classes, such as watches, bicycles, leather

shoes, crystal, and beers (Roth & Romeo, 1992). Furthermore, the automobile industry is an important factor in the global economy and is especially interesting due to the new entrants from less developed countries such as China and India. Within the product class, there is expected to be a difference in the COO effect between cars in different segments. This research will estimate the COO effect for the economy segment, the luxury segment, and the electrical segment. The chosen segments are discussed in paragraph 3.1.2.

In the questionnaire, the cars are shown by providing the respondent with two pictures of the car and some specifications and features. No brands or characteristics that could be linked to specific brands are shown, to eliminate brand effects. The experimental product should be familiar to all respondents, regardless the level of product knowledge. Even respondents with a low level of product knowledge or involvement should be able to understand at least some parts of the provided information.

4.4 CONSIDERATIONS

There are some limitations to the mixed design that is chosen. For instance, the between subject design with six conditions is difficult to combine with other factors because the number of conditions is multiplied by six. Having many conditions is not preferred because of the time and budget constraints of this research. Therefore, the factor segment is incorporated as a repeated measures design, in order to keep reasonable amounts of required respondents. The downside of the repeated measures variable is that respondents are assigned to more than one segment, which is less realistic and could lead to practice effects influencing the second and third car evaluation. However, the ordering of the segment should lead to equally divided practice effects.

Furthermore, because the number of conditions is limited, this research will not investigate the COO effect between different continents. The amount of countries for each continent (2) is considered too small to draw useful conclusions about the differences between continents. If having many conditions was not a restriction, it would be nice to investigate differences in the COO effect on branded versus non-branded cars. The previously mentioned considerations of the research – and experimental design are further discussed in chapter 8.3.

4.5 SAMPLING DESIGN AND PROCEDURE

Regarding the nature and the aim of this experimental research, a questionnaire is chosen to execute the research. According to Kotler & Armstrong (2011) there are several ways to collect questionnaire respondents, including: telephone, email, personal, and online. The choice of collecting method depends on seven factors: flexibility, quantity of data that can be collected, control of interviewer effects, control of sample, speed of data collection, response rate, and costs. This study uses the online questionnaire method to collect the data. The most important factors influencing this decision are costs and speed of data collection, which are both rated 'excellent' for the online contact method. The questionnaire is hosted by Thesistools, mainly because they offer the best services and possibilities for randomization without charging any costs unlike some other online tools (i.e. surveymonkey and qualtrics).

Since this study aims to measure the COO effect of cars on Dutch consumers, it is important that the respondents are familiar with the product, to some degree planning to buy the product in the future, and have the Dutch nationality, to be a 'Dutch' consumer. The following criteria are used:

Familiarity:
The first criterion is that the consumer should be somewhat familiar with passenger cars, if they are 'not familiar at all' it would be useless to ask their opinion.

Residency:
The second requirement is that the respondent is living and consuming in the Netherlands. This is important because the research aims to measure the COO effect on automobiles from a Dutch consumer perspective. To simplify this definition of being a Dutch consumer, only respondents with the Dutch nationality are taken in to account.

Willingness to buy a car in the future:
The respondent should have the intention to some degree to buy a car in the future. If they respond never going to buy a car, it would be useless to ask their opinion.

The gender of the respondent is actually not a criterion itself; however the division between male and female respondents is important to have a representative sample for the Dutch consumer market. Since most cars are bought by males (CBS, 2012), it is appropriate to have more male respondents than female respondents.

The distribution of the questionnaire will be done by using non-probability sampling methods (i.e. convenience sampling), sending the link to the authors' family, friends, and colleagues by email and trough social media (i.e. facebook and linkedin). In the questionnaire they will be thanked for their participation and will be encouraged to forward the link to as much consumers as they can. As long as the respondents meet the previously mentioned criteria, they are more than welcome to participate in the research. The minimum amount of subjects in prior research that used similar designs ranged from 20 (Chao, 1993) to 40 (Piron, 2000) subjects per cell, which results in a minimum required number of 120 to 240 valid respondents. The aim of this research is to find 240 valid respondents.

4.6 CONSTRUCT MEASUREMENT

In this chapter, the construct measurements are explained. In order to estimate the outcomes of the different variables, an online questionnaire is designed to perform the experiment. In the questionnaire, proven measurements scales are used to ensure validity and reliability of the constructs. The following construct measurements are described: segments, country of origin, quality perception, price perception, purchase intention, manipulation checks, and control variables. At last, the pre-test is shortly discussed.

4.6.1 SEGMENTS

The first variable is the independent variable 'segments', which is a dummy variable. It can only be one of the three values (because there are three segments) and will be randomly ordered for each respondent. Important is the restriction that each respondent is assigned to every segment once, not more, not less. Less than once would mean that there are data missing, more than once would mean that a respondent was assigned to answer the questions for two concept cars of the same segment, in which he or she would find out what is manipulated in this research.

In order to test whether the randomization and the requirement of the 'segment' value is properly programmed in the thesis tool, it is pre-tested on X respondents.

4.6.2 COUNTRY OF ORIGIN:

The second variable is the independent variable 'country of origin', which is also a dummy variable. It can only be one of the six possible values, since this research will test the COO effect for cars originating from six different countries. Within each segment, one of the six countries should be randomly assigned to the respondent. In order to test whether the randomization of the country of origin- value is properly programmed in the thesis tool, it is pre-tested on X respondents.

Furthermore, the content of the given information should be clear and understandable. Besides, the manipulation should work out like it is intended. A question in the pre-test is included to test whether the manipulation has worked, and if the respondent has noticed the country of origin of the car. In the final questionnaire a question will also be included to control whether the origin of the car was noticed. People who cannot recall the COO of the car will be excluded from the analysis.

4.6.3 QUALITY PERCEPTION:

The third variable is the dependent variable 'quality perception'. In order to measure the COO effect on consumers' quality perception, a multidimensional construct is used. The construct is already discussed in chapter 3.2 and was designed by Han & Terpstra (1988), who derived it by conducting a factor analysis of the 14 dimensions used by Nagashima (1970). The dimensions are quite similar to that of Klein, Ettenson, & Morris (1998) only the dimension related to design and color not comparable to the dimensions of Han & Terpstra (1988). Furthermore, the scale is comparable to the one used by Grewal et al. (1998) who reported an a-value of 0.91. Klein, Ettenson, & Morris (1998), reported the construct reliabilty of the scale to be 0.73. Although there is not a single scale that is well-suited for this research, a combination of previously mentioned scales, all proven and widely used, is made. The dimensions are: workmanship, technological advanceness, prestige, reliability, design and overall quality. The dimensions are asked in 6 questions with a 7-point likert scale response format ranging from strongly disagree (1) to strongly agree (7).

4.6.4 PRICE PERCEPTION:

The fourth variable is the dependent variable 'price perception'. For the measurement of price perception constructs used by Kulwani & Chi (1992) and Pecotich & Rosenthal (2001) are adjusted for this research. The first question asked respondents how much the car would cost, the second question is related to the maximum amount respondents were willing to pay for the car. Pecotich & Rosenthal (2001) used a graphic rating scale as respons format, which was not an available option in thesistools. One of the benefits of this method is that there can be a large range and at the same time respondents can give precise answers which is useful when the differences are small. In order to keep both benefits, the alternative was to leave an open text box where the respondent could fill in the amount which represents their answer the best.

4.6.5 PURCHASE INTENTION:

The fifth variable is the dependent variable 'purchase intention''. In order to measure the COO effect on consumers' purchase intention, a construct measurement scale by Grewal, Monroe, & Krishnan (1998) is used. The scale consists of three questions with a 7-point likert scale response format ranging from very low (1) to very high (7). The first question is related to the likelyhood of purchasing the product. The second question is related to the probability of considering to buy buy the product. The third question is related to the probability of buying this model, when buying that kind of

product. The last question is especially well-suited for this research, because it is suggesting that the responder is going to buy this sort of product anyway. The scale is proven to be reliable (a=0.92).

4.6.6 MANIPULATION CHECKS

In order to control whether the manipulation of the segments and the countries of origin have worked like they were intended to work, two questions are included after each part of the questionnaire.

The questions are aimed to measure if the respondent has noticed the manipulation.

The car that was shown, could be subscribed to the following segment…

- *Economy*
- *Luxury*
- *Electrical*
- *Don't know*

The car thas was shown, originated from the following country…

- *USA*
- *Mexico*
- *Germany*
- *Romania*
- *Japan*
- *China*
- *Don't know*

4.6.7 CONTROL VARIABLES

In this research, no 'blanco' car was introduced to function as the control group. With a 3 x 6 design there are already 18 different cells that should be answered by 20 to 40 respondents, resulting in 360 to 720 responses. However, the respondents are assigned to 3 of the 18 conditions, resulting in a minimum of 120 to 240 respondents. Adding a control group would increase the number of required respondents substantively or would lower the statistical power of the experiment. Therefore, no control group is added to the research. In order to control for other factors influencing the DVs, the following steps are undertaken.

First, the experimental- and questionnaire design is created in a way that most potentially undesired influencers are eliminated. The information provided is different for the three segments, based on existing car specifications and features. However, the car cannot be recognized by the respondent because the pictures are of generic cars, and the specifications and features cannot be linked to any known car or car brand. Therefore, brand effects cannot have an undesired influence in this experiment. Within each segment, the provided information is identical to all groups, except the country of origin of the car. Therefore, differences in the evaluation of the respondents cannot be subscribed to intrinsic cues such as design, specifications, and features. Other extrinsic cues like ethnocentrism can be assumed to have no significant influence on the respondents' evaluations either, based on the motivation described in chapter 3.3.

Second, the respondents are randomly assigned to each group, therefore it can be expected that the level of respondents'- familiarity, knowledge, involvement, loyalty and risk are comparable in each group. To be sure, the levels of respondent's characteristics are measured by the control questions, and are tested if they significantly differ. If the values differ between the groups, they will be included in the data as covariates. The level of product class involvement is measured based on a measurement scale used by Flynn, Goldsmith, & Eastman (1996), which consists of two questions with a 5 point response format. The scale has proven to be reliable with an alpha of 0.93. The level of product class knowledge is measured based on a measurement scale provided by Mukherjee & Hoyer (2001), with two 5 point response items ranging from 'not at all knowledgeable' to 'very knowledgeable'. The scale reported an alpha of 0.80. The level of risk is measured using a scale based on Shimp & Bearden (1982), which contains two 7-point respons items that have proven to be reliable with alpha's between 0.86 and 0.75. The level of respondents' loyalty is tested using an adjusted version of two questions from the measurement scale provided by Shim & Gehrt (1996), and complemented with a question used by Pappu & Quester (2010), who tested country loyalty with a similar construct as brand loyalty. The three questions are measured with 5-point respons format, achored by the terms 'strongly disagree' and 'strongly agree'.

Furthermore, some subject (extraneous) variables are included which are related to the demographics of the respondent. At the end of the questionnaire the respondent will be asked to answer questions about residency, ethnic background, gender, age, income, and education. In order to discover the ethnic background of the respondent, a question is included that asks whether their parents or grandparents have one of the nationalities similar to the ones used in the experiment. Next to the subject variables, the other extraneous variables like 'experimental variables' and 'situational variables' are assumed to have no influence on the research because there is no personal contact between the experimenter and the respondent, and the respondent will fill in the questionnaire whenever he or she wants to.

4.6.8 PRE-TEST

The pre-test is aimed to control the content of the questionnaire and whether the randomization and order of the different sections of the questionnaire are being properly assigned to respondents by the thesis tool. The content of the questionnaire should be clear, understandable and realistic. The content of the provided information (pictures, specifications, and features of the cars) should be perceived as realistic, credible, and to some degree understandable even for respondents who have a low level of product class knowledge or familiarity. Furthermore, the manipulations are checked if they are working like they are intended. The pre-test is performed by interviewing and observing 12 people during the online questionnaire, of which mostly family and friends. Furthermore, in order to obtain as much information and comments as possible a soft launch is done. Almost 30 people filled in the soft launch, providing information about the control questions, the manipulation checks, understandability, duration, etc. An example of the pre-test / soft launch can be found in appendix A.

After the pre-test and the soft launch, some questions are slightly corrected. The control questions are replaced and the answering format for the questions measuring price perception is changed. Furthermore, the communication of the country and the segment is reversed. In order to emphasize the country label, the country's flag was added to the communication.

4.7   QUESTIONNAIRE DESIGN

The questionnaire starts with an introduction providing the respondent with some general information about the questionnaire, the structure of the questionnaire, and clarifying that the answers will be treated anonymously and confidentially. After the introduction, the respondent is asked to answer a few questions related to their nationality, residency, car ownership, who paid for the car, if the respondent was planning to buy a car, and their level of product class familiarity.

Afterwards, the respondent is randomly assigned to one of the three segments and its corresponding treatment. The treatment contains the appearance of two pictures, some specifications, and some features of a car that is coming to the Dutch market. The country of origin of the car (which can be USA, GER, JPN, MEX, ROM, or CHN) is one element of the provided information. When the respondent has viewed the provided information, he/she is asked to answer questions related to the respondents' quality perception, price perception, and purchase intention of the car that was shown. The first section ends with two questions related to the manipulation check of the shown segment and the country of origin of the car.

After completing one segment, the respondent will be assigned to one of the other segments and its corresponding treatment. Again, the treatment consists of two pictures, some specifications, and some features of a car that is coming to the Dutch market. Only this time the information provided is about a different car, corresponding to a different segment, with different pictures, specifications, and features. The country of origin of this car is the same as in the first segment, which can be one of the six countries under investigation. After viewing the information of the new car, respondents are asked to answer questions related to their quality perception, price perception, and purchase intention. The second section ends with two questions to check if the manipulations have worked.

After completing section two, the respondent moves on to the last segment and its corresponding treatment. Again, the provided information is about a different car that is coming to the Dutch market. The country of origin of the car is similar to the previous segments and can be one of the six countries under investigation. The respondents are asked to evaluate the car by answering the questions related to the quality perception, price perception, and purchase intention. The third section ends with the two questions related to the manipulation checks.

After completing the three sections, the respondent has answered questions about 3 different cars, from different segments. The country of origin is randomly assigned to each respondent and will be the same for each car that the respondent is evaluating. Next, some control variables are asked related to the respondent's level of knowledge, involvement, risk, and loyalty. These questions are included to control whether the levels are equal between the different respondent groups.

The last questions are about the respondent's residency, ethnic background, gender, age, income, and education in order to control for demographic differences between the respondent groups. The last page is used to thank the respondent for his/her time and effort and to encourage the respondent to forward the link of the questionnaire to family and friends.

The following figure shows the structure of the questionnaire, with the different sections. The total questionnaire can be found in appendix A.

Figure 4-6: Flow chart
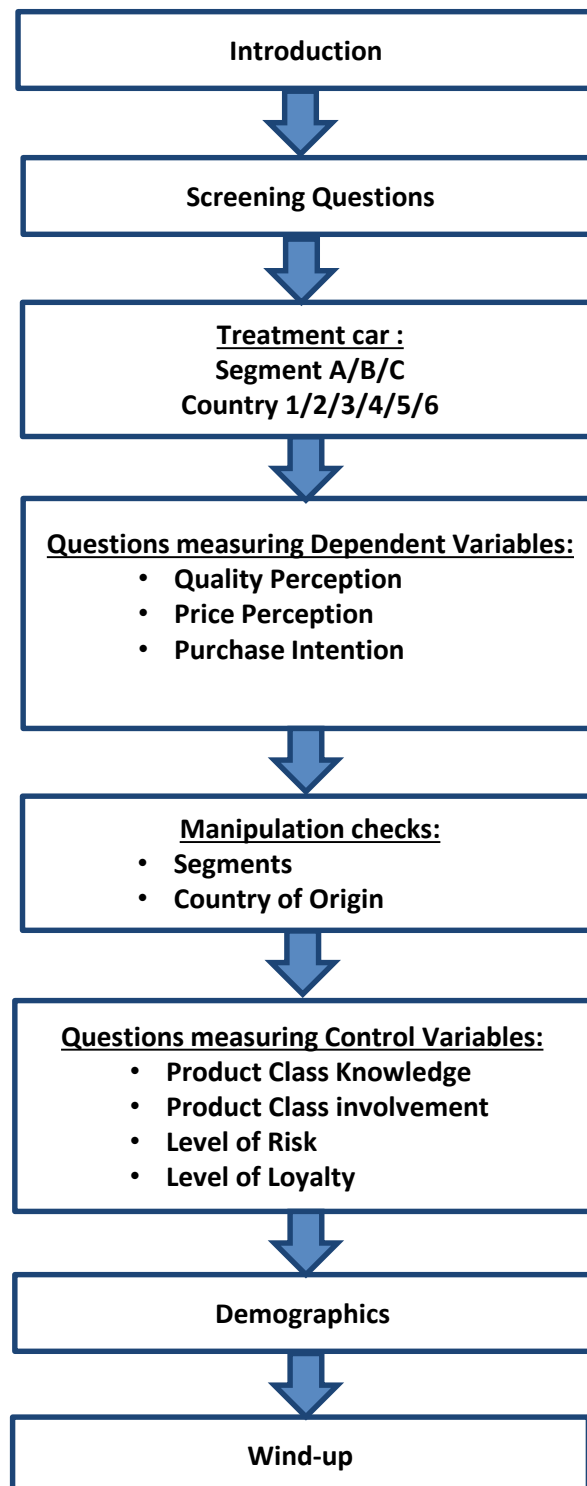
5. DATA

This chapter describes the first step in data analysis. It contains data cleaning, demographics, descriptive statistics, validity and reliability of measurement constructs, manipulation checks, and control variables.

5.1 DATA CLEANING

The data are obtained by an online questionnaire during the period of 20-3-2013 until 27-3-2013. After a short and intensive data collection period, a total of 383 respondents were willing to fill in the questionnaire. Some people did not complete the questionnaire, others had missing values; these people are deleted from the dataset.

Furthermore, not all the people met the screening questions. 26 respondents appeared to have another nationality than Dutch; because this study will focus on Dutch consumers, respondents with other nationalities are not taken into account. Only 6 respondents filled in to be 'not familiar at all' according to the product category passenger cars. Another 3 people responded that they 'will never going to buy a car'. Since it will not be useful to take into account opinions of people who are never going to buy a car or responded that they are not familiar with cars at all, these are deleted as well.

The manipulation of the country and the segments worked out well. However, in approximately 10% percent of the cases the respondent filled in the wrong answer or admitted that they did not know which country or which segment they evaluated. These cases are deleted from the list. This percentage of failures was expected because the soft launch and the pre-test of this questionnaire showed a similar percentage.

The most failures in the country manipulation were related to cars from China and Japan and vice versa. Germany was the country with the lowest amount of failures. In the segment manipulation, most wrong answers are given to the electrical and luxury segment. There are several reasons possible why people did not perceive the manipulation as intended. It might be that some respondents did not see the segment or country sign because they were focused on the pictures of the car. Another reason can be that the consumer saw the signs but thought the shown car was originating from another country and did not believed the manipulation. In other cases, the respondent might not have filled in the questionnaire with enough attention. It is not quite sure what the exact reason is that some respondents did not perceive the manipulation as it was intended. However, it is only a small amount of the total number of observations.

The aim of the number of evaluations was set at 40 in each cell, with 240 useful respondents in total. In order to get this amount of useful observations, the goal was to find approximately 350 respondents. After deleting the incomplete questionnaires, missing values, the respondents that did not meet the screening questions, and the respondents that did not perceive the manipulation as intended, the following number of evaluations are obtained for each cell (Table 5-1: Total number of valid respondents in each cell. The number of 40 evaluations per cell is almost reached, only Germany and Romania are just below that amount. The country was subscribed randomly to the

respondents which also led to a difference of respondent numbers between the cells. In total 272 of the 383 respondents are validated and used for further analysis.

Table 5-1: Total number of valid respondents in each cell

	USA (1)	GER (2)	JPN (3)	MEX (4)	ROM (5)	CHN (6)
Economy (A)	58	38	42	43	39	54
Luxury (B)	58	38	42	43	39	54
Electrical (C)	58	38	42	43	39	54

5.2 DEMOGRAPHICS

The last part of the questionnaire contained questions about the demographic characteristics of the respondents. The first question of this part was whether the respondent had parents or grandparents with a similar nationality as of one the countries in the questionnaire (USA, GER, JPN, MEX, ROM, and CHN). The following questions were related to gender, age, income, and education.

The question about the nationality of parents or grandparents is used to be able to control for the ethnic background of the respondent. The people that responded positively to this question are tested against the other group of respondents. No significant differences were found in the outcome between both groups. Therefore, the respondents with one of these ethnical backgrounds are not deleted or taken apart from the dataset.

As expected, almost 68.44 percent of the respondents were males, against 31.56 percent females. Although this is a substantive difference, it is not expected to be an unrealistic sample since CBS statistics show that in the Netherlands, most cars are bought by males (CBS, 2012).

The age distribution of the sample is less skewed than expected. A student sample was expected, however only 28 percent of the respondents are in the category 18-24 years old. Most people are in the category 25-34 years old and a third large amount of respondents are in the 45-59 years old group.

The income distribution is quite equally divided over the groups ranging from <1.000 euros net monthly income (17.9%) to >5.000 euros net monthly income (12.0%). There was also a group that did not want to respond to this question (11%).

The level of education in this sample is high; almost 50 percent responded to have finished a university master. The second largest group was of people that finished a university bachelor (21.31%). Others have finished HBO (17.21%), MBO (4.51%) or only primary school (0.41%).

The demographic variables are summarized in the following table.

Table 5-2: Demographics

	Description	Frequency	Percentage
Ethnic Background	American	5	1.8%
	German	20	7.3%
	Japanese	3	1.1%
	Mexican	1	0.4%
	Romanian	0	0.0%
	Chinese	2	0.7%
	None of these	246	89.8%

Gender	Male	185	67.5%
	Female	89	32.5%
Age	0-17 years	0	0%
	18 – 24 years	73	26.6%
	25 – 34 years	93	33.9%
	35 – 44 years	19	6.9%
	45 – 59 years	59	21.5%
	60 – 74 years	29	10.6%
	75 years or older	1	0.4%
Income	< 1000	49	17.9%
	1001-2000	54	19.7%
	2001-3000	68	24.8%
	3001-4000	33	12.0%
	4001-5000	8	2.9%
	> 5000	33	12.0%
	Don't want to tell	28	10.2%
Education	Primary school	1	0.4%
	Secondary school	16	5.8%
	MBO	11	4.0%
	HBO	44	16.1%
	University bachelor	59	21.5%
	University master	140	51.1%
	Other	3	1.1%

5.3 DESCRIPTIVE STATISTICS

The descriptive statistics can give a first insight in the data. For example, in table 5-3 can be found that the mean scores of quality perception and price perception are increasing when moving from the economy to the luxury segment, while purchase intention is decreasing.

Next to the first insights, the descriptive statistics can be important to check the data on normality. First, a table is presented with the descriptive statistics of the most important variables used in this research. Afterwards, the normality of the data is shown using histograms and Q-Q plots.

Table 5-3: Descriptive statistics

			Mean	Std. Deviation	Variance
Dependent:	QPTOTAL:		4.3726	.81494	.664
		QPECO	3.8444	1.00311	1.006
		QPELEC	4.4884	.94928	.901
		QPLUX	4.7849	.95308	.908
	PPTOTAL:		26242	7561	57162857
		PPECO	16072	5568	31007494
		PPELEC	27715	9891	97837984
		PPLUX	35004	12437	154680053
	PITOTAL:		2.5654	1.07315	1.152
		PIECO	2.7672	1.50375	2.261
		PIELEC	2.5907	1.35255	1.829
		PILUX	2.3419	1.32884	1.766
Control:	Inv12		3.6415	1.59601	2.547
	Know12		2.8732	1.02797	1.057
	Risk12		3.8493	1.23647	1.529
	Loy123		2.8370	1.00265	1.005

In order to check the data on normality, histograms and Q-Q plots, and normality tests are used. The following figure shows the histograms and Q-Q plots for the dependent variables.

Figure 5-1: Normality histograms & Q-Q plots for dependent variables
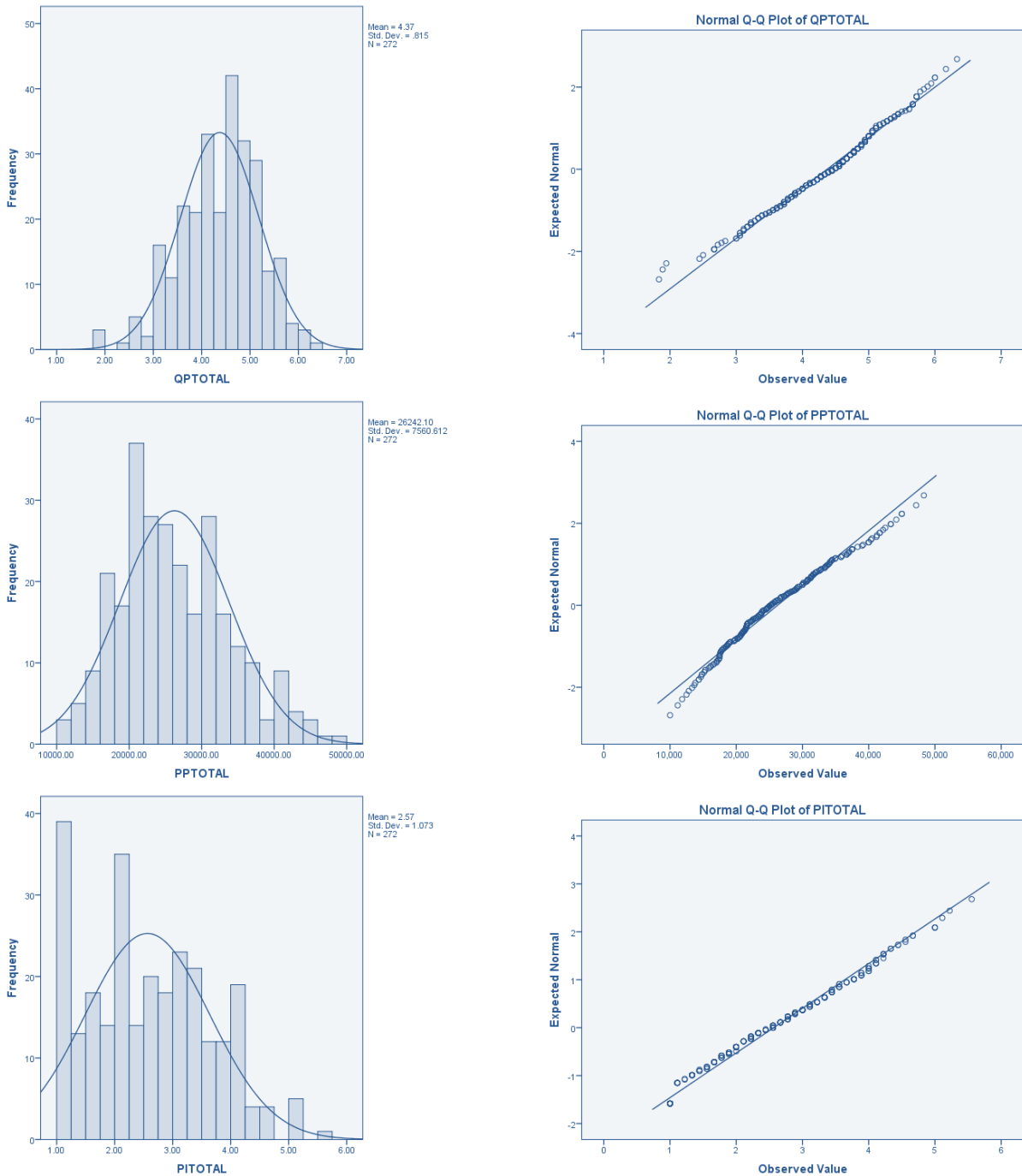
The dependent variable purchase intention is positively skewed, with a high frequency of low valuations. This might be explained by the respondent group, with many people who do not want to buy a car anyway, or do not have the money to buy a car at the moment. In the following paragraph, the assumption of normally distributed data will be further discussed.

The following figure shows the histograms and Q-Q plots for the dependent variables.

Figure 5-2: Normality histograms & Q-Q plots for control variables
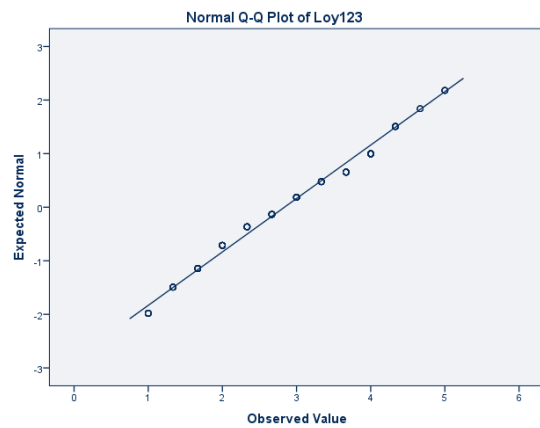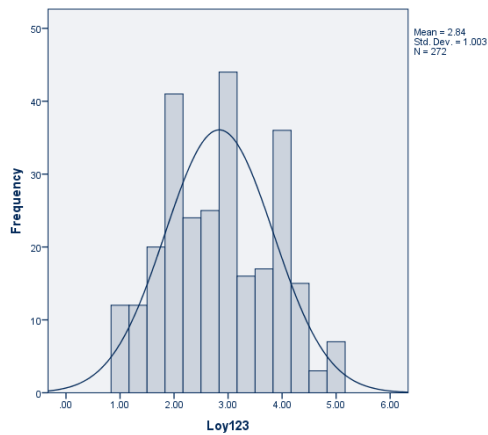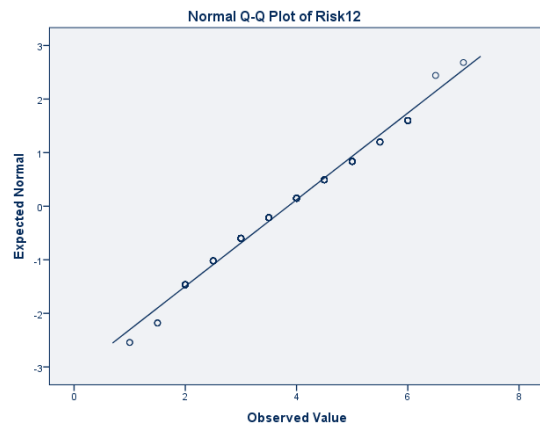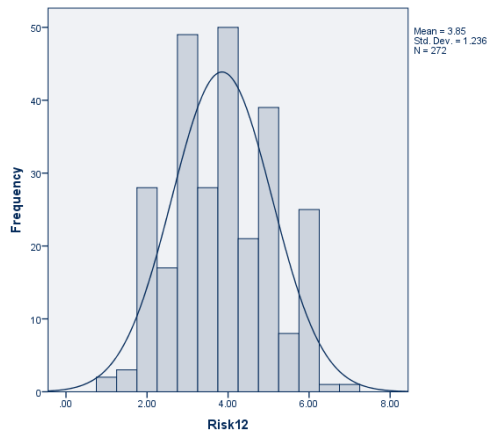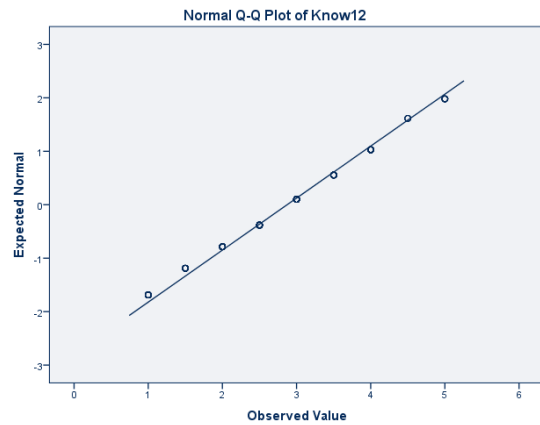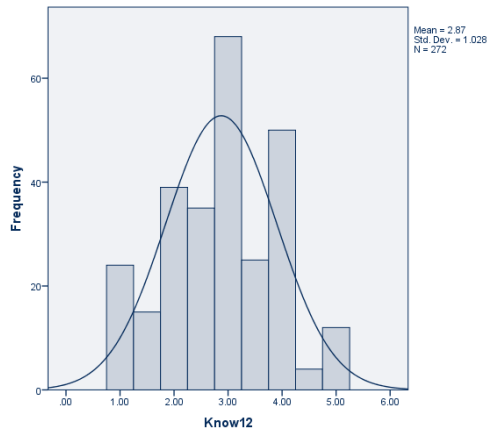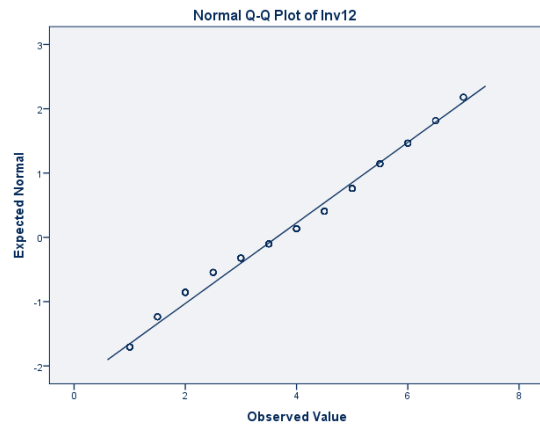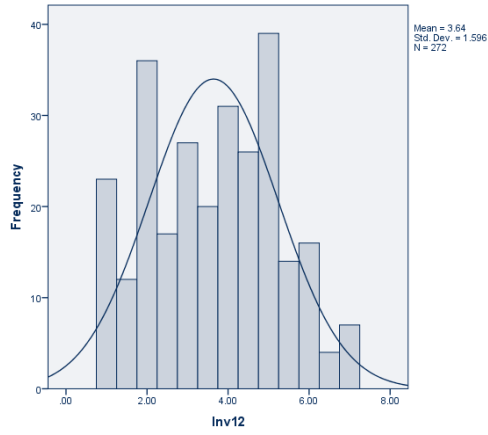
5.4 ASSUMPTIONS OF PARAMETRIC DATA

Before starting the analyses of the data, it has to be checked whether the assumptions for parametric tests are met. According to Field (2005) there are 4 main assumptions that need to be fulfilled before parametric tests can be performed. The four assumptions are shortly discussed separately and will return before each test is performed. Furthermore, for some tests, such as repeated measures Anova, the assumption of sphericity is also important. This 5th assumption is shortly discussed as well.

Normally distributed data:
The first assumption for parametric tests is that the data are from a normally distributed population. It is difficult to test the population, therefore researchers base their assumption on the distribution of the sample. In order to test whether the sample is normally distributed, several methods can be used. Histograms, Q-Q plots, and tests of normality can be performed to make a well informed decision about the assumption.

In this research the normality tests of Kolmogorov-Smirnov and Shapiro-Wilk are in some cases significant (<.05) which indicated that the distribution differs from a normal distribution. However, according to Field (2005), these methods have their limitations, because with larger sample sizes it is easy to get significant results for only small deviations from normality. The interpretations of the histograms and Q-Q plots are discussionable as well, which usually leads to the assumption of normality for the purpose of the research. To avoid arguments about this discussion some tests are analyzed and reported using both parametric and non-parametric tests. If the outcome of the tests are different, which is not expected, this research will assume the distribution of the population is normal.

Homogeneity of variance:
The second assumption for parametric tests is that the variance between different groups of interest should be equal. The homogeneity of variance can be measured using the Levene's test. When the scores of the test are <.05 it indicates that the variances are not equal between the groups.

In this research, in some cases the Levene's test shows significant results. This can be solved using different tests that control for the inequality of variances, e.g. the Welch Anova.

Interval data:
The third assumption for parametric tests is that the data should be measured at least at the interval level. For the dependent variables in this research, the assumption of interval level data is met.

Independence:
The fourth assumption for parametric tests is that the data are independent; the different respondents should not be influenced by other respondents. Because of the method of data collection, an online questionnaire, it can be assumed that the data are independent.

Sphericity:
The last assumption is only important for some parametric tests which are used. The level of sphericity can be measured using the Mauchly's test. A significant score <.05 indicates that the assumption of sphericity is violated. This is corrected by several tests (e.g., Greenhouse-Geisser) which can be found in the same output as when the sphericity is assumed.

5.5   VALIDITY AND RELIABILITY OF CONSTRUCTS

Most of the measurement scales used in this study are commonly used in prior research and have proven to be valid and reliable. However, some of them might differ in the specific conditions of this study. In order to control the constructs on their validity and reliability, factor analysis is performed for each construct. The factor analysis is aimed to see whether different variables can be subscribed to underlying factors.

Preliminary Analysis

Before the number of factors can be determined, checks for multicollinearity, adequacy, and sphericity have to be made. The correlation matrix is used to check for values above .9 which could indicate multicollinearity. The Kaiser-Meyer-Olkin measure of sampling adequacy is used to check for adequacy, and should be .5 or higher to be acceptable (Kaiser, 1974). Sphericity is checked by the Bartlett's test (sign. <.05). All constructs past these tests and were appropriate for further analysis.

Factor Extraction and rotation:

The scree plot (point of inflexion of the curve) and the eigenvalues identified the factors underlying the data. The factors are extracted by using the principal axis factoring method based on eigenvalues greater than 1. Furthermore, the rotation method used is Varimax, to have a clear overview, small coefficients <.3 are suppressed. The rotated factor matrix shows the factor loadings of each variable on to each factor. According to the critical values for factor loadings by Stevens (1992), the factor loadings in this study should exceed .3, the factor loadings in this study are above the critical value. The commonly used extraction method principal component factoring would probably be also a proper method to use in this study. However, based on the preferences of prior research (Cliff, 1987), the principal axis factoring method is chosen. The rotation method used is based on the choice between an orthogonally and an oblique rotation. The latter should be used only when there are good reasons supposing that the underlying factors are theoretically related. Within the orthogonally rotation methods, there are multiple options (Varimax, Quartimax, Equamax). Varimax is recommended as a good general approach and simplifies the interpretation of factors (Field, 2005). Therefore, it is chosen in this study.

Reliability:

After the identification of the factors, the reliability of the factors is tested by using Cronbach's alpha. All constructs prove to be reliable with alpha's exceeding .85. The alphas would not be higher when items are deleted, therefore all items of each factor will be used for further analysis.

Interpretation

The factors analysis confirmed the reliability and validity of the used constructs. This was expected because they were selected based on their proven validity and reliability in prior research. The following table shows the different constructs that are used to measure the dependent variables.

Table 5-4: Validity and reliability of constructs

Dependent Variables	Factor	Item	Factor Loading	Item-to-total correlation	Explained Variance	Cronbach's Alpha
Quality Perception	QPECO	QP-Over	.796	.752	61,32%	0,869
		QP-Work	.747	.716		
		QP-Pres	.712	.709		
		QP-Reli	.700	.652		
		QP-Desi	.654	.648		
		QP-Tech	.580	.559		
	QPELEC	QP-Over	.850	.776	61,24%	0,868
		QP-Reli	.793	.730		
		QP-Work	.778	.737		
		QP-Pres	.677	.678		
		QP-Desi	.602	.600		
		QP-Tech	.541	.502		
	QPLUX	QP-Over	.877	.798	62,77%	0,876
		QP-Work	.847	.783		
		QP-Pres	.606	.616		
		QP-Reli	.750	.683		
		QP-Desi	.677	.691		
		QP-Tech	.553	.541		
Price Perception	PPECO	PP	.826	.742	87,11%	0,852
		PP-WTP	.825	.742		
	PPELEC	PP	.787	.792	89,62%	0,883
		PP-WTP	.903	.792		
	PPLUX	PP	.864	.815	90,73%	0,898
		PP-WTP	.862	.815		
Purchase Intention	PIECO	PI-1	.920	.908	90,20%	0,944
		PI-2	.902	.898		
		PI-3	.840	.853		
	PIELEC	PI-1	.870	.872	88,29%	0,933
		PI-2	.842	.862		
		PI-3	.891	.855		
	PILUX	PI-1	.851	.839	86,89%	0,925
		PI-2	.900	.872		
		PI-3	.844	.828		

The following table shows the constructs used for the measurement of the control variables. The factor analysis indicated that the questions related to knowledge and involvement could be reduced to one factor, therefore, these variables are combined to the factor InvKnow.

Table 5-5: Validity and reliability of constructs

Factor	Item	Factor Loading	Item-to-total correlation	Explained Variance	Cronbach's Alpha
InvKnow	Involvement1	.857	.812	73,19%	0,864
	Involvement2	.779	.753		
	Knowledge1	.782	.707		
	Knowledge2	.757	.678		
Loyalty	Loyalty1	.845	.769	78,68%	0,864
	Loyalty2	.719	.671		
	Loyalty3	.894	.796		
Risk	Risk1	.880	.773	88,67%	0,872
	Risk2	.870	.773		

5.6 MANIPULATION CHECKS

The manipulation checks contain two questions positioned directly after the evaluation of each car. As mentioned in chapter 5.1 respondents that did not answer properly to which car they had seen in terms of the country and the segment, were deleted from the data set because the manipulation did not worked. The remaining respondents in the dataset all answered correctly. Hence, they are assumed to have received the manipulation as it is intended.

5.7 CONTROL VARIABLES

The variables involvement, knowledge, risk, and loyalty were incorporated in the questionnaire to control for characteristic differences between respondents in the different conditions. Therefore the means of these variables are compared between the different groups. For these variables the factors obtained by the factor analysis are used, involvement and knowledge are combined.

Which test should be used is dependent on whether the specific data is normally distributed or not. To test the normality of the data, the Kolmogorov-Smirnov and Shapiro-Wilk methods can provide the outcomes. In this case the variables show significant results ($p < 0.5$) for some countries, which indicate that the data is different from a normal distribution at least in some cases (the normality test for the control variables can be found in appendix). The normality assumption for parametric tests is violated and therefore a non-parametric test is used.

In order to measure if the control variables are different between the groups, the Kruskal-Wallis test is used. The outcomes, which can be found in table 5-6 are not significant (>.05), indicates that the levels of involvement, knowledge, risk, and loyalty are not different between the groups. Therefore, these variables will not be taken into account in further analysis. Other characteristics of the respondents are also checked whether they significantly differ between groups, none of them did (see appendix C1). Therefore, these variables are also not taken into account for further analysis.

Table 5-6: Kruskal-Wallis test

	Risk12	Loy123	Inv12Know12
Chi-Square	6,874	3,312	9,071
df	5	5	5
Asymp. Sig.	,230	,652	,106

6. ANALYSES AND RESULTS

This chapter presents the analyses and the results of the data obtained by the online questionnaire. The hypotheses that were formulated after the literature research are tested on a significance level of 5 percent. In order to test these hypotheses several methods of analysis have been used.

Because the study is aimed to find differences in the evaluation between respondent groups within and between different segments, means of groups are compared. In the experimental design there are two independent variables that are manipulated. The first is the between-subjects variable (country), the second is the repeated measures or within-subjects variable (segment). The best method to compare the mean outcomes for this design is the two-way mixed analysis of variance (ANOVA). Because there are multiple dependent variables, a two-way mixed multivariate analysis of variance (MANOVA) is suitable as well. For the mixed MANOVA method there are extra assumptions that should be met, for example; multivariate normality and homogeneity of covariance matrices. However, MANOVA is a robust test that corrects violations of these assumptions if the different groups are of nearly equal size. Therefore, the group with the highest N should not be more than 1.5 times the N of the smallest group (Leech, Barrett, & Morgan, 2008). In this research the different groups can be seen as nearly equal.

Both methods are considered to be robust for the violation of some of the assumptions and are considered to be statistically strong methods, which are suitable for hypotheses testing.

First, the dependent variable quality perception is tested with ANOVA. The main effect of the country variable and the main effect of the segment variable are discussed. Furthermore the interaction (moderation) effect of country*segment is tested and the means of each country are compared with each other using post-hoc tests as Bonferroni, or Tamhane's test when the Levene's test appeared to be significant and the assumption of homogeneity of variance is violated. The comparison of countries includes the differences between more developed countries (MDC) and less developed countries (LDC).

Secondly, the dependent variable price perception is measured using the same method and structure as the measurement of quality perception.

The third dependent variable, purchase intention, is measured again using the same method and structure as previously described.

In the last part, the three dependent variables are compared. The relationship between them is measured using Pearson's correlation tests. Furthermore, the effect sizes of COO on quality perception, price perception, and purchase intention are compared.

6.1 QUALITY PERCEPTION

Quality perception is the first dependent variable that is discussed. Quality perception is derived from the factor analysis and originally contained six questions measuring technology, workmanship, prestige, reliability, design, and overall quality. The factor is checked on validity and reliability and proved to be suitable for the analysis.

Main effect of country on Quality Perception:
Since the effect of COO on quality perception is proven to be significant in some studies and non-significant in others, the suggestion arises that the COO effect is context dependent. Therefore, the first hypothesis was related to the question whether there is a significant effect of COO on consumer's quality perception of cars.

To test this effect of country on overall quality perception a one-way Anova could be used with country as the factor variable and quality perception as the dependent variable. However, in the mixed ANOVA and the mixed MANOVA, the univariate main effects of each variable are reported as well and there are no differences between them.

Table 6-1: Main effect country on quality perception

Country	N	Mean	Std. Deviation
USA	56	46,151	,69477
GER	38	50,673	,63292
JPN	42	45,040	,69529
MEX	43	39,444	,83466
ROM	39	40,442	,89782
CHN	54	41,080	,62458
Total	272	43,726	,81494

Figure 6-1: Main effect country on quality perception
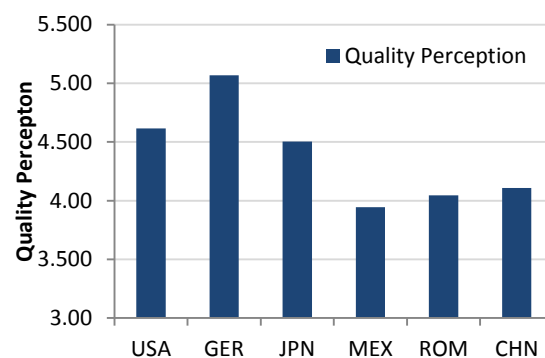
The country variable shows a non-significant p-value of .066 for the Levene's test. The main effect of country on quality perception is significant, $F (5,266) = 14.345$, p= .000, ηp2= .212. Hence, hypothesis 1 is supported.

The Bonferroni test is used to measure the differences of the means between all countries. Significant differences on a p-level of 0.05 are found for 8 of the 15 combinations. The results are listed in the following table:

Table 6-2: Multiple comparisons between countries.

	USA	GER	JPN	MEX	ROM	CHN
USA	X	-0.452	0.111	0.671*	0.571*	0.507*
GER		X	0.563*	1.123*	1.023*	0.959*
JPN			X	0.560*	0.460	0.396
MEX				X	-0.100	-0.164
ROM					X	-0.064
CHN						X

* Significant difference on a p-level of 0.05.

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In general, it can be concluded that for the main effect of country, Germany received the highest quality perception, followed by USA, JPN, CHN, ROM, and MEX. The differences between CHN, ROM, and MEX are small and therefore not significant. The differences of these countries with JPN are relatively small and not always significant. The difference to USA is significant and compared with GER almost every mean score is significantly different.

Main effect of segment on Quality Perception:
Respondents evaluated three different segments, which are: economy, electrical, and luxury. It is expected that the respondents on average rated the luxury segment the highest, the economy segment the lowest, with the electrical segment in between. In order to test this expected difference between the segments, the main effect of segment on quality perception should be significant.

Table 6-3: Descriptive statistics

Segments	Mean	Std. Error
1	3.847	.056
2	4.493	.055
3	4.802	.054

Figure 6-2: Main effect segment on quality perception
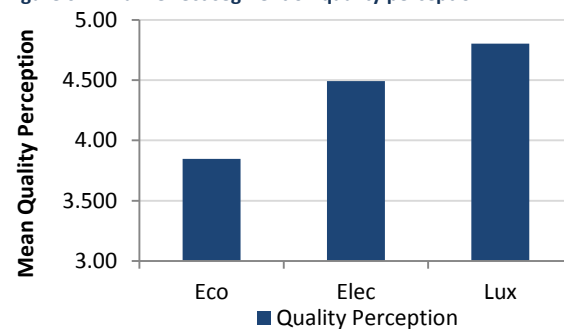
For the main effect of segment the assumption of sphericity should not be violated. In order to test the sphericity, the Mauchly's test is used. The outcome of the test is slightly non-significant with $p=$ .057, therefore sphericity is assumed. The univariate main effect of segment on quality perception is significant, F (2,532) = 156.620, p=0.000, ηp2= 0.371.

Comparing the segments with each other, show that they are significantly different, with p= < .001 in all combinations. Furthermore, the pairwise comparisons (which can be found in the appendix) and the means of the segments show us that the luxury segment has the highest value, the economy segment has the lowest value, with the electrical segment in between. Hence, hypothesis 2A is supported.

The COO effect is expected to be more important in the luxury segment than in the economy segment, since not only functionality is important but also the status and prestige of the car. Therefore, hypothesized is that the country of origin effect is larger (more variety between countries) for the luxury segment than for the economy segment, with the electrical segment in between. In order to test this hypothesis, the standard deviations of the different segments are compared.

For quality perception, the standard deviation of the luxury segment is not significantly larger than the standard deviation of the economy segment (F= 1.1077, p = .0400), it is even slightly reversed, however not significant. The differences with the standard deviation of the electrical segment are also not significant, reporting p-values >.05. Hence, hypothesis 2B cannot be supported.

A possible explanation of the reversed effect can be that consumer's in the economy segment are more insecure about the quality of the car since it is about a car which is relatively cheap. Therefore, the differences between countries that are known as good quality producers and countries that are known as less quality producers are larger.

Interaction effect segment*country on Quality Perception:

It is especially interesting to see whether there are significant interaction effects between the segments and countries. For instance, whether a specific country is evaluated relatively high in one segment and relatively low in another segment. Since the COO effects are estimated in several segments, it improves the generalizability of the results in comparison with the estimation of the COO effect in only one segment. Furthermore, the combination of COO and segments is a more realistic situation than only one of the two options, when evaluating a car.

In order to test the interaction effect Anova and Manova can be used. The descriptive statistics can be found in Table 6-4. The interaction effect segment*country is significant, $F_{(10,532)} = 2.164$, p=.019, $\eta p2$= .039. Although it should be noted that it is a small effect according to the partial eta squared.

For the interpretation of this significant value for the interaction or moderation effect of segment*country, the marginal means in combination with graphs are used (Table 6-4 and Figure 6-3). For further analysis related to the difference of the means between all the countries and segments contrasts and post-hoc tests can be used.

Table 6-4: Descriptive Statistics Country * Segment

Country	Segment	Mean	Std. Error
USA	1	4,289	,121
	2	4,658	,120
	3	4,899	,118
GER	1	4,618	,147
	2	5,114	,145
	3	5,469	,143
JPN	1	3,770	,140
	2	4,643	,138
	3	5,099	,136
MEX	1	3,403	,138
	2	4,058	,136
	3	4,372	,135
ROM	1	3,517	,145
	2	4,128	,143
	3	4,487	,142
CHN	1	3,485	,124
	2	4,355	,122
	3	4,485	,120

Figure 6-3: Country * Segment on quality perception
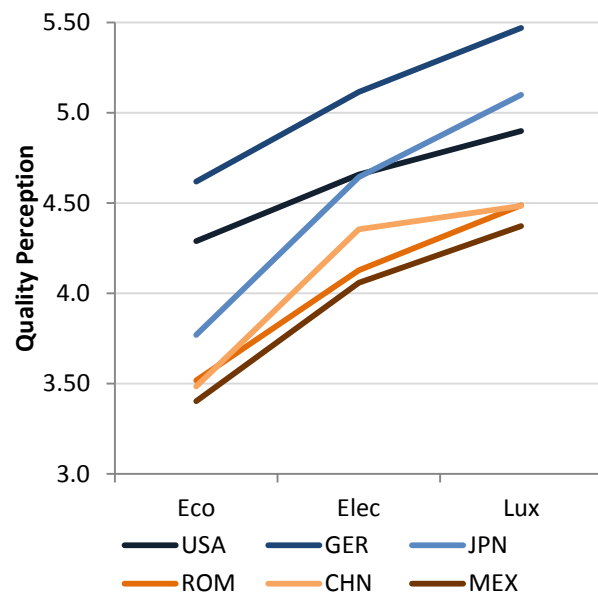
Table 6-5: Multiple comparisons economy segment

	USA	GER	JPN	MEX	ROM	CHN
USA	X	-0.330	0.519	0.886*	0.772*	0.804*
GER		X	0.849*	1.215*	1.101*	1.134*
JPN			X	0.367	0.253	0.285
MEX				X	-0.114	-0.081
ROM					X	0.033
CHN						X

* Significant difference on a p-level of 0.05.

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Table 6-6: Multiple comparisons electrical segment

	USA	GER	JPN	MEX	ROM	CHN
USA	X	-0.456	0.015	0.560	0.530	0.303
GER		X	0.471	1.056*	0.986*	0.759*
JPN			X	0.585	0.515	0.288
MEX				X	-0.070	-0.296
ROM					X	-0.227
CHN						X

Significant difference on a p-level of 0.05.

Table 6-7:Multiple comparisons luxury segment

	USA	GER	JPN	MEX	ROM	CHN
USA	X	-0.570*	-0.200	0.527	0.412	0.414
GER		X	0.370	1.097*	0.982*	0.985*
JPN			X	0.727*	0.612	0.615
MEX				X	-0.115	-0.112
ROM					X	0.003
CHN						X

Significant difference on a p-level of 0.05.

In general, most of the comparisons between countries in different segment are similar to the main effect of counties. However, the effects are now divided in the three segments. The differences between the outcomes in the different segments are best shown in the graph, backed up by the numbers in the tables.

Although the lines of GER, MEX, and ROM are on different levels, they are quite parallel to each other, following the same trend. The lines of JPN, USA, and CHN are definitely showing a deviating pattern. The two Asian countries, JPN and CHN show a large amount of increase from the economy segment to the electrical segment. Where the increase of CHN slows down moving to the luxury segment, the increase of JPN is remarkable, crossing the USA line.

The tables and the graphs also suggest a significant difference between the mean quality perception of cars coming from more developed countries (MDC) and those from less developed countries (LDC). To test this comparison, the between subject variable country is replaced by a computed variable that split the countries in to the category MDC and LDC.

The descriptive statistics are shown in table 6.8. Furthermore, the Levene's test is presented, that shows the homogeneity of variances between the groups, this assumption is met giving the insignificant values of p= >.05. The Anova shows highly significant differences between category 1 (MDC) and 2 (LDC). As presented in 6.10, in all the three segments p= <.001 indicating a very significant effect. It can be concluded that the overall quality perception is significantly higher in more developed countries than in less developed countries. Hence, hypothesis 3A is supported.

Table 6-8: Descriptive statistics MDC vs LDC

Segment		N	Mean	Std. Deviation
QPECO	1.00	136	4.2206	.95428
	2.00	136	3.4681	.90779
	Total	272	3.8444	1.00311
QPELEC	1.00	136	4.7807	.86628
	2.00	136	4.1961	.94147
	Total	272	4.4884	.94928
QPLUX	1.00	136	5.1201	.83708
	2.00	136	4.4498	.94680
	Total	272	4.7849	.95308

Table 6-9: Levene's test

	Levene Statistic	df1	df2	Sig.
QPECO	.958	1	270	.329
QPELEC	1.227	1	270	.269
QPLUX	1.391	1	270	.239

Table 6-10: Anova

	Sum of Squares	df	Mean Square	F	Sig.
QPECO	38.500	1	38.500	44.388	.000
QPELEC	23.238	1	23.238	28.394	.000
QPLUX	30.556	1	30.556	38.264	.000

Assuming that the Dutch consumers have more knowledge about cars originating from MDCs, for example through prior experiences, the expectation is that the size of the effect is larger (more variety between countries) for MDCs than it is for LDCs. In order to compare the variety between the countries in MDC category and the LDC category, the standard deviations are compared.

For quality perception, the standard deviation is slightly higher for LDC than for MDC, this is the opposite of the expected direction. The difference is not significant either, $F = 1.1885$, $p = 0.317$. Therefore, hypothesis 3B is not supported. A possible explanation is similar to the suggestion described at the clarification of hypothesis 2B.

6.2 PRICE PERCEPTION

In this chapter the effects on price perception are discussed. The structure of the analysis and the reporting of the results are similar to that of the previous chapter. However, the results and the interpretation will be different.

The dependent variable price perception is derived from the factor analysis and originally contained two questions of which the first was about how much the car will cost, and the second was about what the respondent is willing to pay for the car. Although the second question resulted in lower values on average, they followed similar trends, and are proven to form one reliable factor.

Main effect of country on price perception:
For the main effect of country on price perception, again the best way to test is with Anova. Unfortunately, the Levene's test is significant and shows that the homogeneity of variance assumption is violated. Therefore the Welch method is used, which controls for the heterogeneity of variance between groups. The Levene's test and the Welch test can be found in the following tables.

Table 6-11: Levene's test main effect price perception

Levene Statistic	df1	df2	Sig.
2.270	5	266	.048

Table 6-12: Welch test main effect price perception

	Statistic[a]	df1	df2	Sig.
Welch	23.436	5	120.736	.000

a. Asymptotically F distributed.

The Welch test shows that the main effect of country on price perception is significant, F (5,120.736) = 23.436, p= .000. Hence, hypothesis 4 is supported.

This significant result only tells that there is a significant difference between outcomes. Further analysis of the data is needed to see the difference between all the combinations of countries. In order to perform this analysis, the descriptive statistics are used to see which directions can be found for the effect and is also used as input for the graph (Table 6-13 and Figure 6-4). Furthermore, the differences between all the combinations of countries are performed with Tanhame's post-hoc test, which corrects for inequality of variances between the groups (appendix).

Table 6-13: Descriptive Statistics of main effect country

Measure	Country	Mean	Std. Error
Price Perception	USA	28962.500	860.488
	GER	33969.298	1044.593
	JPN	25674.579	993.606
	MEX	25470.155	981.985
	ROM	20766.705	1031.114
	CHN	22993.827	876.279

Figure 6-4: Main effect country on price perception
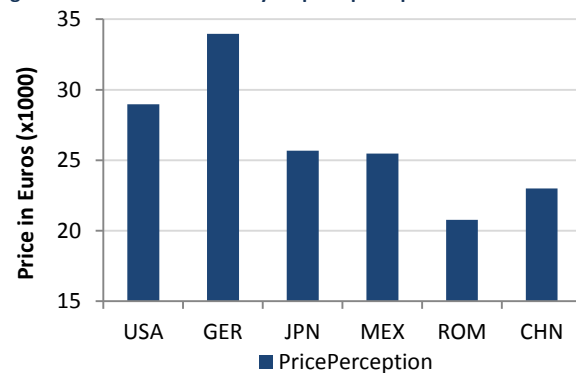
In the following table, the mean differences between all country combinations are presented. In general, for the main effect of country on price perception there can be concluded that: the car originating from Germany scores the highest value, followed by the USA, Japan, Mexico, China, and Romania.

Remarkable are the price perceptions of the less developed countries. The main effect of country on quality perception showed that Mexico was valued the lowest, with Romania and China having slightly better evaluations. In terms of price perception, Romania scores the lowest, with China and Mexico having higher values. A possible explanation is that Mexico is not apparent with a brand in the Dutch market, therefore valued lower on quality perception. On the other hand, Romania is presented in the Dutch market with their brand 'Dacia', which sells extremely cheap priced cars, leading to lower values on price perception.

Table 6-14: Mean differences between countries

	USA	GER	JPN	MEX	ROM	CHN
USA	X	-5006*	3287	3492	8195*	5968*
GER		X	8294*	8499*	13202*	10975*
JPN			X	204	4907*	2680
MEX				X	4703*	2476
ROM					X	-2227
CHN						X

Significant difference on a p-level of .05

P-values that indicate significant differences between the countries are found in 9 of the 15 possible combinations.

Main effect of segment on price perception:
Before we can look at the main effect of segment on price perception, it should be controlled for sphericity. The mauchly's test appears to be significant t χ2 (2) = 13.961, p = .001, the assumption of sphericity is violated.

The alternative methods which controls for this situation are the Greenhouse-Geisser and the Huynh-Feldt corrections of degrees of freedom. They are presented in the following table.

Table 6-15: Main effect segment on price perception

Source	Measure		df	F	Sig.	Partial Eta Squared
segments	PricePerception	Sphericity Assumed	2	478.294	.000	.643
		Greenhouse-Geisser	1.902	478.294	.000	.643
		Huynh-Feldt	1.952	478.294	.000	.643
		Lower-bound	1.000	478.294	.000	.643

The alternative methods are almost equal; in this case we will use the Greenhouse-Geisser test. The main effect of segment on price perception is significant, F (1.902, 506.030) = 478.294, p= 0.000, ηp2= 0.643. Further analysis of this significant value determines in which direction the effect is and what the differences between each segment are. The direction of the effect is determined using descriptive statistics and graphs. The mean differences are measured using pairwise comparisons with adjustments for multiple comparisons of Bonferroni.

Table 6-16: Descriptive statistics segment on price perception

Measure	segments	Mean	Std. Error
Price Perception	1	16064.353	303.869
	2	27713.338	584.548
	3	35140.842	648.426

Figure 6-5: Main effect segment on price perception
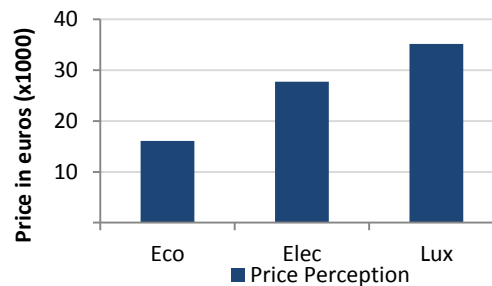
The direction of the effect is in the expected direction, with the luxury segment evaluated the highest, the economy segment the lowest and the electrical segment in between. The pairwise comparisons of the mean differences are all significant with p-values < .001. Hence, hypothesis 5A is supported.

The COO effect is expected to be more important in the luxury segment than in the economy segment, since not only functionality is important but also the status and prestige of the car. Therefore, hypothesized is that the country of origin effect is larger (more variety between countries) for the luxury segment than for the economy segment, with the electrical segment in between. In order to test this hypothesis, the standard deviations of the different segments are compared.

While the standard deviations of the segments were not significantly different for quality perception, they are significantly different for price perception. F-tests show that the differences between the standard deviations are significant in all combinations, economy – electric, F = 3.1153, p <0.001, economy-luxury F = 4.9885, p<0.001, electric-luxury F = 1.5810, p<0.001. The significant differences are in the expected direction, the variety between countries is the largest in the luxury segment, the

smallest in the economy segment, with the electrical segment in between. Hence, hypothesis 5B is supported.

Table 6-17: Multiple comparisons segments

	Economy Segment	Electrical Segment	Luxury Segment
Economy Segment	X	-4322.87***	-6868.61***
Electrical Segment		X	-2545.74***
Luxury Segment			X

*** Significant difference on a p-level of <.001*

*Interaction effect country*segment on price perception:*
For quality perception the interaction effect was significant, however, it is a small effect. For price perception, the interaction effect of country*segment is also significant. F (9.512, 506.030) = 6.365, p= 0.000, ηp2=0.107. Because the assumption of sphericity is violated (described in the previous paragraph), Greenhouse-Geisser corrections of degrees of freedom are used.

The significant value of the interaction effect indicated differences between at least two groups. In order to analyze the direction of the effect and to make comparisons between all groups, descriptive statistics, graphs, contrasts, and post-hoc tests are used. The means of the country*segment and the related graph are presented in the following table:

Table 6-18: Descriptive statistics interaction country*segment **Figure 6-6: Country*segments on Price perception**

Country	segments	Mean	Std. Error
USA	1	17799.107	662.122
	2	29342.857	1273.714
	3	39745.536	1412.901
GER	1	21506.579	803.785
	2	32907.895	1546.230
	3	47493.421	1715.197
JPN	1	16315.440	764.552
	2	28148.786	1470.758
	3	32559.512	1631.478
MEX	1	13929.070	755.610
	2	26993.023	1453.556
	3	35488.372	1612.396
ROM	1	12891.474	793.413
	2	22544.872	1526.278
	3	26863.769	1693.065
CHN	1	13944.444	674.272
	2	26342.593	1297.087
	3	28694.444	1438.828
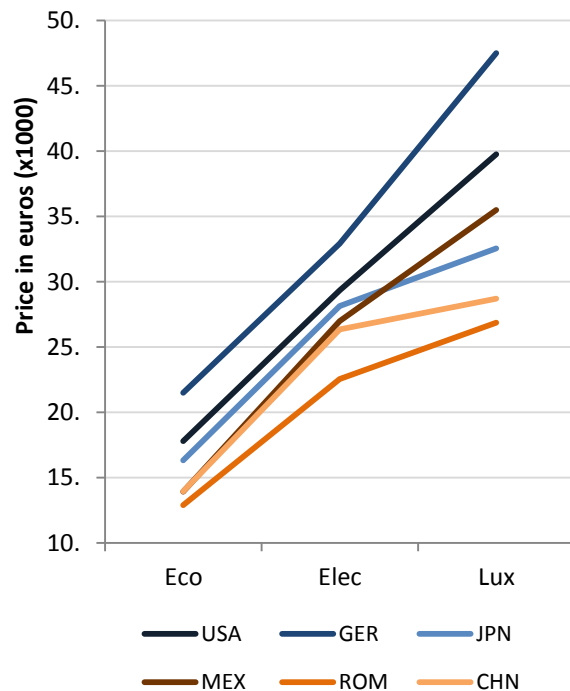
In general, the lines are quite parallel to each other, which indicate a small interaction or moderation effect. Note that the Asian countries are presenting the steepest lines moving from the economy segment to the electrical segment. Oppositely, the magnitude of their slopes is the lowest when moving from the electrical segment to the luxury segment. This could suggest that Japan and China are relatively better evaluated in the electrical segment and less in the luxury segment. Probably they are associated with high-tech products, scoring better in the electrical segment, and are not

associated with prestige and luxury, scoring relatively worse in the luxury segment. Furthermore, the graph shows that Germany and USA are the only countries where the magnitude of the slopes does not decrease moving from the electrical segment to the luxury segment. Remarkable is the line of Mexico, which is in the middle and the slope is very linear through all segments. A possible explanation is that the consumers are less familiar with Mexican cars and have given it average price perception scores.

The comparison of the mean differences for each country*segment combination is presented in the following table.

Table 6-19: Multiple comparisons economy segment

	USA	GER	JPN	MEX	ROM	CHN
USA	X	3707*	1483	3870*	4907*	3854*
GER		X	5191*	7577*	8615*	7562*
JPN			X	2386	3423	2370
MEX				X	1037	-15
ROM					X	-1052
CHN						X

Significant difference on a p-level of 0.05.

Table 6-20: Multiple comparisons electrical segment

	USA	GER	JPN	MEX	ROM	CHN
USA	X	-3565	1194	2350	6797*	3000
GER		X	4759	5914	10363*	6565*
JPN			X	1155	5603	1806
MEX				X	4448	650
ROM					X	-3797
CHN						X

Significant difference on a p-level of 0.05.

Table 6-21: Multiple comparisons luxury segment

	USA	GER	JPN	MEX	ROM	CHN
USA	X	-7747	7186*	4257	12881*	11051*
GER		X	14933*	12005*	20629*	18798*
JPN			X	-2928	5695*	3865
MEX				X	8624*	6793*
ROM					X	1830
CHN						X

Significant difference on a p-level of 0.05.

In 21 of the 45 possible comparisons a significant mean difference is found, p=<0.05. In the electrical segment there are only three significant combinations, in the economy segment there are eight, and most significant combinations are found in the luxury segment, 10 out of 15. Again, in this table the differences of China and Japan with other countries are totally different in the electrical segment compared with the relations in the other segments.

For price perception a significant difference is expected between the more developed countries (MDC) and the less developed countries (LDC). In order to test this expectation, the variable country is replaced by the variable MDC (with 1= MDC, 2= LDC).

Because this is a between subject variable, first the assumption of equal variances has to be met. Unfortunately, the Levene's test is significant for the economy segment, $F_{(1,270)} = 12.388$, p=0.001, and for the electrical segment, $F = _{(1,270)} = 11.843$, p= 0.001. Therefore, the test should be corrected with the Welch method. The Welch test shows significant results for the economy segment, $F_{(1,252.729)} = 57.833$, p= .000, for the electrical segment, $F_{(1,263.134)} = 14.867$, p=.000, and the for the luxury segment $F_{(1,251.201)} = 44.881$, p= .000.

The direction of this effect can be determined by looking at the means, this shows the expected direction: countries labeled as MDC do have significantly higher mean price perceptions than countries labeled as LDC. Hence, hypothesis 6A is supported.

Table 6-22: Descriptive statistics MDC vs LDC

		N	Mean	Std. Deviation
PPECO	1	136	18377	5772
	2	136	13638	4416
	Total	272	16007	5652
PPELEC	1	136	29970	10398
	2	136	25459	8834
	Total	272	27715	9891
PPLUX	1	136	39691	13021
	2	136	30318	9834
	Total	272	35004	12437

Table 6-23: Test of Homogeneity of Variances MDC

	Levene Statistic	df1	df2	Sig.
PPECO	12.388	1	270	.001
PPELEC	2.820	1	270	.094
PPLUX	11.843	1	270	.001

Table 6-24: Welch test MDC Robust Tests of Equality of Means

		Statistic[a]	df1	df2
PPECO	Welch	57.833	1	252.73
PPELEC	Welch	14.867	1	263.13
PPLUX	Welch	44.881	1	251.20
a. Asymptotically F distributed.				

Assuming that the Dutch consumers have more knowledge about cars originating from MDCs, for example through prior experiences, the expectation is that the size of the effect is larger (more variety between countries) for MDCs than it is for LDCs. In order to compare the variety between the countries in the MDC category and the LDC category, the standard deviations are compared.

The comparison of standard deviations between the MDC and LDC did not lead to significant differences for quality perception. However, it does show significant differences for price perception. The standard deviation of the MDC groups is significantly higher than the standard deviation of the LDC group, F= 1.7256, p= 0.002. The variety between countries in the MDC group is larger than that of the LDC group. Therefore, hypothesis 6B is supported.

6.3 PURCHASE INTENTION

In this chapter the effects on price perception are discussed. The structure of the analysis and the reporting of the results are similar to that of the previous chapters. However, the results and the interpretation will be different.

The dependent variable purchase intention is derived from the factor analysis and originally contained three questions measuring purchase intention. The factor has proven to be reliable and suitable for this analysis. However, the data were positively skewed because many respondents were not planning to buy a car at all, or do not have the money to buy a car, so on average the scores are relatively low. Normally distributed data is one of the assumptions for using parametric tests; however, Anova and Manova are considered as robust methods that can correct for this non-normality if the sizes of the groups are nearly equal (Leech, Barrett, & Morgan, 2008). For the purpose of this study, the assumption of normality is made. Just to be sure, the main effect will be measured with non-parametric tests as well in order to check for differences in the outcomes.

Main effect of country on Purchase Intention:
Before the main effect can be measured, the equality of variance assumption should be checked. The Levene's test, $F_{(5,266)}$ = .715, p= .613, is not significant and therefore equality of variance is assumed. The main effect of country on purchase intention is significant, $F_{(5,266)}$ = 7.357, p= .000, ηp^2=.121, which indicates that there is a significant mean difference between countries.

When the main effect is measured using a non-parametric test, in this case Kruskal-Wallis (appendix X), it leads to the following result: H (5)= 30.23, p= .000, with mean ranks of 189.70 for Germany to 99.15 for Romania. The Kruskal-Wallis test is used because it is the non-parametric equivalent of one-way Anova. The outcome of the test indicates that the mean ranks are significantly different, which is in line with the Anova test.

In order to interpret the direction of the effect and the relations between all countries, descriptive statistics, graphs, contrasts, and post hoc tests are used.

Table 6-25: Descriptive statistics main effect country

Measure	Country	Mean	Std. Error
Purchase	USA	2,673	,136
Intention	GER	3,336	,165
	JPN	2,460	,157
	MEX	2,641	,155
	ROM	2,051	,163
	CHN	2,305	,138

Figure 6-7: Main effect country on purchase intention
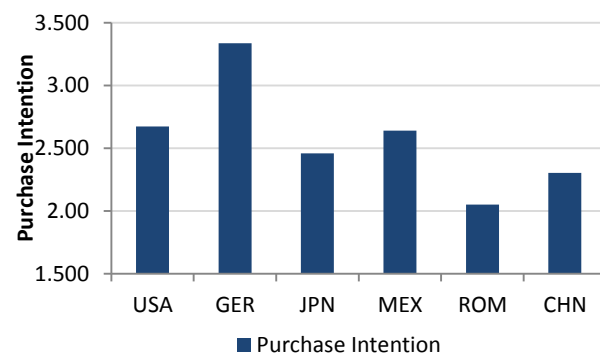
In general, the means are low for all the countries. However, there are still notable differences between countries. Germany scores the highest, followed by: USA, Mexico, Japan, China, and Romania. The outcomes are in line with the outcomes of price perception, whereas both have low scores for Romania and surprisingly high scores for Mexico.

Table 6-26: Multiple comparisons between countries

	USA	GER	JPN	MEX	ROM	CHN
USA	X	-0.664	0.212	0.032	0.621	0.368
GER		X	0.876*	0.695	1.285*	1.032*
JPN			X	-0.181	0.409	0.156
MEX				X	0.590	0.336
ROM					X	-0.253
CHN						X

* Significant difference on a p-level of 0.05

Because the data are skewed to the left, recording many low scores, there are only a few significant mean differences between countries. Only the mean of Germany do significantly differ from China, Romania, and Japan.

Main effect of segment on purchase intention:
For the main effect of segment on purchase intention, the assumption of sphericity should be checked. The Mauchly's test reported: $\chi^2 (2) = 4.613$, $p = .100$. There can be concluded that sphericity is assumed.

Table 6-27: Main effect segments on purchase intention

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
segments	Sphericity Assumed	24.742	2	12.371	10.414	.000	.038

The main effect of segment on purchase intention is significant, F (2,532) = 10.414, p=.000, ηp2=.038. In order to investigate this significant effect on the direction and the combinations between the segments, descriptive statistics, graphs, and pairwise comparisons with Bonferroni adjustments are used.

The means and the graphs show that the purchase intention was the highest in the economy segment, the lowest in the luxury segment, with the electrical segment in between. Hence, hypothesis 8A is supported.

This was expected since most people that filled in the questionnaire responded that they would buy an economy car. The pairwise comparisons show that the mean difference between the economy segment and the electrical segment is not significant, p= .190. The difference between the economy segment and the luxury segment is significant, p=.000, just as the difference between the electrical segment and the luxury segment, p=.000.

Table 6-28: Main effect segment on purchase intention

segments	Mean	Std. Error
1	2.782	.091
2	2.598	.080
3	2.353	.077

Figure 6-8: Main effect segment on purchase intention
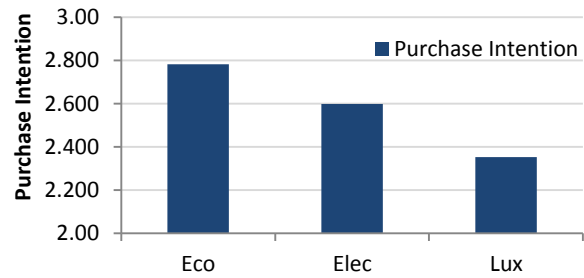
The COO effect is expected to be more important in the luxury segment than in the economy segment, since not only functionality is important but also the status and prestige of the car. Therefore, hypothesized is that the country of origin effect is larger (more variety between countries) for the luxury segment than for the economy segment, with the electrical segment in between. In order to test this hypothesis, the standard deviations of the different segments are compared.

For purchase intention, the difference between the standard deviation of the economy segment and the luxury segment is significant, F = 1.2806, p= 0.042. However, the difference between the standard deviations of the economy segment and the electrical segment is not significant, F = 1.2361, p= 0.082, just as the difference between the electrical segment and the luxury segment, F = 1.0360, p= 0.771. Besides the differences are being not significant, the direction is reversed. Therefore, we cannot support hypothesis 8B.

Interaction effect of country*segment on purchase intention:
As discussed in the previous paragraph, the sphericity assumption is met. Therefore, we do not need to look at Greenhouse-Geisser corrections. The interaction effect of country*segment is significant, $F_{(10,532)} = 1.856$, p= .049, $\eta p2$= .034. It should be noted that the effect is small, and that the p-value is only just significant according to the commonly .05 boundary. Therefore, segment is a marginal significant moderator in the relationship between country of origin and purchase intention.

In order to further analyze the significant effect, descriptive statistics, graphs, and contrasts are used.

Table 6-29: Descriptive statistics country*segment

Country	segments	Mean	Std. Error
USA	1	2.952	.197
	2	2.494	.175
	3	2.571	.168
GER	1	3.421	.239
	2	3.368	.212
	3	3.219	.204
JPN	1	2.563	.228
	2	2.373	.202
	3	2.444	.194
MEX	1	2.961	.225
	2	2.698	.200
	3	2.264	.191
ROM	1	2.513	.236
	2	2.000	.210
	3	1.641	.201
CHN	1	2.284	.201
	2	2.654	.178
	3	1.975	.171

Figure 6-9: country*segment on purchase intention
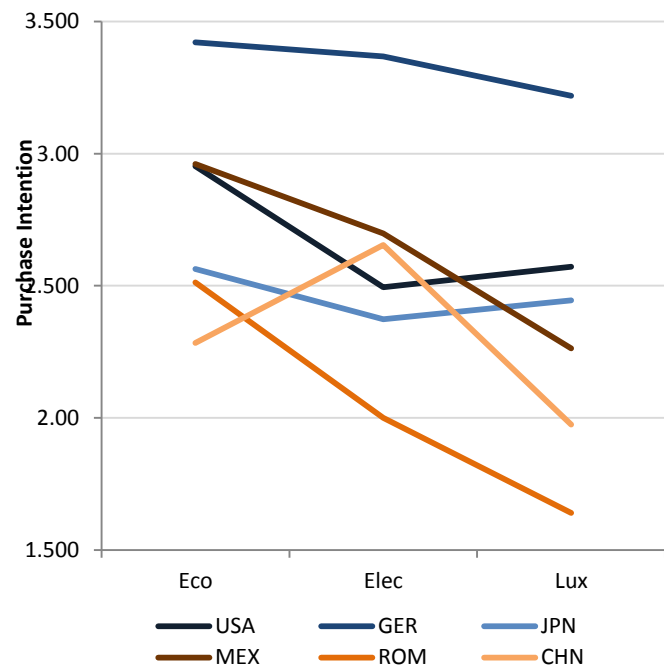
In general, the graph shows some expected insights. For instance, that Germany received the highest purchase intention and Romania the lowest. Remarkable is the line of China which is relatively high in the electrical segment and relatively low in the luxury segment. This is in line with earlier findings.

The comparisons between all countries in every segment are presented in the following table. However, because of the skewness of the data, there are only small differences that are insignificant. Only in the luxury segment there are still some significant mean differences, mainly for Germany and Romania in comparison with other countries.

Table 6-30: Multiple comparisons economy segment

	USA	GER	JPN	MEX	ROM	CHN
USA	X	-0.469	0.389	-0.009	0.440	0.668
GER		X	0.858	0.460	0.908	1.137*
JPN			X	-0.398	0.051	0.280
MEX				X	0.448	0.677
ROM					X	0.229
CHN						X

Significant difference on a p-level of 0.05

Table 6-31: Multiple comparisons electrical segment

	USA	GER	JPN	MEX	ROM	CHN
USA	X	-0.874	0.121	-0.204	0.494	-0.160
GER		X	0.995*	0.671	1.368*	0.714
JPN			X	-0.325	0.373	-0.281
MEX				X	0.698	0.043
ROM					X	-0.654
CHN						X

Significant difference on a p-level of 0.05

Table 6-32: Multiple comparisons luxury segment

	USA	GER	JPN	MEX	ROM	CHN
USA	X	-0.648	0.127	0.308	0.930*	0.596
GER		X	0.755	0.956*	1.578*	1.244*
JPN			X	0.181	0.803*	0.469
MEX				X	0.623	0.288
ROM					X	-0.334
CHN						X

* Significant difference on a p-level of 0.05

The graph and the means are suggesting that the purchase intention is significantly higher for cars from more developed countries (MDC) than for cars from less developed countries (LDC). To test this hypothesis a one-way Anova is performed with MDC as the between group variable and the factors Purchase intention economy segment (PIECO), Purchase intention electrical segment (PIELEC), and Purchase intention luxury segment (PILUX) as dependent variables.

The Levene's test appeared to be insignificant for PIECO and PIELEC, but significant for PILUX, $F(1,270) = 6.426$, p= .012. Therefore, the assumption of homogeneity of variances is violated. The Welch Anova is used to correct for the violated assumption by changing the degrees of freedom.

The Welch Anova reports that the mean purchase intention in the electrical segment is not significantly different between both groups, $F(1,267.915) = 1.814$, p= .179. The effect is significant for PIECO, $F(1,268.662) = 4.842$, p= .029, and for PILUX, $F(1,262.834) = 22.960$, p= .000.

Because two of the three conditions show significant results and all three effect s are in the right direction, hypothesis 9A is partially supported.

Table 6-33: Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
PIECO	1.611	1	270	.205
PIELEC	1.897	1	270	.170
PILUX	6.426	1	270	.012

Table 6-34: Robust Tests of Equality of Means

		Statistic[a]	df1	df2	Sig.
PIECO	Welch	4.842	1	268.662	.029
PIELEC	Welch	1.814	1	267.915	.179
PILUX	Welch	22.960	1	262.834	.000

a. Asymptotically F distributed.

Assuming that the Dutch consumers have more knowledge about cars originating from MDCs, for example through prior experiences, the expectation is that the size of the effect is larger (more variety between countries) for MDCs than it is for LDCs. In order to compare the variety between the countries in the MDC category and the LDC category, the standard deviations are compared.

For purchase intention, the standard deviation of the MDC group is larger than the standard deviation of the LDC group. However, the difference is not significant, $F = 1.1549$, $p = 0.404$. This might also be caused by the positively skewed data, which leads to smaller differences between the evaluations of the countries. Nevertheless, hypothesis 9B is not supported.

6.4 COMPARISON BETWEEN THE DEPENDENT VARIABLES

In order to compare the different dependent variables with each other, multiple tests are performed. The relationship between quality perception, price perception, and purchase intention is discussed, and the effect size of the COO on quality perception, price perception, and purchase intention is compared.

In order to compare the different dependent variables with each other, the differences from the weighted average are measured in percentages for quality perception, price perception, and purchase intention (Figure 6-10: Difference of weighted average per dependent variable per country. The figure shows that for most countries, the distance from the weighted average is doubled for price perception and purchase intentions in comparison with quality perception. This is the case for positive distance (Germany and USA) and for negative distance (Romania and China) to the weighted average. The lines of Japan and Mexico show different patterns that should be analyzed separately. The unexpected pattern for Mexico is in line with the presented results in previous paragraphs. A possible explanation is mentioned before. The pattern of Japan suggests that consumer's perceive cars from Japan relatively high in terms of quality, however relatively low in terms of price and purchase intention. Germany is perceived relatively high in terms of quality, even higher in terms of price and purchase intention. A similar pattern, although negative, is found for Romania. USA and China show mirrored patterns just like Germany and Romania. Furthermore, this figure shows that the variety between countries is larger for price perception and purchase intention than it is for quality perception.

Figure 6-10: Difference of weighted average per dependent variable per country

	%QP	%PP	%PI
USA	5.55%	10.37%	4.18%
GER	15.89%	29.45%	30.05%
JPN	3.01%	-2.16%	-4.09%
MEX	-9.79%	-2.94%	2.94%
ROM	-7.51%	-20.86%	-20.04%
CHN	-6.05%	-12.38%	-10.17%
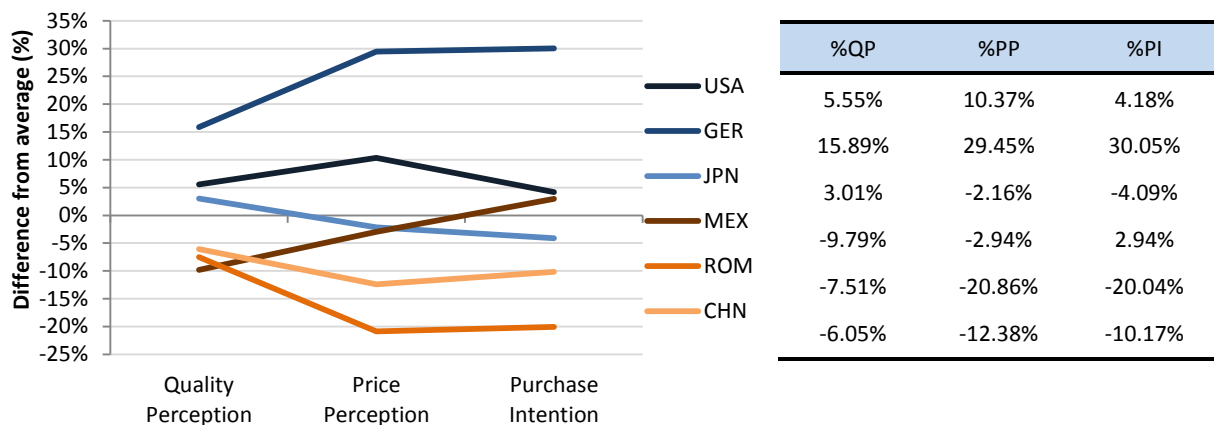
Correlation between quality perception, price perception, and purchase intention:
If normality is not assumed, Spearman's correlation coefficient can be used. However, in this case normality is assumed (histograms and Q-Q plots are presented in chapter 5.3) and Pearson's correlation coefficient is used. Both methods provide roughly the same outcome for bivariate correlations. The dependent variables quality perception and price perception are positively correlated, Pearson's r (272) = .362, p<.001, price perception and purchase intention are positively correlated, Pearson's r (272) = .392, p<.001, purchase intention and quality perception are also positively correlated, Pearson's r (272) = .431, p<.001. In all cases the effects can be considered as medium effects according to Field (2005).

Table 6-35: Pearson's correlation between dependent variables.

	Quality Perception	Price Perception	Purchase Intention
Quality Perception	X	.362**	.431**
Price Perception	.362**	X	.392**
Purchase Intention	.431**	.392**	X

**= p-value < .001

Since the three variables could have some overlap, a partial correlation test is performed. The partial correlation test controls the effect for a third variable. When controlling for the third variable, the effects are smaller, however still considered to be medium of size and significant, quality perception – purchase intention, r (269) = .337, p<.001, quality perception – price perception, r (269) = .232, p<.001, and purchase intention – price perception, r (269) = .281, p<.001. (Tables can be found in appendix B4).

Although the correlation coefficient gives no indication of the direction of causality, it does indicate that quality perception, price perception, and purchase intention are positively correlated. Hence, hypothesis 9 is supported.

Size of COO effect on quality perception, price perception, and purchase intention:
Peterson & Jolibert (1995) investigated the mean effect size of COO on quality perception and COO on purchase intention in a meta-analysis. They concluded that COO is in general a better predictor for quality perception than it is for purchase intention. A mean effect size of .30 was found for quality perception and for purchase intention effect size was .19 on average. Based on their findings, the expectation is that the COO effect on quality perception shows a larger effect size than the COO effect on purchase intention.

The effect sizes in this study are measured for the main effects of COO on quality perception, price perception, and purchase intention. The main effects of COO are all significant and reported effect sizes of $\eta p2$= .212 for quality perception and $\eta p2$= .122 for purchase intention. Hence, hypothesis 10 is supported.

The effect size of COO on price perception was not included since there was no suggestion found in prior research that compared the effect sizes of COO on these three dependent variables. However, the effect size of COO on price perception was expected to be similar as the effect size of quality perception because they are both based on perceptions. In this research, the effect size of COO on price perception, $\eta p2$ = .287, p<.001, is larger than the effect size of COO on quality perceptions.

Table 6-36: Effect sizes

Main effect country on	F-value	P-value	Effect Size
Quality Perception	14,345	.000**	.212
Price Perception	21,395	.000**	.287
Purchase Intention	7,396	.000**	.122

**= p-value <0.001

In comparison with the effect sizes found in prior research, this research shows slightly smaller effects. Especially the effect size of COO on purchase intention is small, a possible explanation is that the main part of the respondents in this research are in the age category 18-24 or 25-34, which could lead to lower purchase intentions if they do not have the money to buy one of the cars. On the other hand, most studies used by Peterson & Jolibert (1995) had student samples as well.

6.5 MANOVA SUMMARY RESULTS

Instead of measuring one Anova for each of the dependent variables, they can be calculated with only one Manova test. However, because the assumption of equality of covariance matrices was not met (p<.05), it is decided to use three separate Anova's for the analysis of the dependent variables. Although the Manova is considered to be robust against slightly significant values for Box's test of equality of covariance matrices, the reported p-value in this research was (.000), which is highly significant and therefore violates the assumption.

If the violation is ignored, the Manova shows highly significant values for the multivariate tests.

Table 6-37: Manova Multivariate tests

Variable	Pillai's Trace	Wilks' Lambda	Hotelling's Trace	Roy's Largest Root
Country	0.42**	0.60**	0.62**	0.54**
Segment	0.82**	0.18**	4.46**	4.46**
Country*Segment	0.31**	0.71**	0.37**	0.27**

*= p-value <.05 **= p-value <0.001*

Table 6-38: Univariate Anova results for the dependent variables

Source	df	Quality Perception F-value	Price Perception F-value	Purchase Intention F-value
Country	5	14.35**	21.39**	7.40**
Segment	2	156.62**	472.19**	10.57**
Country*Segment	10	2.16*	6.50**	1.87*

*= p-value <.05 **= p-value <0.001*

Furthermore, the Manova summarizes all the univariate results which can be found in table 6-38. The results should be similar to the outcomes of the separate Anova's. Nevertheless, the use of separate mixed Anova's is preferred and used in this research in order to test the hypotheses.

6.6 SUMMARY OF RESULTS

The summary of the test results are presented in table 6-39. Based on the results, 12 of the 17 hypotheses are supported, 1 hypothesis is only partially supported, and 4 of them are not supported on a p-level of .05 or even in the reverse direction.

Table 6-39: Summary of results

	Table of Hypotheses	Result
H_1	The Country of Origin (COO) has a significant effect on consumers' quality perception of cars.	supported
H_{2A}	The quality perception is higher for more expensive segments, in this research: The overall quality perception is the highest for the luxury segment, the lowest for the economical segment, with the electrical segment in between.	supported
H_{2B}	The COO effect on quality perception is larger in more expensive segments, in this research: The COO effect on quality perception is the largest in the luxury segment, the smallest in the economy segment, with the electrical segment in between.	not supported
H_{3A}	The overall quality perception is significantly higher for cars originating from more developed countries (MDC's) than from less developed countries (LDC's).	supported
H_{3B}	The Country of Origin (COO) effect on quality perception is larger for more developed countries (MDC's) than for less developed countries (LDC's).	not supported
H_4	The Country of Origin (COO) has a significant effect on consumers' price perception of cars.	supported
H_{5A}	The price perception is higher for more expensive segments, in this research: The overall price perception is the highest for the luxury segment, the lowest for the economical segment, with the electrical segment in between.	supported
H_{5B}	The COO effect on price perception is larger in more expensive segments, in this research: The COO effect on price perception is the largest in the luxury segment, the smallest in the economy segment, with the electrical segment in between.	supported
H_{6A}	The overall price perception is significantly higher for cars originating from more developed countries (MDC's) than for less developed countries (LDC's).	supported
H_{6B}	The Country of Origin (COO) effect on price perception is larger for more developed countries (MDC's) than for less developed countries (LDC's).	supported
H_7	The Country of Origin (COO) has a significant effect on consumers' purchase intention of cars.	supported
H_{8A}	The purchase intention is lower for more expensive segments, in this research: The purchase intention is the highest for the economy segment, the lowest for the luxury segment, with the electrical segment in between.	supported
H_{8B}	The COO effect on purchase intention is larger in more expensive segments, in this research: The Country of Origin (COO) effect on purchase intention is the largest in the luxury segment, the smallest in the economy segment, with the electrical segment in between.	not supported
H_{9A}	The purchase intention is significantly higher for cars originating from more developed countries (MDC's) than for less developed countries (LDC's).	partially supported
H_{9B}	The Country of Origin (COO) effect on purchase intention is larger for more developed countries (MDC's) than for less developed countries (LDC's).	not supported
H_{10}	There is a positive relationship between the outcome of the COO effect on quality perception, price perception, and purchase intentions.	supported
H_{11}	The mean effect of COO on quality perception is larger than the mean effect of COO on purchase intention.	supported

7. DISCUSSION OF RESULTS

In this chapter the results that are described in the previous chapter are discussed. The results are compared with the expectations and the findings of prior research. The chapter is structured by the dependent variables, discussing them separately.

7.1 QUALITY PERCEPTION

Quality perception is used as dependent variable in many COO studies according to the meta-analysis of Peterson & Jolibert (1995). Since the effect has proven to be significant in some studies and did not show significant results in other studies, the effect tends to be context-specific. Therefore, the first hypothesis is related to the occurance of a significant effect of COO on quality perception. Based on the results, it can be concluded that under the specific conditions of this experiment, the main effect of COO on quality perception is significant. The effect size is comparable with effect sizes found in prior research.

Furthermore, the interaction or moderation effect of segment on the relationship between COO and quality perception is found to be significant. This was suggested by prior research (Thanasuta, Patoomsuwan, Chaimahawong, & Chiaravutthi, 2009; Seidenfuss, Kathawala, & Dinnie, 2010), although they only reported differences between the economy and the luxury segment. The interaction effect on quality perception did show similar patterns for some countries (GER, USA, ROM, MEX), however, the effect is clearly visible for Japan and China. Both countries are evaluated relatively high for the electrical segment, while China reported relatively low scores for the luxury segment. This could suggest that these Asian countries are seen as producers of high-tech products rather than luxury or prestigous products and therefore are relatively better perceived in terms of quality when it is about an electrical car in comparison with cars in the economy or luxury segment. Underlying possible explanations could be investigated in future research.

In line with the findings of Srinivasan, Jain, & Sikand (2004) and Chandrasen & Paliwoda (2009) a significant difference was found between the quality perception of more developed countries (MDC) and less developed countries (LDC). The classification of countries whether they are more-or less developed is done by using GDP per capita, this could be argued, however it is a commonly used statistic for defining the level of development. Future research could focus on investigating results from other perspectives, other definitions of level of development, or using more than two levels of development (e.g. high-medium-low).

7.2 PRICE PERCEPTION

In contrast to prior research by Pecotich & Rosenthal (2001), a significant effect of COO on price perceptions is found. This could be explained by the difference in experimental product, they used a JET printer which is a product with less product-differentiation than cars. In terms of the hierarchy between countries, unexpected results are found between the less developed countries. Whereas in terms of quality perception, Mexico scored the lowest, in terms of price perception, Romania reported the lowest scores. A possible explanation might be that the Dutch respondents are less familiar with Mexican cars since they do not have a brand presented in the Dutch market. If people

do not know whether cars from Mexico are cheap or expensive they might respond a more average price. Romania is presented with the brand Dacia, which is selling relatively cheap cars. Therefore, Romanian cars might be valuated lower on price and higher on quality than Mexican cars. This possible explanation is suggestive and further research is needed to clarify this finding.

Next to the main effect of COO on price perception, a significant interaction effect of segment and COO on price perception is also found. Moving from the electrical segment to the luxury segment, only the slope of Germany and USA are increasing, the other countries have decreasing positive slopes in comparison with moving from the economy to the electrical segment. Again, Mexico shows a very linear pattern, where other less developed countries show decreasing slopes. This is in line with findings for the main effect of COO and a possible explanation is already mentioned. Furthermore, China and Japan show relatively high scores for the electrical segment, which is in line with the findings discussed for interaction effect on quality perception.

The comparison of more developed countries (MDC) and less developed countries (LDC) did not show surprisingly results, since the expectations are confirmed. MDC are evaluated significantly higher in terms of price perception than LDC.

7.3   PURCHASE INTENTION

The results revealed a significant main effect of COO on purchase intentions, which is not always the case in prior research. Furthermore, as the findings of Peterson & Jolibert (1995) suggested, the effect of COO on purchase intention is smaller than the effect of COO on quality perception. This expectation is confirmed by the results presented in chapter 6, showing larger effect size for quality perception than for purchase intentions.

Next to the main effect of COO on purchase intention, the interaction effect of segment and COO is also proven to be significant. However, there should be noted that it is a small effect and it is only marginally significant. Considering the scores of the different countries, the pattern of China is remarkable. As the interaction effects of segment and COO on quality perception and price perception already indicated, China scores relatively high in the electrical segment. The purchase intentions for Chinese electrical cars is even higher than the purchase intention of Chinese economy cars, while all other countries reported highest purchase intentions for the economy segment.

The comparison of MDC and LDC showed unexpected results and do not support the formulated hypothesis. This is because the mean difference between MDC and LDC in the electrical segment is not significant on a p-level of .05. The lack of significance in this comparison is caused for a large amount by the relatively high evaluation of Chinese cars in the electrical segment. Since the overall effect of COO on purchase intention is significant, with significant values in two of the three segments, and all three segments showing the effect to be in the right direction, hypothesis 9A is partially supported.

7.4   COMPARISON BETWEEN THE DEPENDENT VARIABLES

Comparing the outcomes of the COO effect on quality perception, price perception, and purchase intention, interesting results are revealed.

For example, the distance to the weighted average in percentages is higher for price perception and purchase intentions than it is for quality perception. Germany and Romania, and USA and China show

mirrored patterns between quality perceptions, price perceptions, and purchase intentions. Furthermore, it shows that the variety between countries is larger for price perception and purchase intention than it is for quality perception.

The significant correlation tests show that quality perception, price perception, and purchase intention are positively related to each other. The effects can be considered as medium effects. Partial correlation tests were also performed in order to control for a third variable. The partial correlation effects were similar, but slightly smaller. Since the dependent variables are related to each other, MANOVA could be appropriate to use for the analysis. However, the assumption of equality of covariance matrices was not met ($p<.05$). Therefore, for each dependent variable a two-way mixed Anova is used for the analysis.

Concerning the effect size of COO on quality perception and on purchase intention, the results reveal that the effect size is larger for quality perception than it is for purchase intention. This was expected, and is in line with the findings of prior research (Peterson & Jolibert, 1995). The effect of COO on price perception was expected to be similar as that of quality perception, but it reported an even larger effect size. The effect sizes in general are slightly smaller than the effect sizes reported in prior research, this is especially the case for purchase intention. A possible explanation is provided, which is related to the relatively low scores of purchase intentions in general. The low scores in general could lead to smaller effects between countries, resulting in a smaller COO effect on purchase intention.

Overall, the COO effects on the dependent variables show that most expectations can be confirmed under the specific conditions of this research. Other findings were unexpected, for instance the interaction effect of COO and segment revealed remarkable results for China in the electrical segment.

8. CONCLUSIONS

In this chapter, the final conclusions of this research are drawn. General conclusions and main findings are presented. Furthermore, managerial implications are made, and finally limitations and future research are discussed.

8.1 GENERAL CONCLUSIONS AND MAIN FINDINGS

Although many studies have been conducted in order to estimate COO effects for a variety of countries, products, and situations, no consensus is found in the literature. Some researchers (e.g. Johansson, Douglas, & Nonaka, 1985; Agrawal & Kamakura, 1999) are skeptical about the effect and reported that they did not find significant effects of COO on consumer's product evaluations. Others (e.g. Fetscherin & Toncar, 2010; Bilkey & Nes, 1982) did find significant results for the influence of the COO effect on product evaluations. The suggestion arises whether the COO effect is context dependent and varies between different situations. Therefore, the main effect of COO is tested on quality perception, price perception, and purchase intention. Based on the results, it can be concluded that the COO significantly influences consumer's quality perception, price perception, and purchase intention. Overall, German cars are perceived the best, followed by USA, Japan, Mexico, China, and Romania. If quality perception, price perception, and purchase intention are combined, Germany scores 25% above weighted average, USA (+7%) also scored above average, while Japan (-1%), Mexico (-6%), China (-10%), and Romania (-20%), report scores below the weighted average.

Next, the main effect of the second manipulated variable is measured on quality perception, price perception, and purchase intention. In terms of quality and price, respondents evaluated the economy car the lowest, the luxury car the highest, with the electrical car in between. For purchase intention, the opposite direction is found, which was expected since the main part of the respondents are in the age group between 18-24 and 25-34 and would buy an economy car rather than a more expensive electrical or luxury car. The main effect of segment showed significant results for all dependent variables.

The main interest of this research is related to the interaction effect of COO and segment on quality perception, price perception, and purchase intention. Based on the results, it can be concluded that the interaction of COO and segment significantly influences quality perception, price perception, and purchase intention. Hence, the COO effect varies per country in each segment. A remarkable combination of COO and segment is the Chinese car in the electrical segment, which is evaluated relatively high in the electrical segment, while evaluated relatively low in the economy – and luxury segment. The suggested explanation is that people perceive China as a country that produces high-tech products rather than prestigious luxury products.

Furthermore, the comparison of more developed countries (MDC) and less developed countries (LDC) showed that the Dutch consumers evaluate cars originating from MDC higher than cars originating from LDC for quality perception, price perception, and purchase intention. Especially in the luxury segment, the MDC score better than LDC.

In contrast to prior research there are no significant differences found in the variety between countries in the economy segment and the variety between countries in the luxury segment for quality perception and purchase intention. Only for price perception, significant differences in the variety between countries in the economy -, electrical -, and luxury segment are reported. The suggestion that the COO effect is larger in the luxury segment, because not only functionality is important but also prestige and status, cannot be confirmed.

Overall, the aim of this research to enhance the existing literature of COO effects with a Dutch consumer perspective is achieved. Since the COO effect is considered to be context dependent and is never tested in the Dutch passenger car market before, the outcomes of this research are clearly of added value to the existing literature concerning COO research. Especially the interaction effects between COO and segment provides interesting results, which can be further investigated in future research.

8.2 MANAGERIAL IMPLICATIONS

The new insights provided by this COO research in the Dutch passenger car market can support marketeers and strategic decision makers of manufacturers that are planning to enter the Dutch market or manufacturers that are already present in the Dutch market.

For the manufacturers that are planning to be globally active the Dutch market can be interesting. Despite the relatively small sizes of the industry, the annual amount of sold cars is substantive. Given the absence of a dominant home brand, and the net import of cars which is relatively high, the Dutch market is quite interesting. When entering the Dutch market, the manufacturer should be careful with its pricing and positioning strategies. For the COO in question, information related to quality perceptions, price perceptions and purchase intentions of Dutch consumers should be taken into account. According to the results in this study, the COO significantly influences these perceptions and intentions. Similar cars with only different COO labels are perceived significantly different. Positive COO labels lead to higher evaluations of respondents in terms of quality, respondents are willing to pay more for it, and given equal prices do show higher purchase intentions for it. In general, Dutch consumers evaluate cars from more developed countries better than cars from less developed countries. This is especially the case in the luxury segment and to some extent in the electrical segment. Hence, introducing a luxury car originating from a less developed country would not be advised. For Chinese manufacturers, this study show that a car in the electrical segment would suit best. In terms of marketing strategies, less developed countries should emphasize on intrinsic products attributes such as size, engine power, or fuel consumption, rather than on the COO.

For manufacturers that are already present in the Dutch market, the insights provided by this study can be used in terms of differentiation and marketing strategies. When facing fierce competition of low priced new entrants, a positive COO label can support the manufacturer in differentiating its brand from others. The COO effect has proven to influence consumer's quality perceptions, price perceptions, and purchase intentions. Therefore, equal or similar intrinsic product attributes can be better perceived when an extrinsic product attribute like the COO is positive and emphasized by marketing communications. For the countries that are already present in the Dutch passenger car market, and do not have a positive country label the advice is to emphasize marketing communications on intrinsic product attributes.

8.3   LIMITATIONS AND FUTURE RESEARCH

Although this research has investigated the COO effect for cars originating from six different countries, comparing two levels of development, in and between different segments of the Dutch car market, with a high number of participants, this research has several limitations. Because the COO effect is context dependent, it is interesting to test it in a variety of situations. There is a wide range of different research methods, perspectives, countries, and conditions possible. However, this research investigated only a small part of the enormous field of research.

As already mentioned in the scope of the research, this research is limited to investigating the COO effect in only one product category. Furthermore, the respondent group and the number of countries that were investigated are limited.

The research design itself had some limitations as well, as discussed in the considerations paragraph. For example, the 'between subjects'- factor country increased the required number of respondents substantively, leaving less room for other interesting 'between subjects'- factors. Therefore, it was decided to consider the variable segments as a repeated measures factor, keeping the number of required respondent reasonable. The downside of the repeated measures design is the 'practice effect' which can influence the evaluations of the second and third car. Although the randomly ordering of the cars controlled for this effect, a full 'between subjects'- design would have yield better data.

Moreover, if the number of conditions or groups is not restricted, it would have been interesting to compare branded versus non-branded cars. Also the comparison between several continents, which was originally the idea, would have been interesting. In this research, the comparison of continents is not taken into account as only two countries per continent were studied. This is insufficient to draw meaningful conclusions related to continents.

This research has investigated the COO effect from a Dutch consumer perspective for multiple countries with different levels of development in and between several segments. Some interesting insights provided by the research should be further investigated in order to confirm the suggestions. For example, the interaction effect of COO and segment in the case of a Chinese car in the electrical segment. The remarkably results suggest that Dutch consumers associate China with electrical or high-tech products rather than with luxury products. The underlying explanations of the results can be further investigated by future research.

Since the COO effect is considered to be context dependent, the current results should not be generalized. Therefore it would be interesting to research the COO effect in different situations. Other countries, continents, branded versus not-branded, experimental conditions, and other varieties can all extend the existing literature of COO research. Since the COO effect can significantly influence consumer's perceptions, future research on the underlying dimensions is needed to get a better understanding of the COO effect in a variety of situations, in order to be used properly by marketeers and decision makers.

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APPENDIX A: PRE-TEST QUESTIONNAIRE

Dear Participant,

It is very appreciated that you are willing to take approximately 10 minutes to fill in this questionnaire. A large number of participants is essential for the success of this research, which is necessary for my graduation.The topic of this questionnaire is about passenger cars.

The questionnaire consists of three sections, concerning cars from different segments. Each section consists of 2 parts, including:

- part 1 contains photos with information about a car that is coming to the Dutch market.
- part 2 contains questions related to this car that is coming to the Dutch market.

Before and after the 3 sections, some general questions will be asked.

There are no right or wrong answers, please fill in this survey honestly, the answers will be treated anonymously and confidentially.

For questions and / or remarks please contact me by email (laurens_spiele@hotmail.com)

Thank you for your participation!

Laurens Spiele

-Next Page-

GENERAL QUESTIONS CONCERNING PASSENGER CARS

Please fill in your opinion about the following statements and questions related to the product category 'passenger cars'.

In general, would you consider yourself familiar or unfamiliar with this product category?
Very unfamiliar   1   2   3   4   5   6   7   Very familiar

In general, I have a strong interest in this product category.
Strongly disagree   1   2   3   4   5   6   7   Strongly agree

This product category is very important to me.
Strongly disagree   1   2   3   4   5   6   7   Strongly agree

In general, how knowledgeable are you about different types of passenger cars in the market?
Not at all knowledgeable   1   2   3   4   5   Very knowledgeable

Compared to others you know, how knowledgeable are you about the features of different types of passenger cars in the market?
Not at all knowledgeable   1   2   3   4   5   Very knowledgeable

Considering the sizeable investment with the purchase of a car, how risky would you say purchasing a

car would be?

| Not risky at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very risky |

Giving the expense involved with purchasing a car today, how much risk would you say would be involved with purchasing a new car?

| Substantial risk | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very little risk |

When I would buy a car, I always buy a car originating from a specific country…

| Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |

When I am buying a new car, I would stick to the same brand or manufacturer…

| Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |

I consider myself loyal to buying cars from a specific country…

| Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |

Please proceed to the next page.

-Next Page-

Economy car

Made in China

Specifications:

Fuel type: **Petrol**
Body style: **Hatchback**
Transmission: **5-speed manual**
Engine: **1229 cc 4 cylinder**
Power: **63 kW / 86 HP**
Weight: **1020 kg**
Fuel consumption: **5,1 L / 100 km**

Features:

•ABS, Cruise control, Traction control
•Front airbags, Side airbags
•Power steering, steering Wheel adjustability
•Airconditioning
•Board computer
•Remote control with alarm system
•Powered windows
•16 inch alloy wheels
•AM/FM single CD Audio system

SECTION A

After you have viewed the information concerning this passenger car, you can proceed to the next page.

-Next Page-

The following statements are related to the car which was shown on the previous page.
Please fill in your opinion about the statements.

The car shows a high degree of technological advancement:

| *Strongly disagree* | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *Strongly agree* |

The car is carefully produced and has fine workmanship:
Strongly disagree   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Strongly agree*

The car shows a high degree of prestige:
Strongly disagree   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Strongly agree*

The car appears to be reliable:
Strongly disagree   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Strongly agree*

The car shows to be attractively designed:
Strongly disagree   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Strongly agree*

The car appears to be of good overall quality:
Strongly disagree   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Strongly agree*

-Next Page-

Consider you are planning to buy a car in this segment. The average price of a car in this segment is €15.000.

The likelyhood of purchasing this car is…
Very low   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Very high*

The probability that I would consider buying the car is…
Very low   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Very high*

If you were going to buy a car, the probability of buying this model is...
Very low   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Very high*

I think this car will cost approximatily…
€10.000.   *€12.000*   *€14.000*   *€16.000.*   *€18.0000*   *€20.000.*

The maximum amount of money that I am willing to pay for this car is…
€10.000.   *€12.000*   *€14.000*   *€16.000.*   *€18.0000*   *€20.000.*

-Next Page-

The car that was shown, could be subscribed to the following segment…

- Economy
- Luxury
- Electrical
- I don't know

The car thas was shown, originated from the following country…

- USA
- Mexico
- Germany
- Romania
- Japan
- China
- I don't know

This is the end of section 1, please continue the questionnaire by pushing the following buttom.

-Next Page-

Luxury car

Made in Japan

Specifications:

Fuel Type: **Diesel**
Body Style: **Sedan**
Transmission: **7-speed Automatic**
Engine: **3000 cc 6 cylinder**
Power: **184 kW / 250 HP**
Weight: **1720 kg**
Fuel consumption: **6.5 L / 100 km**

Features:

- ABS, Cruise control, Traction control
- Front Airbags, Side-airbags
- Powersteering, steeringwheel adjustability
- Climate control
- Boardcomputer + telephone and bluetooth
- Parkingassistance
- Remote control with alarm system
- Electrically adjustable and heated seats
- Electric mirrors
- 20 inch alloy wheels
- Xenon light + LED lighting
- AM/FM /CD/DVD Multimedia system

SECTION B

After you have viewed the information concerning this passenger car, you can proceed to the next page.

-Next Page-

The following statements are related to the car which was shown on the previous page.
Please fill in your opinion about the statements.

The car shows a high degree of technoglogical advancement:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car is carefully produced and has fine workmanship:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car shows a high degree of prestige:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car appears to be reliable:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car shows to be attractively designed:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car appears to be of good overall quality:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

-Next Page-

Consider you are planning to buy a car in this segment. The average price of a car in this segment is €65.000.

The likelyhood of purchasing this car is…
Very low   1   2   3   4   5   6   7   Very high

The probability that I would consider buying the product is…
Very low   1   2   3   4   5   6   7   Very high

If you were going to buy a car, the probability of buying this model is...
Very low   1   2   3   4   5   6   7   Very high

-Next Page-

I think this car will cost approximatily…
€50.000.   €55.000   €60.000   €65.000.   €70.0000   €75.000   €80.000.

The maximum amount of money that I am willing to pay for this car is…
€50.000.   €55.000   €60.000   €65.000.   €70.0000   €75.000   €80.000.

-Next Page-

The car that was shown, could be subscribed to the following segment…

-   Economy
-   Luxury
-   Electrical
-   I don't know

The car thas was shown, originated from the following country…

-   USA
-   Mexico
-   Germany
-   Romania
-   Japan
-   China
-   I don't know

This is the end of section 2, please continue to the next page by pushing the following buttom.

-Next Page-

Electrical car

Made in USA

Specifications:

Fuel type: **Hybrid**
Body style: **5-door hatchback**
Transmission: **Automatic**
Fuel engine: **1400 cc 4 cilinder**
Electric motor: **permanent magnet generator**
Combined power: **111kW / 150 HP**
Charging time: (230V/16A): **3.5 hours**
Weight: **1735 kg**
Fuel consumption: **1.2 L / 100 km**

Features:

- ABS, Cruise control, Traction control
- Front Airbag, Side airbags
- Multifuntional steeringwheel
- Airconditioning
- Boordcomputer / navigation / bluetooth
- Remote control + alarmsystem
- Heated Seats
- 17 inch alloy wheels
- AM/FM /CD player
- Parkassist (rear)
- LED lighting

SECTION C

After you have viewed the information concerning this passenger car, you can proceed to the next page.

-Next Page-

The following statements are related to the car which was shown on the previous page.
Please fill in your opinion about the statements.

The car shows a high degree of technoglogical advancement:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car is carefully produced and has fine workmanship:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car shows a high degree of prestige:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car appears to be reliable:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car shows to be attractively designed:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car appears to be of good overall quality:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

-Next Page-

Consider you are planning to buy a car in this segment. The average price of a car in this segment is €35.000.

The likelyhood of purchasing this car is…
Very low   1   2   3   4   5   6   7   Very high

The probability that I would consider buying the product is…
Very low   1   2   3   4   5   6   7   Very high

If you were going to buy a car, the probability of buying this model is...
Very low   1   2   3   4   5   6   7   Very high

-Next Page-

I think this car will cost approximatily…
€20.000.   €25.000   €30.000   €35.000.   €40.0000   €45.000   €50.000.

The maximum amount of money that I am willing to pay for this car is…
€20.000.   €25.000   €30.000   €35.000.   €40.0000   €45.000   €50.000.

-Next Page-

The car that was shown, could be subscribed to the following segment…

- Economy
- Luxury
- Electrical
- Don't know

The car thas was shown, originated from the following country…

- USA
- Mexico
- Germany
- Romania
- Japan
- China
- Don't know

This is the end of section 3, please continue to the next page by pushing the following buttom.

-Next Page-

GENERAL QUESTIONS:
What is your residency?

- The Netherlands
- Other…

What is your ethnic background?

- Dutch
- Other…

What is your Gender?

- Male
- Female

100

What is your age?

- < 17 years
- 18 – 24 years
- 25 – 34 years
- 35 – 44 years
- 45 – 59 years
- 60 – 74 years
- > 75 years

What is your monthly income (in Euro's)?

- < 1000
- 1001-2000
- 2001-3000
- 3001-4000
- 4001-5000
- 5001-6000
- > 6000

What is the highest level of education that you have completed?

- Primary school
- Secondary school
- MBO
- HBO
- University bachelor
- University master
- Other…

The following questions are especially for this pre-test.

Are the pictures, specifications, and features of the shown cars:
- realistic? ...
- Credible for the segment in which they are used? …
- Understandable? ...
Are the questions clear and understandable? …
Would it increase the understandability when the questionnaire is in Dutch? …
How long did it take to complete the questionnaire (approximately)? …

In the case you have any comments related to this questionnaire, please write it down in the following box…

-Next Page-

Thank you very much for completing the questionnaire! However, I need a lot more respondents. If you have any friends or family members that are also willing to participate in the questionnaire, please forward the link or email to them. Your help is greatly appreciated!

With kind regards,

Laurens Spiele

-End-

APPENDIX B: FINAL QUESTIONNAIRE ENGLISH VERSION

In this example of the final questionnaire, the cars are originating from Japan, and the ordering is economy segment – luxury segment – electrical segment. This example would have the code: 333-132. The first digits are explaining the country, the second row of digits explains the order of the shown segments. Online, respondents are randomly assigned to different codes in order to randomize the country and the segment variable.

The following figure displays the flow chart of the questionnaire. The blocks are used in order to give a clear overview of the final questionnaire.

```
┌─────────────────────────────────────────┐
│              Introduction                 │
└─────────────────────────────────────────┘
                    ↓
┌─────────────────────────────────────────┐
│          Screening Questions              │
└─────────────────────────────────────────┘
                    ↓
┌─────────────────────────────────────────┐
│            Treatment car :                │
│            Segment A/B/C                   │
│          Country 1/2/3/4/5/6              │
└─────────────────────────────────────────┘
                    ↓
┌─────────────────────────────────────────┐
│  Questions measuring Dependent Variables: │
│        •   Quality Perception             │
│        •   Price Perception               │
│        •   Purchase Intention             │
└─────────────────────────────────────────┘
                    ↓
┌─────────────────────────────────────────┐
│          Manipulation checks:             │
│        •   Segments                       │
│        •   Country of Origin              │
└─────────────────────────────────────────┘
                    ↓
┌─────────────────────────────────────────┐
│   Questions measuring Control Variables:  │
│        •   Product Class Knowledge        │
│        •   Product Class involvement      │
│        •   Level of Risk                  │
│        •   Level of Loyalty               │
└─────────────────────────────────────────┘
                    ↓
┌─────────────────────────────────────────┐
│              Demographics                 │
└─────────────────────────────────────────┘
                    ↓
┌─────────────────────────────────────────┐
│                Wind-up                    │
└─────────────────────────────────────────┘
```

Introduction

Dear Participant,

It is very much appreciated that you are willing to take approximately 10 minutes to fill in this questionnaire. A large number of participants is essential for the success of this research, which is necessary for my graduation.The topic of this questionnaire is passenger cars.

The questionnaire consists of three sections, concerning cars from different segments (economy, luxury, electrical). Each section consists of 2 parts:

- part 1 contains photos with information about a car that is coming to the Dutch market.
- part 2 contains questions related to this car that is coming to the Dutch market.

Before and after the three sections, some general questions will be asked.

There are no right or wrong answers, please fill in this survey honestly, the answers will be treated anonymously and confidentially.

For questions and / or remarks please contact me by email (laurens_spiele@hotmail.com)

Thank you for your participation!

Laurens Spiele

-Next Page-

Screening Questions

GENERAL QUESTIONS

1. What is your Nationality?
(Note: if you have more than one nationality, please include them all)

- Dutch
- German
- Belgium
- Spanish
- Greek
- Italian
- Other…

2. Are you living in the Netherlands?

- Yes
- No

3. Do you currently own a car?

- Yes
- No

4. Who paid for the car?

- I do not have a car
- I paid for the car myself
- My parents paid for the car
- Other…

5. Are you planning to buy a new car in the future?

- Yes, within now and 12 months
- Yes, within now and 2 years
- Yes, within now and 5 years
- Yes, within now and 10 years
- No, I will never buy a car

6. In general, would you consider yourself familiar or unfamiliar with this product category?

Very unfamiliar   1   2   3   4   5   6   7   Very familiar

-Next Page-

> **Treatment car :**
> **Segment A/B/C**
> **Country 1/2/3/4/5/6**

Please take a look at this car and its specifications and features.

Economy segment:

🔴 JAPANESE CAR

Specifications:

Fuel type: **Petrol**
Body style: **Hatchback**
Transmission: **5-speed manual**
Engine: **1229 cc 4 cylinder**
Power: **63 kW / 86 HP**
Weight: **1020 kg**
Fuel consumption: **5,1 L / 100 km**

Features:

•ABS, Cruise control, Traction control
•Front airbags, Side airbags
•Power steering, steering Wheel adjustability
•Airconditioning
•Board computer
•Powered Windows
•Remote control with alarm system
•16 inch alloy wheels
•AM/FM single CD Audio system

After you have viewed the information concerning this passenger car, you can proceed to the next page.

-Next Page-

Questions measuring Dependent Variables:
- **Quality Perception**
- **Price Perception**
- **Purchase Intention**

The following statements are related to the car which was shown on the previous page.
Please fill in your opinion about the statements.

7. The car shows a high degree of technological advancement:

| *Strongly disagree* | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *Strongly agree* |

The car is carefully produced and has fine workmanship:

| *Strongly disagree* | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *Strongly agree* |

The car shows a high degree of prestige:

| *Strongly disagree* | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *Strongly agree* |

The car appears to be reliable:

| *Strongly disagree* | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *Strongly agree* |

The car shows to be attractively designed:

| *Strongly disagree* | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *Strongly agree* |

The car appears to be of good overall quality:

| *Strongly disagree* | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *Strongly agree* |

-Next Page-

8. I think this car will cost approximatily (in Euros)…   {{tekstbox}}

The maximum amount of money that I am willing to pay for this car is (in Euros)…   {{tekstbox}}

-Next Page-

Imagine you are planning to buy a car in this segment. The price of this car is €15.000.

9. The likelyhood that I would purchase this car is…

| *Very low* | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *Very high* |

The probability that I would consider buying the car is…

| *Very low* | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *Very high* |

If you were going to buy a car, the probability of buying this model is...

| *Very low* | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *Very high* |

-Next Page-

Manipulation checks:
- **Segments**
- **Country of Origin**

---

10. The car that was shown, could be subscribed to the following segment…

- Economy
- Luxury

- Electrical
- I don't know

11. The car thas was shown, originated from the following country…

- USA
- Mexico
- Germany
- Romania
- Japan
- China
- I don't know

This is the end of section 1, please continue the questionnaire by pushing the following buttom.

-Next Page-

> **Treatment car :**
> **Segment A/B/C**
> **Country 1/2/3/4/5/6**

Please take a look at this car and its specifications and features.

Luxury Segment:

🔴 **JAPANESE CAR**

Specifications:

Fuel Type: **Diesel**
Body Style: **Sedan**
Transmission: **7-speed Automatic**
Engine: **3000 cc 6 cylinder**
Power: **184 kW / 250 HP**
Weight: **1720 kg**
Fuel consumption: **6.5 L / 100 km**

Features:

•ABS, Cruise control, Traction control
•Front Airbags, Side-airbags
•Powersteering, steeringwheel adjustability
•Climate control
•Boardcomputer + telephone and bluetooth
• Parkingassistance
•Remote control with alarm system
•Electrically adjustable and heated seats
•Electric mirrors
•20 inch alloy wheels
•Xenon light + LED lighting
•AM/FM /CD/DVD Multimedia system

After you have viewed the information concerning this passenger car, you can proceed to the next page.

-Next Page-

Questions measuring Dependent Variables:
- **Quality Perception**
- **Price Perception**
- **Purchase Intention**

The following statements are related to the car which was shown on the previous page.
Please fill in your opinion about the statements.

12. The car shows a high degree of technoglogical advancement:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car is carefully produced and has fine workmanship:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car shows a high degree of prestige:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car appears to be reliable:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car shows to be attractively designed:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

The car appears to be of good overall quality:
Strongly disagree   1   2   3   4   5   6   7   *Strongly agree*

-Next Page-

13. I think this car will cost approximatily (in Euros)…   {{tekstbox}}

The maximum amount of money that I am willing to pay for this car is (in Euros)…   {{tekstbox}}

-Next Page-

Imagine you are planning to buy a car in this segment. The price of this car is €65.000.

14. The likelyhood that I would purchase this car is…
Very low   1   2   3   4   5   6   7   *Very high*

The probability that I would consider buying the product is…
Very low   1   2   3   4   5   6   7   *Very high*

If you were going to buy a car, the probability of buying this model is...
Very low   1   2   3   4   5   6   7   *Very high*

-Next Page-

Manipulation checks:
- **Segments**
- **Country of Origin**

15. The car that was shown, could be subscribed to the following segment…

- Economy
- Luxury

- Electrical
- I don't know

16. The car thas was shown, originated from the following country…

- USA
- Mexico
- Germany
- Romania
- Japan
- China
- I don't know

This is the end of section 2, please continue to the next page by pushing the following buttom.

-Next Page-

> **Treatment car :**
> **Segment A/B/C**
> **Country 1/2/3/4/5/6**

Please take a look at this car and its specifications and features.

Electrical segment:

🔴 JAPANESE CAR

Specifications:

Fuel type: **Hybrid**
Body style: **5-door hatchback**
Transmission: **Automatic**
Fuel engine: **1400 cc 4 cilinder**
Electric motor: **permanent magnet generator**
Combined power: **111kW / 150 HP**
Charging time: (230V/16A): **3.5 hours**
Weight: **1735 kg**
Fuel consumption: **1.2 L / 100 km**

Features:

- ABS, Cruise control, Traction control
- Front Airbag, Side airbags
- Multifuntional steeringwheel
- Airconditioning
- Boardcomputer / navigation / bluetooth
- Remote control + alarmsystem
- Heated Seats
- 17 inch alloy wheels
- AM/FM /CD player
- Parkassist (rear)
- LED lighting

After you have viewed the information concerning this passenger car, you can proceed to the next page.

-Next Page-

> **Questions measuring Dependent Variables:**
> - **Quality Perception**
> - **Price Perception**
> - **Purchase Intention**

The following statements are related to the car which was shown on the previous page.
Please fill in your opinion about the statements.

17. The car shows a high degree of technoglogical advancement:
Strongly disagree   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Strongly agree*

The car is carefully produced and has fine workmanship:
Strongly disagree   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Strongly agree*

The car shows a high degree of prestige:
Strongly disagree   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Strongly agree*

The car appears to be reliable:
Strongly disagree   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Strongly agree*

The car shows to be attractively designed:
Strongly disagree   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Strongly agree*

The car appears to be of good overall quality:
Strongly disagree   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Strongly agree*

-Next Page-

18. I think this car will cost approximatily (in Euros)…   {{tekstbox}}

The maximum amount of money that I am willing to pay for this car is (in Euros)…   {{tekstbox}}

-Next Page-

Imagine you are planning to buy a car in this segment. The price of this car is €35.000.

19. The likelyhood that I would purchase this car is…
Very low   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Very high*

The probability that I would consider buying the product is…
Very low   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Very high*

If you were going to buy a car, the probability of buying this model is...
Very low   *1*   *2*   *3*   *4*   *5*   *6*   *7*   *Very high*

-Next Page-

> **Manipulation checks:**
> - **Segments**
> - **Country of Origin**

20. The car that was shown, could be subscribed to the following segment…

- Economy

- Luxury
- Electrical
- Don't know

21. The car thas was shown, originated from the following country…

- USA
- Mexico
- Germany
- Romania
- Japan
- China
- Don't know

This is the end of section 3, please continue to the next page by pushing the following buttom.

-Next Page-

> **Questions measuring Control Variables:**
> • **Product Class Knowledge**
> • **Product Class involvement**
> • **Level of Risk**
> • **Level of Loyalty**

GENERAL QUESTIONS CONCERNING PASSENGER CARS

Please fill in your opinion about the following statements and questions related to the product category 'passenger cars'.

22. In general, I have a strong interest in this product category.
Strongly disagree　　1　　2　　3　　4　　5　　6　　7　　*Strongly agree*

This product category is very important to me.
Strongly disagree　　1　　2　　3　　4　　5　　6　　7　　*Strongly agree*

23. In general, how knowledgeable are you about different types of passenger cars in the market?
Not at all knowledgeable　　1　　2　　3　　4　　5　　*Very knowledgeable*

Compared to others you know, how knowledgeable are you about the features of different types of passenger cars in the market?
Not at all knowledgeable　　1　　2　　3　　4　　5　　*Very knowledgeable*

24. Considering the sizeable investment with the purchase of a car, how risky would you say purchasing a car would be?
Not risky at all　　1　　2　　3　　4　　5　　6　　7　　Very risky

Given the expense involved purchasing a car today, how much risk would you say would be involved with purchasing a new car?
Substantial risk　　1　　2　　3　　4　　5　　6　　7　　Very little risk

25. When buying a car, I always buy a car originating from a specific country…
Strongly disagree　　1　　2　　3　　4　　5　　Strongly agree

When buying a new car, I would stick to the same brand or manufacturer…
Strongly disagree   1   2   3   4   5   Strongly agree

I consider myself loyal buying cars from a specific country…
Strongly disagree   1   2   3   4   5   Strongly agree

26. When you are going to buy a new car, regardless of this questionaire, in which segment will that be?

- Economy (<€20.000)
- Medium / middle (€20.000. – €50.000.)
- Luxury (> €50.000.)
- Other…
- Don't know

27. When you are going to buy a new car, regardless of this questionaire, will that be an electric/ hybrid driven car or a car driven by conventional fuels (Petrol, Diesel)?

- Yes, electric / hybrid
- No, petrol / diesel
- Don't know

Please proceed to the next page.

<div align="center">-Next Page-</div>

Demographics

GENERAL QUESTIONS:

28. Does one of your parents or grandparents have the following nationalities?
(Note: if multiple answers are relevant, please)

- American
- German
- Japanese
- Mexican
- Romanian
- Chinese
- No, my parents and grandparents are not of the above mentioned nationalities

29. What is your Gender?

- Male
- Female

30. What is your age?

- < 17 years
- 18 – 24 years
- 25 – 34 years
- 35 – 44 years
- 45 – 59 years

- 60 – 74 years
- > 75 years

31. What is your monthly net income (in Euros)?

- < 1000
- 1001-2000
- 2001-3000
- 3001-4000
- 4001-5000
- > 5000

32. What is the highest level of education that you have completed?

- Primary school
- Secondary school
- MBO
- HBO
- University bachelor
- University master
- Other…

33. In the case you have any comments related to this questionnaire, please write it down in the following box…

-Next Page-

Wind-up

Thank you very much for completing the questionnaire! However, I need a lot more respondents. If you have any friends or family members that are also willing to participate in the questionnaire, please forward the link or email to them. Your help is greatly appreciated!

With kind regards,

Laurens Spiele

-End-

APPENDIX C: DATA OUTPUT SPSS

C1. SPSS OUTPUT FOR CONTROL VARIABLES

Table 0-1: Test of normality for control variables

Tests of Normality[b]

	Country	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Risk12	USA	.123	56	.034	.964	56	.088
	GER	.138	38	.067	.930	38	.020
	JPN	.131	42	.067	.956	42	.104
	MEX	.112	42	.200[*]	.966	42	.236
	ROM	.174	39	.005	.947	39	.063
	CHI	.167	54	.001	.931	54	.004
Loy123	USA	.135	56	.012	.944	56	.011
	GER	.171	38	.007	.916	38	.007
	JPN	.107	42	.200[*]	.960	42	.143
	MEX	.117	42	.161	.965	42	.215
	ROM	.165	39	.009	.951	39	.086
	CHI	.158	54	.002	.955	54	.042
Inv12Know12	USA	.096	56	.200[*]	.970	56	.168
	GER	.150	38	.030	.958	38	.162
	JPN	.097	42	.200[*]	.966	42	.241
	MEX	.078	42	.200[*]	.969	42	.298
	ROM	.169	39	.007	.934	39	.024
	CHI	.107	54	.180	.963	54	.091
Familiarity	USA	.183	56	.000	.912	56	.001
	GER	.160	38	.016	.914	38	.006
	JPN	.234	42	.000	.900	42	.001
	MEX	.167	42	.005	.921	42	.006
	ROM	.211	39	.000	.902	39	.003
	CHI	.194	54	.000	.889	54	.000

Table 0-2: Kruskal Wallis

Test Statisticsa,b

	Inv12Know12	Risk12	Loy123
Chi-Square	9,071	6,874	3,312
df	5	5	5
Asymp. Sig.	,106	,230	,652

Table 0-3: Kruskal Wallis

Test Statisticsa,b

	Carowner	Plantobuy	Familiarity	Seg?	Petrol
Chi-Square	9,615	4,717	3,876	11,230	6,784
df	5	5	5	5	5
Asymp. Sig.	,087	,451	,567	,057	,237

Table 4: Kruskal Wallis

Test Statisticsa,b

	Gender	Age	Income	Edu
Chi-Square	,868	4,635	2,913	2,395
df	5	5	5	5
Asymp. Sig.	,972	,462	,713	,792

Table 5: Kruskal Wallis

Test Statisticsa,b

	QPTOTAL	PPTOTAL	PITOTAL
Chi-Square	,847	,567	2,382
df	1	1	1
Asymp. Sig.	,357	,452	,123

C2. SPSS OUTPUT FOR DV QUALITY PERCEPTION

MAIN EFFECT COUNTRY:

Table 6: Descriptive statistics

Estimates

Measure:QualityPerception

Country	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
USA	4,615	,098	4,423	4,807
GER	5,067	,118	4,834	5,300
JPN	4,504	,113	4,282	4,726
MEX	3,944	,111	3,725	4,164
ROM	4,044	,117	3,814	4,274
CHN	4,108	,099	3,912	4,304

Table 7: ANOVA main effect country

Tests of Between-Subjects Effects

Measure:QualityPerception
Transformed Variable:Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Powera
Intercept	15305,868	1	15305,868	9573,623	,000	,973	9573,623	1,000
Country	114,672	5	22,934	14,345	,000	,212	71,726	1,000
Error	425,269	266	1,599					

Table 8: Levene's test

Test of Homogeneity of Variances

QPTOTAL

Levene Statistic	df1	df2	Sig.
2,097	5	266	,066

Table 9: Bonferroni post-hoc test

Multiple Comparisons

Dependent Variable:QPTOTAL

	(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Bonferroni	USA	GER	-,45217	,15343	,052	-,9066	,0023
		JPN	,11108	,14901	1,000	-,3303	,5525
		MEX	,67063	,14802	,000	,2322	1,1091
		ROM	,57092	,15225	,003	,1200	1,0219
		CHN	,50705	,13923	,005	,0947	,9194
	GER	USA	,45217	,15343	,052	-,0023	,9066
		JPN	,56326	,16344	,010	,0792	1,0474
		MEX	1,12281	,16253	,000	,6414	1,6042
		ROM	1,02309	,16640	,000	,5302	1,5160
		CHN	,95923	,15457	,000	,5014	1,4171
	JPN	USA	-,11108	,14901	1,000	-,5525	,3303
		GER	-,56326	,16344	,010	-1,0474	-,0792
		MEX	,55955	,15837	,007	,0905	1,0286
		ROM	,45984	,16234	,075	-,0210	,9407
		CHN	,39597	,15019	,133	-,0489	,8408
	MEX	USA	-,67063	,14802	,000	-1,1091	-,2322
		GER	-1,12281	,16253	,000	-1,6042	-,6414
		JPN	-,55955	,15837	,007	-1,0286	-,0905
		ROM	-,09972	,16142	1,000	-,5778	,3784
		CHN	-,16358	,14921	1,000	-,6055	,2784
	ROM	USA	-,57092	,15225	,003	-1,0219	-,1200
		GER	-1,02309	,16640	,000	-1,5160	-,5302
		JPN	-,45984	,16234	,075	-,9407	,0210
		MEX	,09972	,16142	1,000	-,3784	,5778
		CHN	-,06387	,15341	1,000	-,5182	,3905
	CHI	USA	-,50705	,13923	,005	-,9194	-,0947
		GER	-,95923	,15457	,000	-1,4171	-,5014
		JPN	-,39597	,15019	,133	-,8408	,0489
		MEX	,16358	,14921	1,000	-,2784	,6055
		ROM	,06387	,15341	1,000	-,3905	,5182

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MAIN EFFECT SEGMENT:

Table 10: descriptive statistics

Estimates

Measure:QualityPerception

segments	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	3,847	,056	3,737	3,957
2	4,493	,055	4,385	4,601
3	4,802	,054	4,695	4,909

Table 11: Mauchly's test of sphericity

Mauchly's Test of Sphericityb

Measure:QualityPerception

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilona		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
segments	,979	5,720	2	,057	,979	1,000	,500

Table 12: Pairwise comparisons segments

Pairwise Comparisons

Measure:QualityPerception

(I) segments	(J) segments	Mean Difference (I-J)	Std. Error	Sig.a	95% Confidence Interval for Differencea	
					Lower Bound	Upper Bound
1	2	-,646	,059	,000	-,787	-,505
	3	-,955	,055	,000	-1,087	-,823
2	1	,646	,059	,000	,505	,787
	3	-,309	,052	,000	-,433	-,185
3	1	,955	,055	,000	,823	1,087
	2	,309	,052	,000	,185	,433

Table 13: ANOVA within subject effects

Tests of Within-Subjects Effects									
Measure:QualityPerception									
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Powera
segments	Sphericity Assumed	126,241	2	63,120	156,620	,000	,371	313,241	1,000
	Greenhouse-Geisser	126,241	1,958	64,468	156,620	,000	,371	306,692	1,000
	Huynh-Feldt	126,241	2,000	63,120	156,620	,000	,371	313,241	1,000
	Lower-bound	126,241	1,000	126,241	156,620	,000	,371	156,620	1,000
segments * Country	Sphericity Assumed	8,721	10	,872	2,164	,019	,039	21,639	,912
	Greenhouse-Geisser	8,721	9,791	,891	2,164	,020	,039	21,187	,907
	Huynh-Feldt	8,721	10,000	,872	2,164	,019	,039	21,639	,912
	Lower-bound	8,721	5,000	1,744	2,164	,058	,039	10,820	,707
Error(segments)	Sphericity Assumed	214,404	532	,403					
	Greenhouse-Geisser	214,404	520,877	,412					
	Huynh-Feldt	214,404	532,000	,403					
	Lower-bound	214,404	266,000	,806					

INTERACTION EFFECTS COUNTRY * SEGMENTS

Table 14: Descriptive statistics

4. Country * segments

Measure:QualityPerception

Country	segments	Mean	Std. Error	Lower Bound	Upper Bound
USA	1	4,289	,121	4,050	4,527
	2	4,658	,120	4,422	4,893
	3	4,899	,118	4,666	5,131
GER	1	4,618	,147	4,329	4,908
	2	5,114	,145	4,828	5,400
	3	5,469	,143	5,187	5,752
JPN	1	3,770	,140	3,494	4,046
	2	4,643	,138	4,371	4,915
	3	5,099	,136	4,831	5,368
MEX	1	3,403	,138	3,131	3,676
	2	4,058	,136	3,790	4,327
	3	4,372	,135	4,107	4,638
ROM	1	3,517	,145	3,231	3,803
	2	4,128	,143	3,846	4,410
	3	4,487	,142	4,208	4,766
CHI	1	3,485	,124	3,241	3,728
	2	4,355	,122	4,115	4,595
	3	4,485	,120	4,248	4,721

Table 15: Descriptive statistics MDC / LDC

Descriptives

			N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum	Component Variance
QPECO	1.00		136	4,2206	,95428	,08183	4,0588	4,3824	1,83	6,17	
	2.00		136	3,4681	,90779	,07784	3,3142	3,6221	1,00	5,67	
	Total		272	3,8444	1,00311	,06082	3,7246	3,9641	1,00	6,17	
	Model	Fixed Effects			,93132	,05647	3,7332	3,9555			
		Random Effects				,37623	-,9360	8,6248			,27671
QPELEC	1.00		136	4,7807	,86628	,07428	4,6338	4,9276	2,67	7,00	
	2.00		136	4,1961	,94147	,08073	4,0364	4,3557	1,83	6,17	
	Total		272	4,4884	,94928	,05756	4,3751	4,6017	1,83	7,00	
	Model	Fixed Effects			,90466	,05485	4,3804	4,5964			
		Random Effects				,29229	,7745	8,2023			,16485
QPLUX	1.00		136	5,1201	,83708	,07178	4,9781	5,2621	3,00	7,00	
	2.00		136	4,4498	,94680	,08119	4,2892	4,6103	1,67	6,33	
	Total		272	4,7849	,95308	,05779	4,6712	4,8987	1,67	7,00	
	Model	Fixed Effects			,89362	,05418	4,6782	4,8916			
		Random Effects				,33517	,5262	9,0437			,21881

table 16: Levene's test MDC/LDC

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
QPECO	,958	1	270	,329
QPELEC	1,227	1	270	,269
QPLUX	1,391	1	270	,239

table 17: ANOVA MDC/LDC

ANOVA

			Sum of Squares	df	Mean Square	F	Sig.
QPECO	Between Groups	(Combined)	38,500	1	38,500	44,388	,000
		Linear Contrast Term	38,500	1	38,500	44,388	,000
	Within Groups		234,189	270	,867		
	Total		272,689	271			
QPELEC	Between Groups	(Combined)	23,238	1	23,238	28,394	,000
		Linear Contrast Term	23,238	1	23,238	28,394	,000
	Within Groups		220,970	270	,818		
	Total		244,208	271			
QPLUX	Between Groups	(Combined)	30,556	1	30,556	38,264	,000
		Linear Contrast Term	30,556	1	30,556	38,264	,000
	Within Groups		215,612	270	,799		
	Total		246,168	271			

Table18: Multiple comparisons country * segment

Multiple Comparisons

Bonferroni

Dependent Variable	(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
QPECO	USA	GER	-,32973	,18832	,731	-,8983	,2388
		JPN	,51885	,18501	,089	-,0381	1,0758
		MEX	.88559[*]	,18789	,000	,3200	1,4512
		ROM	.77160[*]	,19752	,003	,1746	1,3686
		CHN	.80412[*]	,16327	,000	,3153	1,2930
	GER	USA	,32973	,18832	,731	-,2388	,8983
		JPN	.84858[*]	,20355	,001	,2337	1,4635
		MEX	1.21532[*]	,20617	,000	,5928	1,8378
		ROM	1.10133[*]	,21498	,000	,4511	1,7515

		CHN	1.13385[*]	,18401	,000	,5774	1,6903
	JPN	USA	-,51885	,18501	,089	-1,0758	,0381
		GER	-.84858[*]	,20355	,001	-1,4635	-,2337
		MEX	,36674	,20315	,688	-,2457	,9791
		ROM	,25275	,21209	,983	-,3880	,8935
		CHN	,28527	,18062	,848	-,2592	,8297
	MEX	USA	-.88559[*]	,18789	,000	-1,4512	-,3200
		GER	-1.21532[*]	,20617	,000	-1,8378	-,5928
		JPN	-,36674	,20315	,688	-,9791	,2457
		ROM	-,11399	,21460	1,000	-,7620	,5340
		CHN	-,08147	,18357	1,000	-,6348	,4718
	ROM	USA	-.77160[*]	,19752	,003	-1,3686	-,1746
		GER	-1.10133[*]	,21498	,000	-1,7515	-,4511
		JPN	-,25275	,21209	,983	-,8935	,3880
		MEX	,11399	,21460	1,000	-,5340	,7620
		CHN	,03253	,19341	1,000	-,5530	,6180
	CHN	USA	-.80412[*]	,16327	,000	-1,2930	-,3153
		GER	-1.13385[*]	,18401	,000	-1,6903	-,5774
		JPN	-,28527	,18062	,848	-,8297	,2592
		MEX	,08147	,18357	1,000	-,4718	,6348
		ROM	-,03253	,19341	1,000	-,6180	,5530
QPELEC	USA	GER	-,45630	,19100	,255	-1,0337	,1212
		JPN	,01480	,16129	1,000	-,4696	,4992
		MEX	,59960	,20029	,054	-,0049	1,2041
		ROM	,52953	,20363	,157	-,0871	1,1462
		CHN	,30280	,15221	,531	-,1531	,7587
	GER	USA	,45630	,19100	,255	-,1212	1,0337
		JPN	,47110	,18850	,201	-,1004	1,0426
		MEX	1.05590[*]	,22279	,000	,3833	1,7285
		ROM	.98583[*]	,22579	,001	,3029	1,6688
		CHN	.75910[*]	,18080	,001	,2101	1,3081
	JPN	USA	-,01480	,16129	1,000	-,4992	,4696
		GER	-,47110	,18850	,201	-1,0426	,1004
		MEX	,58480	,19791	,061	-,0139	1,1835
		ROM	,51473	,20128	,176	-,0963	1,1258
		CHN	,28800	,14906	,582	-,1606	,7366
	MEX	USA	-,59960	,20029	,054	-1,2041	,0049
		GER	-1.05590[*]	,22279	,000	-1,7285	-,3833
		JPN	-,58480	,19791	,061	-1,1835	,0139
		ROM	-,07007	,23371	1,000	-,7755	,6353
		CHN	-,29680	,19059	,862	-,8743	,2807
	ROM	USA	-,52953	,20363	,157	-1,1462	,0871
		GER	-.98583[*]	,22579	,001	-1,6688	-,3029
		JPN	-,51473	,20128	,176	-1,1258	,0963

		MEX	,07007	,23371	1,000	-,6353	,7755
		CHN	-,22673	,19409	,986	-,8172	,3637
	CHN	USA	-,30280	,15221	,531	-,7587	,1531
		GER	-.75910*	,18080	,001	-1,3081	-,2101
		JPN	-,28800	,14906	,582	-,7366	,1606
		MEX	,29680	,19059	,862	-,2807	,8743
		ROM	,22673	,19409	,986	-,3637	,8172
QPLUX	USA	GER	-.57049*	,15328	,005	-1,0314	-,1095
		JPN	-,20040	,17833	,990	-,7377	,3369
		MEX	,52672	,19722	,130	-,0690	1,1224
		ROM	,41163	,19392	,434	-,1754	,9987
		CHN	,41424	,15794	,140	-,0586	,8871
	GER	USA	.57049*	,15328	,005	,1095	1,0314
		JPN	,37009	,17420	,432	-,1569	,8970
		MEX	1.09721*	,19349	,000	,5108	1,6836
		ROM	.98212*	,19013	,000	,4045	1,5598
		CHN	.98473*	,15325	,000	,5236	1,4458
	JPN	USA	,20040	,17833	,990	-,3369	,7377
		GER	-,37009	,17420	,432	-,8970	,1569
		MEX	.72711*	,21388	,016	,0820	1,3723
		ROM	,61203	,21085	,070	-,0251	1,2491
		CHN	.61464*	,17831	,013	,0773	1,1520
	MEX	USA	-,52672	,19722	,130	-1,1224	,0690
		GER	-1.09721*	,19349	,000	-1,6836	-,5108
		JPN	-.72711*	,21388	,016	-1,3723	-,0820
		ROM	-,11509	,22705	1,000	-,8003	,5701
		CHN	-,11247	,19720	1,000	-,7082	,4833
	ROM	USA	-,41163	,19392	,434	-,9987	,1754
		GER	-.98212*	,19013	,000	-1,5598	-,4045
		JPN	-,61203	,21085	,070	-1,2491	,0251
		MEX	,11509	,22705	1,000	-,5701	,8003
		CHN	,00261	,19390	1,000	-,5845	,5897
	CHN	USA	-,41424	,15794	,140	-,8871	,0586
		GER	-.98473*	,15325	,000	-1,4458	-,5236
		JPN	-.61464*	,17831	,013	-1,1520	-,0773
		MEX	,11247	,19720	1,000	-,4833	,7082
		ROM	-,00261	,19390	1,000	-,5897	,5845

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

C3. SPSS OUTPUT FOR DV PRICE PERCEPTION

MAIN EFFECT COUNTRY:

Tabel 1: Descriptive statistics

Estimates

Measure	Country	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
QualityPerception	USA	4,615	,098	4,423	4,807
	GER	5,067	,118	4,834	5,300
	JPN	4,504	,113	4,282	4,726
	MEX	3,944	,111	3,725	4,164
	ROM	4,044	,117	3,814	4,274
	CHN	4,108	,099	3,912	4,304
PricePerception	USA	28962,500	860,488	27268,265	30656,735
	GER	33969,298	1044,593	31912,575	36026,021
	JPN	25674,579	993,606	23718,245	27630,913
	MEX	25470,155	981,985	23536,703	27403,607
	ROM	20766,705	1031,114	18736,521	22796,889
	CHN	22993,827	876,279	21268,503	24719,152
PurchaseIntention	USA	2,673	,136	2,405	2,940
	GER	3,336	,165	3,012	3,661
	JPN	2,460	,157	2,152	2,769
	MEX	2,641	,155	2,336	2,946
	ROM	2,051	,163	1,731	2,371
	CHN	2,305	,138	2,033	2,577

Tabel 2: Levene's test

Test of Homogeneity of Variances

PPTOTAL

Levene Statistic	df1	df2	Sig.
2,270	5	266	,048

Tabel 3: Welch test

Robust Tests of Equality of Means

PPTOTAL

	Statistic[a]	df1	df2	Sig.
Welch	23,436	5	120,736	,000

a. Asymptotically F distributed.

Tabel 4: Multiple comparisons

Multiple Comparisons

PPTOTAL
Tamhane

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
USA	GER	-5006.79825*	1496,37541	,018	-9515,8827	-497,7138
	JPN	3287,92063	1458,20633	,332	-1095,0364	7670,8776
	MEX	3492,34496	1356,72432	,160	-580,3494	7565,0393
	ROM	8195.79487*	1244,03651	,000	4456,2364	11935,3534
	CHN	5968.67284*	1296,83192	,000	2083,2997	9854,0460
GER	USA	5006.79825*	1496,37541	,018	497,7138	9515,8827
	JPN	8294.71888*	1536,61819	,000	3652,3537	12937,0840
	MEX	8499.14321*	1440,67020	,000	4140,8753	12857,4112
	ROM	13202.59312*	1335,08674	,000	9143,8378	17261,3484
	CHN	10975.47109*	1384,41424	,000	6785,9023	15165,0399
JPN	USA	-3287,92063	1458,20633	,332	-7670,8776	1095,0364
	GER	-8294.71888*	1536,61819	,000	-12937,0840	-3652,3537
	MEX	204,42433	1400,98428	1,000	-4021,9490	4430,7977
	ROM	4907.87424*	1292,16211	,005	995,2179	8820,5306
	CHN	2680,75220	1343,06706	,531	-1368,9599	6730,4643
MEX	USA	-3492,34496	1356,72432	,160	-7565,0393	580,3494
	GER	-8499.14321*	1440,67020	,000	-12857,4112	-4140,8753
	JPN	-204,42433	1400,98428	1,000	-4430,7977	4021,9490
	ROM	4703.44991*	1176,44299	,002	1150,2668	8256,6330
	CHN	2476,32788	1232,13810	,518	-1228,8415	6181,4973
ROM	USA	-8195.79487*	1244,03651	,000	-11935,3534	-4456,2364
	GER	-13202.59312*	1335,08674	,000	-17261,3484	-9143,8378
	JPN	-4907.87424*	1292,16211	,005	-8820,5306	-995,2179
	MEX	-4703.44991*	1176,44299	,002	-8256,6330	-1150,2668
	CHN	-2227,12203	1106,83796	,516	-5555,3269	1101,0829
CHN	USA	-5968.67284*	1296,83192	,000	-9854,0460	-2083,2997
	GER	-10975.47109*	1384,41424	,000	-15165,0399	-6785,9023
	JPN	-2680,75220	1343,06706	,531	-6730,4643	1368,9599
	MEX	-2476,32788	1232,13810	,518	-6181,4973	1228,8415
	ROM	2227,12203	1106,83796	,516	-1101,0829	5555,3269

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

MAIN EFFECT SEGMENT:

Tabel 5: Mauchly's test

Within Subjects Effect	Measure	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[a]		
						Greenhouse-Geisser	Huynh-Feldt	Lower-bound
segments	PricePerc eption	,949	13,961	2	,001	,951	,976	,500

Mauchly's Test of Sphericity

Tabel 6: ANOVA within subjects

Univariate Tests

Source	Measure		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
segments	PricePerc eption	Sphericity	49168812641,264	2	24584406320,632	478,294	,000	,643	956,588	1,000
		Greenhou se-Geisser	49168812641,264	1,902	25846095839,067	478,294	,000	,643	909,892	1,000
		Huynh-Feldt	49168812641,264	1,952	25192566720,667	478,294	,000	,643	933,495	1,000
		Lower-bound	49168812641,264	1,000	49168812641,264	478,294	,000	,643	478,294	1,000
segments * Country	PricePerc eption	Sphericity Assumed	3271677021,085	10	327167702,109	6,365	,000	,107	63,651	1,000
		Greenhou se-Geisser	3271677021,085	9,512	343958185,277	6,365	,000	,107	60,544	1,000
		Huynh-Feldt	3271677021,085	9,759	335261061,696	6,365	,000	,107	62,114	1,000
		Lower-bound	3271677021,085	5,000	654335404,217	6,365	,000	,107	31,826	,997
Error(seg ments)	PricePerc eption	Sphericity Assumed	27344906092,570	532	51400199,422					
		Greenhou se-Geisser	27344906092,570	506,030	54038094,843					
		Huynh-Feldt	27344906092,570	519,157	52671719,484					
		Lower-bound	27344906092,570	266,000	102800398,844					
a. Computed using alpha = .05										

Tabel 7: Descriptive statistics

Estimates

Measure	segments	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
PricePerception	1	16064,353	303,869	15466,058	16662,647
	2	27713,338	584,548	26562,407	28864,268
	3	35140,842	648,426	33864,142	36417,543

INTERACTION EFFECTS COUNTRY * SEGMENT

Tabel 8: Descriptive statistics

3. Country * segments

Measure	Country	segments	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
Price Perception	USA	1	17799,107	662,122	16495,441	19102,773
		2	29342,857	1273,714	26835,014	31850,701
		3	39745,536	1412,901	36963,643	42527,429
	GER	1	21506,579	803,785	19923,988	23089,170
		2	32907,895	1546,230	29863,488	35952,301
		3	47493,421	1715,197	44116,331	50870,511
	JPN	1	16315,440	764,552	14810,096	17820,785
		2	28148,786	1470,758	25252,977	31044,594
		3	32559,512	1631,478	29347,258	35771,765
	MEX	1	13929,070	755,610	12441,333	15416,807
		2	26993,023	1453,556	24131,085	29854,961
		3	35488,372	1612,396	32313,690	38663,054
	ROM	1	12891,474	793,413	11329,305	14453,644
		2	22544,872	1526,278	19539,749	25549,994
		3	26863,769	1693,065	23530,256	30197,282
	CHN	1	13944,444	674,272	12616,856	15272,033
		2	26342,593	1297,087	23788,730	28896,455
		3	28694,444	1438,828	25861,503	31527,386

Tabel 9: Multiple comparisons PP

Multiple Comparisons

Tamhane

Dependent Variable	(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
PPECO	USA	GER	-3707.47180[*]	1193,59067	,040	-7326,9446	-87,9990
		JPN	1483,66667	1063,13644	,935	-1718,5402	4685,8735
		MEX	3870.03738[*]	970,30478	,002	955,1134	6784,9614
		ROM	4907.63278[*]	1040,02214	,000	1771,9457	8043,3199
		CHN	3854.66270[*]	850,09101	,000	1306,4962	6402,8291
	GER	USA	3707.47180[*]	1193,59067	,040	87,9990	7326,9446
		JPN	5191.13847[*]	1286,26508	,002	1299,8800	9082,3969
		MEX	7577.50918[*]	1210,66516	,000	3904,8053	11250,2131
		ROM	8615.10459[*]	1267,22722	,000	4776,4933	12453,7159
		CHN	7562.13450[*]	1116,63490	,000	4151,2722	10972,9968
	JPN	USA	-1483,66667	1063,13644	,935	-4685,8735	1718,5402
		GER	-5191.13847[*]	1286,26508	,002	-9082,3969	-1299,8800

		MEX	2386,37071	1082,27101	,370	-879,0335	5651,7749
		ROM	3423,96612	1145,19222	,054	-33,3907	6881,3229
		CHN	2370,99603	975,94770	,234	-584,9723	5326,9643
	MEX	USA	-3870.03738*	970,30478	,002	-6784,9614	-955,1134
		GER	-7577.50918*	1210,66516	,000	-11250,2131	-3904,8053
		JPN	-2386,37071	1082,27101	,370	-5651,7749	879,0335
		ROM	1037,59541	1059,57421	,998	-2163,0453	4238,2361
		CHN	-15,37468	873,90285	1,000	-2651,0843	2620,3349
	ROM	USA	-4907.63278*	1040,02214	,000	-8043,3199	-1771,9457
		GER	-8615.10459*	1267,22722	,000	-12453,7159	-4776,4933
		JPN	-3423,96612	1145,19222	,054	-6881,3229	33,3907
		MEX	-1037,59541	1059,57421	,998	-4238,2361	2163,0453
		CHN	-1052,97009	950,71598	,991	-3936,6335	1830,6933
	CHN	USA	-3854.66270*	850,09101	,000	-6402,8291	-1306,4962
		GER	-7562.13450*	1116,63490	,000	-10972,9968	-4151,2722
		JPN	-2370,99603	975,94770	,234	-5326,9643	584,9723
		MEX	15,37468	873,90285	1,000	-2620,3349	2651,0843
		ROM	1052,97009	950,71598	,991	-1830,6933	3936,6335
PPELEC	USA	GER	-3565,03759	2097,14619	,769	-9892,1755	2762,1003
		JPN	1194,07143	2156,66959	1,000	-5303,4370	7691,5798
		MEX	2349,83389	1902,30227	,976	-3362,6533	8062,3210
		ROM	6797.98535*	1731,41302	,002	1595,0058	12000,9649
		CHN	3000,26455	1896,56047	,844	-2678,0763	8678,6054
	GER	USA	3565,03759	2097,14619	,769	-2762,1003	9892,1755
		JPN	4759,10902	2324,47193	,491	-2261,3161	11779,5342
		MEX	5914,87148	2090,62191	,086	-408,2663	12238,0093
		ROM	10363.02294*	1936,42379	,000	4478,3806	16247,6653
		CHN	6565.30214*	2085,39868	,034	270,1199	12860,4843
	JPN	USA	-1194,07143	2156,66959	1,000	-7691,5798	5303,4370
		GER	-4759,10902	2324,47193	,491	-11779,5342	2261,3161
		MEX	1155,76246	2150,32592	1,000	-5337,0256	7648,5505
		ROM	5603,91392	2000,73454	,095	-462,8892	11670,7170
		CHN	1806,19312	2145,24806	1,000	-4660,1338	8272,5201
	MEX	USA	-2349,83389	1902,30227	,976	-8062,3210	3362,6533
		GER	-5914,87148	2090,62191	,086	-12238,0093	408,2663
		JPN	-1155,76246	2150,32592	1,000	-7648,5505	5337,0256
		ROM	4448,15146	1723,50483	,162	-757,1703	9653,4733
		CHN	650,43066	1889,34366	1,000	-5026,0236	6326,8850
	ROM	USA	-6797.98535*	1731,41302	,002	-12000,9649	-1595,0058
		GER	-10363.02294*	1936,42379	,000	-16247,6653	-4478,3806
		JPN	-5603,91392	2000,73454	,095	-11670,7170	462,8892
		MEX	-4448,15146	1723,50483	,162	-9653,4733	757,1703
		CHN	-3797,72080	1717,16528	,362	-8960,9216	1365,4800
	CHN	USA	-3000,26455	1896,56047	,844	-8678,6054	2678,0763

			Mean Difference	Std. Error	Sig.	Lower Bound	Upper Bound
		GER	-6565.30214*	2085,39868	,034	-12860,4843	-270,1199
		JPN	-1806,19312	2145,24806	1,000	-8272,5201	4660,1338
		MEX	-650,43066	1889,34366	1,000	-6326,8850	5026,0236
		ROM	3797,72080	1717,16528	,362	-1365,4800	8960,9216
PPLUX	USA	GER	-7747,88534	2652,60794	,065	-15740,9949	245,2242
		JPN	7186.02381*	2247,31081	,028	436,6615	13935,3861
		MEX	4257,16362	2311,99928	,656	-2683,1321	11197,4593
		ROM	12881.76648*	2160,81105	,000	6383,6802	19379,8527
		CHN	11051.09127*	2220,20632	,000	4393,5716	17708,6109
	GER	USA	7747,88534	2652,60794	,065	-245,2242	15740,9949
		JPN	14933.90915*	2404,86319	,000	7634,8195	22232,9988
		MEX	12005.04896*	2465,42122	,000	4534,7273	19475,3706
		ROM	20629.65182*	2324,23439	,000	13553,8382	27705,4655
		CHN	18798.97661*	2379,55399	,000	11581,0137	26016,9396
	JPN	USA	-7186.02381*	2247,31081	,028	-13935,3861	-436,6615
		GER	-14933.90915*	2404,86319	,000	-22232,9988	-7634,8195
		MEX	-2928,86019	2022,96287	,915	-9027,7388	3170,0184
		ROM	5695.74267*	1848,28095	,042	114,8061	11276,6792
		CHN	3865,06746	1917,38211	,512	-1898,9018	9629,0367
	MEX	USA	-4257,16362	2311,99928	,656	-11197,4593	2683,1321
		GER	-12005.04896*	2465,42122	,000	-19475,3706	-4534,7273
		JPN	2928,86019	2022,96287	,915	-3170,0184	9027,7388
		ROM	8624.60286*	1926,41566	,000	2807,8491	14441,3566
		CHN	6793.92765*	1992,80932	,015	801,3344	12786,5209
	ROM	USA	-12881.76648*	2160,81105	,000	-19379,8527	-6383,6802
		GER	-20629.65182*	2324,23439	,000	-27705,4655	-13553,8382
		JPN	-5695.74267*	1848,28095	,042	-11276,6792	-114,8061
		MEX	-8624.60286*	1926,41566	,000	-14441,3566	-2807,8491
		CHN	-1830,67521	1815,22800	,997	-7289,6229	3628,2725
	CHN	USA	-11051.09127*	2220,20632	,000	-17708,6109	-4393,5716
		GER	-18798.97661*	2379,55399	,000	-26016,9396	-11581,0137
		JPN	-3865,06746	1917,38211	,512	-9629,0367	1898,9018
		MEX	-6793.92765*	1992,80932	,015	-12786,5209	-801,3344
		ROM	1830,67521	1815,22800	,997	-3628,2725	7289,6229

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

Tabel 10: Descriptive statistics MDC vs LDC

			N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum	Between-Component Variance
PPECO	1.00		136	18376,8272	5771,67456	494,91701	17398,0337	19355,6208	6750,00	34000,00	
	2.00		136	13637,6287	4416,43961	378,70657	12888,6636	14386,5937	17,50	25000,00	
	Total		272	16007,2279	5652,15486	342,71223	15332,5111	16681,9448	17,50	34000,00	
	Model	Fixed Effects			5138,92820	311,59329	15393,7665	16620,6894			
		Random Effects				2369,59926	-14101,3855	46115,8413			11035820,59314
PPELEC	1.00		136	29970,2132	10397,59190	891,58615	28206,9302	31733,4963	12000,00	57500,00	
	2.00		136	25459,1912	8834,06748	757,51504	23961,0595	26957,3228	11000,00	47500,00	
	Total		272	27714,7022	9891,30850	599,74867	26533,9432	28895,4612	11000,00	57500,00	
	Model	Fixed Effects			9647,55579	584,96899	26563,0217	28866,3827			
		Random Effects				2255,51103	-944,2827	56373,6871			9490282,56081
PPLUX	1.00		136	39691,1728	13020,82651	1116,52666	37483,0266	41899,3190	12500,00	77500,00	
	2.00		136	30317,5515	9833,92837	843,25240	28649,8577	31985,2452	5000,00	55000,00	
	Total		272	35004,3621	12437,04357	754,10653	33519,7101	36489,0141	5000,00	77500,00	
	Model	Fixed Effects			11537,93895	699,59031	33627,0164	36381,7079			
		Random Effects				4686,81066	-24547,2137	94555,9380			42953535,15920

Descriptives

Tabel 11: Levene's test

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
PPECO	12,388	1	270	,001
PPELEC	2,820	1	270	,094
PPLUX	11,843	1	270	,001

Tabel 12: Welch test

Robust Tests of Equality of Means

		Statistic[a]	df1	df2	Sig.
PPECO	Welch	57,833	1	252,729	,000
PPELEC	Welch	14,867	1	263,134	,000
PPLUX	Welch	44,881	1	251,201	,000

a. Asymptotically F distributed.

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C3. SPSS OUTPUT FOR DV PURCHASE INTENTION

MAIN EFFECT COUNTRY:

Tabel 13: Descriptive statistics

Estimates

Measure:PurchaseIntention

Country	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
USA	2,673	,136	2,405	2,940
GER	3,336	,165	3,012	3,661
JPN	2,460	,157	2,152	2,769
MEX	2,641	,155	2,336	2,946
ROM	2,051	,163	1,731	2,371
CHN	2,305	,138	2,033	2,577

Tabel 14: Levene's test

Test of Homogeneity of Variances

PITOTAL

Levene Statistic	df1	df2	Sig.
,715	5	266	,613

Tabel 15: ANOVA between subjects

Tests of Between-Subjects Effects								
Measure:PurchaseIntention Transformed Variable:Average								
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Intercept	5299,758	1	5299,758	1713,872	,000	,866	1713,872	1,000
Country	113,748	5	22,750	7,357	,000	,121	36,785	,999
Error	822,544	266	3,092					
a. Computed using alpha = .05								

Tabel 16: Multiple comparisons

Multiple Comparisons

PITOTAL
Tamhane

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
USA	GER	-,66364	,22553	,062	-1,3439	,0167
	JPN	,21230	,20530	,996	-,4044	,8290
	MEX	,03179	,22260	1,000	-,6377	,7013
	ROM	,62134	,21002	,058	-,0106	1,2532
	CHN	,36809	,19377	,606	-,2123	,9484
GER	USA	,66364	,22553	,062	-,0167	1,3439
	JPN	.87594*	,22437	,003	,1972	1,5547
	MEX	,69543	,24030	,071	-,0302	1,4211
	ROM	1.28498*	,22870	,000	,5929	1,9770
	CHN	1.03173*	,21387	,000	,3845	1,6790
JPN	USA	-,21230	,20530	,996	-,8290	,4044
	GER	-.87594*	,22437	,003	-1,5547	-,1972
	MEX	-,18051	,22143	1,000	-,8484	,4874
	ROM	,40904	,20877	,563	-,2214	1,0395
	CHN	,15579	,19242	1,000	-,4232	,7348
MEX	USA	-,03179	,22260	1,000	-,7013	,6377
	GER	-,69543	,24030	,071	-1,4211	,0302
	JPN	,18051	,22143	1,000	-,4874	,8484
	ROM	,58954	,22581	,150	-,0920	1,2711
	CHN	,33630	,21078	,838	-,2992	,9718
ROM	USA	-,62134	,21002	,058	-1,2532	,0106
	GER	-1.28498*	,22870	,000	-1,9770	-,5929
	JPN	-,40904	,20877	,563	-1,0395	,2214
	MEX	-,58954	,22581	,150	-1,2711	,0920
	CHN	-,25324	,19745	,967	-,8487	,3422
CHN	USA	-,36809	,19377	,606	-,9484	,2123
	GER	-1.03173*	,21387	,000	-1,6790	-,3845
	JPN	-,15579	,19242	1,000	-,7348	,4232
	MEX	-,33630	,21078	,838	-,9718	,2992
	ROM	,25324	,19745	,967	-,3422	,8487

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

Tabel 17: Kruskal Wallis test Purchase Intention

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
PITOTAL	272	2,5654	1,07315	1,00	5,56
Country	272	3,49	1,804	1	6

Ranks

	Country	N	Mean Rank
PITOTAL	USA	56	144,61
	GER	38	189,70
	JPN	42	130,24
	MEX	43	141,92
	ROM	39	99,15
	CHN	54	118,19
	Total	272	

Test Statistics[a],b

	PITOTAL
Chi-Square	30,235
df	5
Asymp. Sig.	,000

a. Kruskal Wallis Test
b. Grouping Variable: Country

MAIN EFFECT SEGMENTS

Tabel 18: Mauchly's test

Mauchly's Test of Sphericity[b]

Measure:PurchaseIntention

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[a]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
segments	,983	4,613	2	,100	,983	1,000	,500

Tabel 19: Descriptive statistics

Estimates

Measure:PurchaseIntention

segments	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	2,782	,091	2,604	2,961
2	2,598	,080	2,440	2,756
3	2,353	,077	2,201	2,504

Tabel 20: ANOVA within subjects

Tests of Within-Subjects Effects									
Measure:PurchaseIntention									
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
segments	Sphericity Assumed	24,742	2	12,371	10,414	,000	,038	20,829	,988
	Greenhouse-Geisser	24,742	1,966	12,585	10,414	,000	,038	20,475	,987
	Huynh-Feldt	24,742	2,000	12,371	10,414	,000	,038	20,829	,988
	Lower-bound	24,742	1,000	24,742	10,414	,001	,038	10,414	,895
segments * Country	Sphericity Assumed	22,051	10	2,205	1,856	,049	,034	18,563	,854
	Greenhouse-Geisser	22,051	9,830	2,243	1,856	,050	,034	18,248	,849
	Huynh-Feldt	22,051	10,000	2,205	1,856	,049	,034	18,563	,854
	Lower-bound	22,051	5,000	4,410	1,856	,102	,034	9,282	,629
Error(segments)	Sphericity Assumed	631,961	532	1,188					
	Greenhouse-Geisser	631,961	522,975	1,208					
	Huynh-Feldt	631,961	532,000	1,188					
	Lower-bound	631,961	266,000	2,376					

a. Computed using alpha = .05

Tabel 21: Pairwise comparisons

Pairwise Comparisons

Measure:PurchaseIntention

(I) segments	(J) segments	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	,185	,099	,190	-,054	,423
	3	.430[*]	,096	,000	,199	,661
2	1	-,185	,099	,190	-,423	,054
	3	.245[*]	,088	,018	,032	,458
3	1	-.430[*]	,096	,000	-,661	-,199
	2	-.245[*]	,088	,018	-,458	-,032

INTERACTION EFFECT COUNTRY * SEGMENTS

Tabel 22: Descriptive statistics

Estimates

Measure:PurchaseIntention

Country	segments	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
USA	1	2,952	,197	2,564	3,341
	2	2,494	,175	2,150	2,839
	3	2,571	,168	2,241	2,902
GER	1	3,421	,239	2,950	3,892
	2	3,368	,212	2,950	3,787
	3	3,219	,204	2,818	3,620
JPN	1	2,563	,228	2,115	3,012
	2	2,373	,202	1,975	2,771
	3	2,444	,194	2,063	2,826
MEX	1	2,961	,225	2,518	3,404
	2	2,698	,200	2,305	3,091
	3	2,264	,191	1,887	2,641
ROM	1	2,513	,236	2,048	2,978
	2	2,000	,210	1,587	2,413
	3	1,641	,201	1,245	2,037
CHN	1	2,284	,201	1,889	2,679
	2	2,654	,178	2,304	3,005
	3	1,975	,171	1,639	2,312

Tabel 23: Multiple comparisons

Multiple Comparisons

Tamhane

Dependent Variable	(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
PIECO	USA	GER	-,46867	,32830	,923	-1,4588	,5215
		JPN	,38889	,30472	,968	-,5267	1,3044
		MEX	-,00886	,31889	1,000	-,9675	,9498
		ROM	,43956	,32529	,949	-,5407	1,4198
		CHN	,66843	,27076	,205	-,1431	1,4800
	GER	USA	,46867	,32830	,923	-,5215	1,4588
		JPN	,85756	,33093	,159	-,1430	1,8582
		MEX	,45981	,34403	,954	-,5793	1,4989
		ROM	,90823	,34997	,158	-,1501	1,9666
		CHN	1.13710*	,29996	,005	,2269	2,0473
	JPN	USA	-,38889	,30472	,968	-1,3044	,5267
		GER	-,85756	,33093	,159	-1,8582	,1430
		MEX	-,39775	,32161	,976	-1,3674	,5719
		ROM	,05067	,32795	1,000	-,9402	1,0415
		CHN	,27954	,27395	,996	-,5467	1,1058
	MEX	USA	,00886	,31889	1,000	-,9498	,9675
		GER	-,45981	,34403	,954	-1,4989	,5793
		JPN	,39775	,32161	,976	-,5719	1,3674
		ROM	,44842	,34116	,960	-,5814	1,4782
		CHN	,67729	,28963	,283	-,1973	1,5518
	ROM	USA	-,43956	,32529	,949	-1,4198	,5407
		GER	-,90823	,34997	,158	-1,9666	,1501
		JPN	-,05067	,32795	1,000	-1,0415	,9402
		MEX	-,44842	,34116	,960	-1,4782	,5814
		CHN	,22887	,29666	1,000	-,6702	1,1279
	CHN	USA	-,66843	,27076	,205	-1,4800	,1431
		GER	-1.13710*	,29996	,005	-2,0473	-,2269
		JPN	-,27954	,27395	,996	-1,1058	,5467
		MEX	-,67729	,28963	,283	-1,5518	,1973
		ROM	-,22887	,29666	1,000	-1,1279	,6702
PIELEC	USA	GER	-.87437*	,26615	,023	-1,6778	-,0709
		JPN	,12103	,24389	1,000	-,6119	,8540
		MEX	-,20363	,27267	1,000	-1,0250	,6178
		ROM	,49405	,26914	,664	-,3183	1,3063
		CHN	-,16027	,25632	1,000	-,9281	,6076
	GER	USA	.87437*	,26615	,023	,0709	1,6778
		JPN	.99541*	,27131	,007	,1749	1,8159
		MEX	,67075	,29745	,336	-,2273	1,5688

		ROM	1.36842*	,29422	,000	,4787	2,2582
		CHN	,71410	,28254	,182	-,1371	1,5653
	JPN	USA	-,12103	,24389	1,000	-,8540	,6119
		GER	-.99541*	,27131	,007	-1,8159	-,1749
		MEX	-,32466	,27771	,985	-1,1626	,5133
		ROM	,37302	,27425	,947	-,4561	1,2021
		CHN	-,28131	,26167	,993	-1,0674	,5048
	MEX	USA	,20363	,27267	1,000	-,6178	1,0250
		GER	-,67075	,29745	,336	-1,5688	,2273
		JPN	,32466	,27771	,985	-,5133	1,1626
		ROM	,69767	,30014	,291	-,2081	1,6035
		CHN	,04335	,28869	1,000	-,8248	,9115
	ROM	USA	-,49405	,26914	,664	-1,3063	,3183
		GER	-1.36842*	,29422	,000	-2,2582	-,4787
		JPN	-,37302	,27425	,947	-1,2021	,4561
		MEX	-,69767	,30014	,291	-1,6035	,2081
		CHN	-,65432	,28536	,309	-1,5138	,2051
	CHN	USA	,16027	,25632	1,000	-,6076	,9281
		GER	-,71410	,28254	,182	-1,5653	,1371
		JPN	,28131	,26167	,993	-,5048	1,0674
		MEX	-,04335	,28869	1,000	-,9115	,8248
		ROM	,65432	,28536	,309	-,2051	1,5138
PILUX	USA	GER	-,64787	,30205	,416	-1,5614	,2656
		JPN	,12698	,25994	1,000	-,6540	,9080
		MEX	,30786	,25367	,979	-,4538	1,0695
		ROM	.93040*	,23606	,002	,2211	1,6398
		CHN	,59612	,25112	,254	-,1558	1,3480
	GER	USA	,64787	,30205	,416	-,2656	1,5614
		JPN	,77485	,30455	,180	-,1477	1,6974
		MEX	.95573*	,29922	,031	,0487	1,8628
		ROM	1.57827*	,28444	,000	,7123	2,4442
		CHN	1.24399*	,29706	,001	,3443	2,1437
	JPN	USA	-,12698	,25994	1,000	-,9080	,6540
		GER	-,77485	,30455	,180	-1,6974	,1477
		MEX	,18088	,25664	1,000	-,5929	,9546
		ROM	.80342*	,23925	,018	,0805	1,5264
		CHN	,46914	,25412	,653	-,2951	1,2333
	MEX	USA	-,30786	,25367	,979	-1,0695	,4538
		GER	-.95573*	,29922	,031	-1,8628	-,0487
		JPN	-,18088	,25664	1,000	-,9546	,5929
		ROM	,62254	,23243	,127	-,0791	1,3242
		CHN	,28826	,24771	,986	-,4560	1,0326

ROM	USA	-.93040[*]	,23606	,002	-1,6398	-,2211
	GER	-1.57827[*]	,28444	,000	-2,4442	-,7123
	JPN	-.80342[*]	,23925	,018	-1,5264	-,0805
	MEX	-,62254	,23243	,127	-1,3242	,0791
	CHN	-,33428	,22965	,911	-1,0248	,3562
CHN	USA	-,59612	,25112	,254	-1,3480	,1558
	GER	-1.24399[*]	,29706	,001	-2,1437	-,3443
	JPN	-,46914	,25412	,653	-1,2333	,2951
	MEX	-,28826	,24771	,986	-1,0326	,4560
	ROM	,33428	,22965	,911	-,3562	1,0248

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

Tabel 24: LDC vs MDC

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
PIECO	1.00	136	2,9632	1,54902	,13283	2,7005	3,2259	,67	6,33
	2.00	136	2,5637	1,44331	,12376	2,3190	2,8085	1,00	6,33
	Total	272	2,7635	1,50768	,09142	2,5835	2,9435	,67	6,33
PIELEC	1.00	136	2,7010	1,28958	,11058	2,4823	2,9197	1,00	7,00
	2.00	136	2,4804	1,40883	,12081	2,2415	2,7193	1,00	6,33
	Total	272	2,5907	1,35255	,08201	2,4292	2,7521	1,00	7,00
PILUX	1.00	136	2,7132	1,37955	,11830	2,4793	2,9472	1,00	6,00
	2.00	136	1,9706	1,16779	,10014	1,7725	2,1686	1,00	6,00
	Total	272	2,3419	1,32884	,08057	2,1833	2,5005	1,00	6,00

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
PIECO	1,611	1	270	,205
PIELEC	1,897	1	270	,170
PILUX	6,426	1	270	,012

Robust Tests of Equality of Means

		Statistic[a]	df1	df2	Sig.
PIECO	Welch	4,842	1	268,662	,029
PIELEC	Welch	1,814	1	267,915	,179
PILUX	Welch	22,960	1	262,834	,000

a. Asymptotically F distributed.

C4. SPSS OUTPUT FOR COMPARISONS OF DVS

CORRELATIONS BETWEEN DVS

Tabel 25: Pearson's correlation

Correlations

		QPTOTAL	PPTOTAL	PITOTAL
QPTOTAL	Pearson Correlation	1	,362	,431
	Sig. (1-tailed)		,000	,000
	N	272	272	272
PPTOTAL	Pearson Correlation	,362	1	,392
	Sig. (1-tailed)	,000		,000
	N	272	272	272
PITOTAL	Pearson Correlation	,431	,392	1
	Sig. (1-tailed)	,000	,000	
	N	272	272	272

Tabel 26: Spearman's correlations

Correlations

			QPTOTAL	PPTOTAL	PITOTAL
Spearman's rho	QPTOTAL	Correlation Coefficient	1,000	,339	,419
		Sig. (2-tailed)	.	,000	,000
		N	272	272	272
	PPTOTAL	Correlation Coefficient	,339	1,000	,364
		Sig. (2-tailed)	,000	.	,000
		N	272	272	272
	PITOTAL	Correlation Coefficient	,419	,364	1,000
		Sig. (2-tailed)	,000	,000	.
		N	272	272	272

Tabel 27: Partial correlations

Correlations

Control Variables			PPTOTAL	PITOTAL
QPTOTAL	PPTOTAL	Correlation	1,000	,281
		Significance (1-tailed)	.	,000
		df	0	269
	PITOTAL	Correlation	,281	1,000
		Significance (1-tailed)	,000	.
		df	269	0

Correlations

Control Variables			QPTOTAL	PPTOTAL
PITOTAL	QPTOTAL	Correlation	1,000	,232
		Significance (1-tailed)	.	,000
		df	0	269
	PPTOTAL	Correlation	,232	1,000
		Significance (1-tailed)	,000	.
		df	269	0

Correlations

Control Variables			QPTOTAL	PITOTAL
PPTOTAL	QPTOTAL	Correlation	1,000	,337
		Significance (1-tailed)	.	,000
		df	0	269
	PITOTAL	Correlation	,337	1,000
		Significance (1-tailed)	,000	.
		df	269	0

EFFECT SIZES

Tabel 28: Differences in effect sizes DVs

Tests of Between-Subjects Effects

Transformed Variable:Average

Source	Measure	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	price	553031018993,287	1	553031018993,287	4483,332	,000	,944
	purcahse	5303,852	1	5303,852	1721,063	,000	,866
	quality	15305,868	1	15305,868	9573,623	,000	,973
Country	price	13195394835,900	5	2639078967,180	21,395	,000	,287
	purcahse	113,968	5	22,794	7,396	,000	,122
	quality	114,672	5	22,934	14,345	,000	,212
Error	price	32811811286,869	266	123352674,011			
	purcahse	819,740	266	3,082			
	quality	425,269	266	1,599			

C5. SPSS OUTPUT FACTOR ANALYSIS

Table 0-4: Economy segment, electrical segment, luxury segment

Rotated Factor Matrix[a]

	Factor		
	1	2	3
QP-Over	.796		
QP-Work	.747		
QP-Pres	.712		
QP-Reli	.700		
QP-Desi	.654		
QP-Tech	.580		
PI-1		.920	
PI-2		.902	
PI-3		.840	
PP-WTP			.826
PP			.825

Rotated Factor Matrix[a]

	Factor		
	1	2	3
QP-Over	.850		
QP-Reli	.793		
QP-Work	.778		
QP-Pres	.677		
QP-Desi	.602	.334	
QP-Tech	.541		
PI-3		.891	
PI-1		.870	
PI-2		.842	
PP-WTP			.903
PP			.787

Rotated Factor Matrix[a]

	Factor		
	1	2	3
QP-Over	.877		
QP-Work	.847		
QP-Reli	.750		
QP-Desi	.677		
QP-Pres	.606		
QP-Tech	.553		
PI-2		.900	
PI-1		.851	
PI-3		.844	
PP			.864
PP-WTP			.862