

# Analysis of Factors Affecting the Value Perception of Specialty Coffee Roasters

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*MCB- 80433 MSc Thesis Marketing and Consumer Behaviour (Wageningen University)/ Final Dissertation MSc Agricultural and Food Economics (Università Cattolica del Sacro Cuore-Cremona)*

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# ***Analysis of Factors Affecting the Value Perception of Specialty Coffee Roasters***

## **Abstract**

This thesis improves the knowledge of specialty coffee farmers, who want to enter the market as direct suppliers, by identifying the most important factors that affect the value perception of specialty coffee roasters. The majority of farmers and farmers' cooperatives renounce to be direct suppliers in the B2B specialty green coffee market because they do not obtain a competitive advantage compared to mature coffee importers. The insufficient understanding of value perception could be the main cause of farmers' disadvantage, therefore this thesis analyses the impact of five factors of specialty coffee market on value perception of specialty roasters.

Results show that every strategy aimed to increase the uniqueness of the product is important in order to affect the value perception of specialty roasters. The fact that the product is not easily available, and the presence of an exclusive link between producers and buyers, impact indirectly the value perception through the product uniqueness. The proposed marketing approach will support farmers to enter the market in a more competitive way, by providing information on value perception of specialty roasters. Moreover, this thesis improves the literature about B2B customer value perception, by offering a new case study that could be used not only in specialty coffee market, but in all B2B relationships trading high quality products.

# 1 Introduction

Empirical evidences show that many customers are demanding high quality coffees, the number of artisan roasters is increasing around the world, and a new business model is being developed close to the mature mainstream market (van Hilten, 2011; Donnet et al. 2007). This recent trend has favored the growth an exclusive and different product called “specialty coffee”, that poses new challenges to the mainstream market (van Dijk et al., 1998). Studies demonstrate that trading specialty coffee could be an interesting and profitable opportunity for any coffee suppliers, but in particular for farmers and farmers’ cooperatives. Bacon (2005) shows “that participation in specialty coffee networks reduces farmers’ livelihood vulnerability”, while a study of Wollni and Zeller (2006) states that participation in specialty coffee segment helped farmers to obtain higher margins. Moreover, specialty coffee could be a new market niche where farmers’ cooperatives may supply the specialty roasters directly without using middlemen (van Hilten, 2011).

However, **farmers and farmers’ cooperatives do not have a sufficient competitive advantage** as compared with mature coffee importers, and most of them renounce to be direct suppliers in the B2B specialty green coffee market. Ponte (2002) declares that “local actors in producing countries do not have an easy access to the direct trading, and as a consequence they have either allied themselves with international traders or have disappeared. In most cases, they are losing control of processing, domestic trade and export functions” (Ponte, 2002). Regulatory systems in the coffee chain were implemented to help farmers, but without ensuring a better economic performance (Muradian and Pelupessy, 2005).

Literature analyzed many causes that reduce farmers’ competitiveness, such as supply chain management features, financial issues and logistic complications (Daviron and Ponte, 2005). However, **scholars are not investigating the problem from a marketing perspective. Actually, the cause could be the insufficient understanding of value perception.** Farmers do not know the symbolic quality attributes in order to gain higher margins from the downstream market (Daviron and Ponte, 2005). In order to be successful in the high quality segment, farmers and farmers’ cooperatives have to know how to sell the right coffee to the right people (Ponte, 2002). Coffee producers have to refine their marketing skills to better exploit their stories from a marketing perspective (Ponte, 2002). In other words, farmers do not have a competitive advantage when they enter the market as direct supplier, because there is a gap between them and specialty roasters. This gap could be filled in by more robust evidences on customer value perception. Understanding the

factors that lead to higher value perception is a tool that farmers could use in order to enter the specialty coffee market as competitive suppliers.

The theory on customer value perception states that delivering products that buyers will perceive with higher values means obtaining stronger competitive advantages for business (Fornell, 1992; Fornell et al., 1996). Moreover, knowledge and competences of the firm, used to understand the customer value perception, play a central role in building and maintaining the sustainable advantage (Blocker and Flint, 2007; O'Cass and Vient Ngo, 2012). Indeed, knowledge on customer value may help in improving those products which are already on the market, and anticipating what customers will esteem in the future (Blocker and Flint, 2007). Providing a higher customer value perception leads to positive customers actions such as repurchase intention and word of mouth (Dubrovski, 2001; Zeithaml, 1988). Finally, perceived value could affect positively also the financial outcome of an organization (Ittner and Larcker, 1996).

However, although many studies have been conducted to understand the factors that affect customer value perception, it seems that literature does not take into consideration cases on B2B relationships of exclusive products. Most researches on customer value perception focus mainly on benefits and sacrifices related to B2B service market (Lapierre, 2000), or B2B manufacture market (Ulaga, 2003). Literature narrows the interest only on some dimensions, neglecting other dimensions of customer-perceived value (Parasuraman and Grewal, 2000). This lack of information may be a problem for those B2B relationships trading high quality products, such as cases of gourmet or specialty food. Those are the cases in which specific dimensions of customer value perception, such as the uniqueness perception of the product, need to be taken into deeper consideration.

In sum, on one side marketing the theory on customer value perception could be the successful strategy to support farmer's competitiveness. They will understand the most important factors that affect the value perception of specialty roasters, and they will be able to build proper marketing strategies to enter the market as new suppliers. On the other side, classic literature in B2B value perception needs to improve by including cases of exclusive/gourmet products.

These are the reasons why this master thesis **deepens knowledge of farmers, who want to enter the market as new suppliers, by identifying the most important factors that affect the value perception of specialty roasters.** Given this background, this thesis aims to answer the following general research questions: Which factors affect the value perception of specialty roasters? What is the impact of each factor on value perception?

This thesis is divided into 8 chapters. Chapter 2 will describe the main concepts of the specialty coffee market. The contextualization of Chapter 2 is essential to better understand the further parts of the thesis. Chapter 3 will introduce the theoretical framework and the theoretical choices of the constructs. Chapter 4 and Chapter 5 will explain respectively the research design and the results of the research. Finally, the last chapters will present the discussion of the results, limitations and conclusions.

## 2 Specialty Coffee Market: The Context

This chapter will summarize the main concepts about specialty coffee market. Understanding the context will be the first step in order to select suitable affecting dimensions of value perception. The latter will be essential to set better marketing strategies, and therefore competitive advantage for new green coffee suppliers such as farmers and farmers' cooperatives.

It can be anticipated that the specialty coffee market differs from the mainstream market mainly because of its quality offers. Specialty roasters are the key agents of this market and they are looking for “unique” and superior products. The market has been spread across the world, but it seems to be profitable in some specific areas (Northern America and Northern Europe) because of an increase in trends and in number of specialty coffee roasters.

### 2.1 The Product: Quality and Certifications

Specialty coffee market has a business model different from the mainstream one (Donnet et al., 2007). The differences are based mainly on the high level of quality offered, and on the categorization of the products. Mainstream market categorizes the coffee quality just in terms of variety (Arabica or Robusta), country of origin (Colombia, Brazil or others countries) and bean traits. The market offers homogenous products inside of specific categorizations that make the supplier traceability and quality differentiation almost impossible (Donnet et al., 2007). On the other hand, specialty market provides unique and specific categorizations based on the quality assessment of each single lot of coffee provided by every supplier. In this way, the specialty market can offer heterogeneous and transparent products in terms of quality, variety and origin (Donnet et al., 2007).

In the last years, quality certifications and specialty coffee associations grew to offer reliable standard of quality. The aim was to build a successful quality system that made the supply coffee chain more transparent. For example, Specialty Coffee Association America (SCAA) was a pioneer in this field, and contributed to spread the concept of specialty coffee around the world. SCAA established an international quality grade system to guarantee the coffee quality and differentiate specialty coffee from the mainstream market. Independent commissions across the world use the SCAA grade system to assess the specialty coffee quality. Due to earlier stages of specialty coffee life

cycle, the quality grade obtained by an independent and expert commission is very important (Donnet and Weatherspoon, 2006).

Alliance for Cup of Excellence and Coffee Quality Institute are two independent commissions in charge of specialty coffee quality assessment. Coffee suppliers can send a coffee sample in order to be assessed, and obtain the specification of “specialty”. According to Coffee Quality Institute, a coffee can be defined as specialty if it reaches at least 80 points over 100 on the scale of SCAA grade system (“Coffee Quality Institute”). Experts cup the coffee and assess the quality by following the standard grade system provided by SCAA. Similarly, Alliance for Cup of Excellence categorizes all samples in the countries of origin, and then it ranks all samples, inside each category, from the highest quality to the lowest. The ranked coffee that reaches at least 85 over 100 points will be sold by online auctions where buyers are connected directly to farmers.

These quality differences make the value proposition high for specialty market, due to procurement and marketing, while, for mainstream market, the value is limited due to undifferentiated trade (Donnet et al., 2007). Figure 2.1.1 shows the coffee segmentation according to the quality. However, although a specialty coffee market is different from mainstream market, a common definition about specialty coffee has not been provided yet. Without a common definition it is difficult to identify the product categorization and, as a consequence, the identification of a clear trend and market segmentation (Valcarce, 2014; van Hilten, 2011).

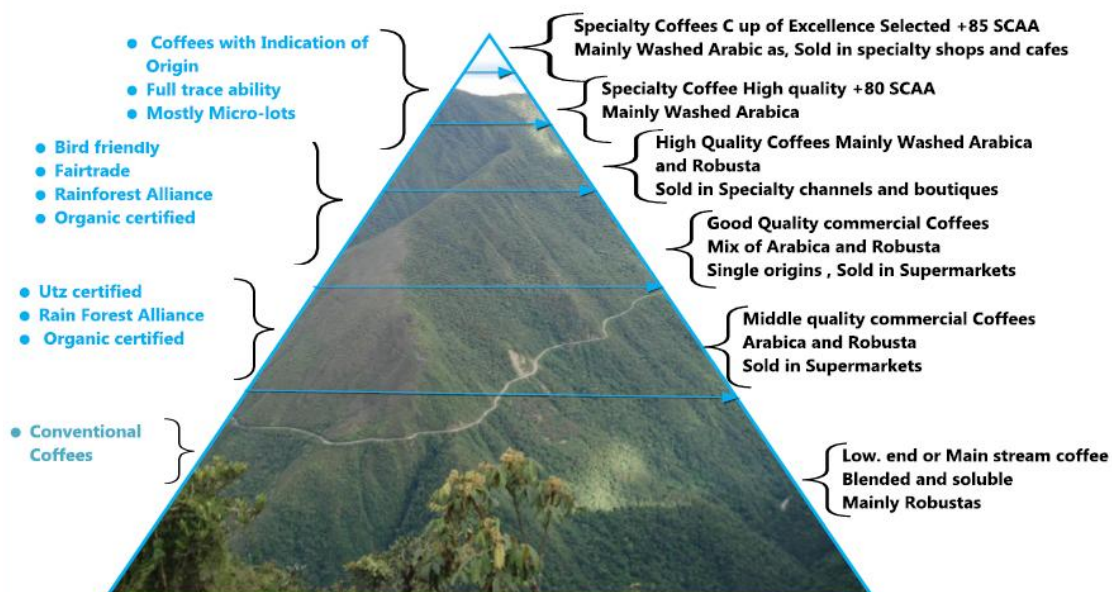


Figure 2.1.1 Segmentation according to quality. Source: Valcarce, 2014.

## 2.2 Specialty Roasters: buyers with high request for uniqueness

While mass consumers prefer to buy a standard coffee coming from a mainstream market, specialty coffee consumers want to drink unique products with high levels of quality (Donnett et al., 2007). Consumers of specialty coffee market want to buy unique coffees with high quality and carrying a “story behind them” (van Hilten, 2011). Consumers of this market want to be satisfied by two perspectives: hedonist and social (Valcarce, 2014). They require high quality coffee but, at the same time, they want to make a choice that is socially responsible for the coffee producers (Valcarce, 2014).

In B2B context, specialty roasters are the first customers to satisfy. They buy green coffee that will be roasted and later brewed for final customers. Pre-qualitative interviews with coffee experts (Appendix A) reveal important information about specialty coffee roasters. They are businesses that in most cases are the intermediates between farmers and final consumers. Indeed, they are providing knowledge, expertise, training to the final customers and, at the same time, they are impacting the farmers’ production because of their quality requests. In other words, they can understand which factors contribute to the coffee quality, and then translate them to the final customers.

Specialty roasters are artisans who sell personal and distinct coffees. By looking at their websites, it is easy to find words exalting the “exclusiveness” or “uniqueness” of the product in different ways. For example, in most cases the “**single origin**” is exalted as an index of distinctiveness. *“Peerless is grounded in the philosophy that every coffee needs to be roasted to varying degrees to bring out its unique characteristics, which are most pronounced in single origin coffees”* (“Gourmet roasted coffee & tea”). The story of farmers producing specialty coffee and the capability to help them by buying their product are other examples of “**social exclusivity**”. For example, Thanks Giving Coffee Company declares: *“Small family farms and cooperatives produce the best coffee in the world. It is our pleasure to share these fine coffees with you: each is an expression of unique soils, varietals, and climate as they combine with the farmer’s pride and craft”* (“Thanksgiving Coffee Company”). Finally, drinking a coffee coming from a **specific variety** with a **distinct taste** and high quality is another way of differentiation. For example, Crescent Moon declares *“We travel all over the world to bring a unique variety of the most delicious gourmet coffee”* (“Crescent Moon Coffee”).

Specialty Roasters are establishing also particular marketing arrangements with farmers. With these agreements, they want to have the total exclusivity to sell particular coffee coming from specific farms (van Hilten, 2011). This research of uniqueness could be identified also in the online competition of Alliance for Cup of Excellence where scientific evidence shows that specialty roasters are willing to pay 94% more for the specialty coffee graded in the first position (Donnet and Weatherspoon, 2006). In this auction it is clear that the exclusivity and the reputation of owing the best coffee have an impact on the willingness to pay.

In conclusion, it seems that these buyers want to roast coffee that is not offered from anyone and to a certain extent they want to have the exclusivity of the product. In the next chapters, this characteristic will be the key dimension to consider as affecting the value perception. Indeed, the need of uniqueness of specialty roasters will play a key role in the theoretical framework of this research.

## **2.3 The Main Markets: Northern America and Northern Europe**

Van Hilten (2011) declares that 10-15% of the coffee world market is a share of exemplary high quality coffee, and it is receiving a premium price at retail level nowadays. The USA are pioneers of the specialty coffee consumption, where 20 years ago the commercialization started and increased up to the present days (Figure 2.3.1). Roasters started to brew single origin coffees that were sold as “exclusive” coffees. Recently, the specialty coffee market has been identified also in Northern Europe, where countries like Germany or The Netherlands appreciate this product (Figure 2.3.2). However, in Europe specialty coffee is still a niche market with a share of 2-3% of the whole coffee traded (Valcarce, 2014). Specialty Coffee Association of Europe provides an estimation of the amount of specialty roasters (Figure 2.3.3). Its positive trend leads to assume that the market is profitable (van Hilten, 2011).

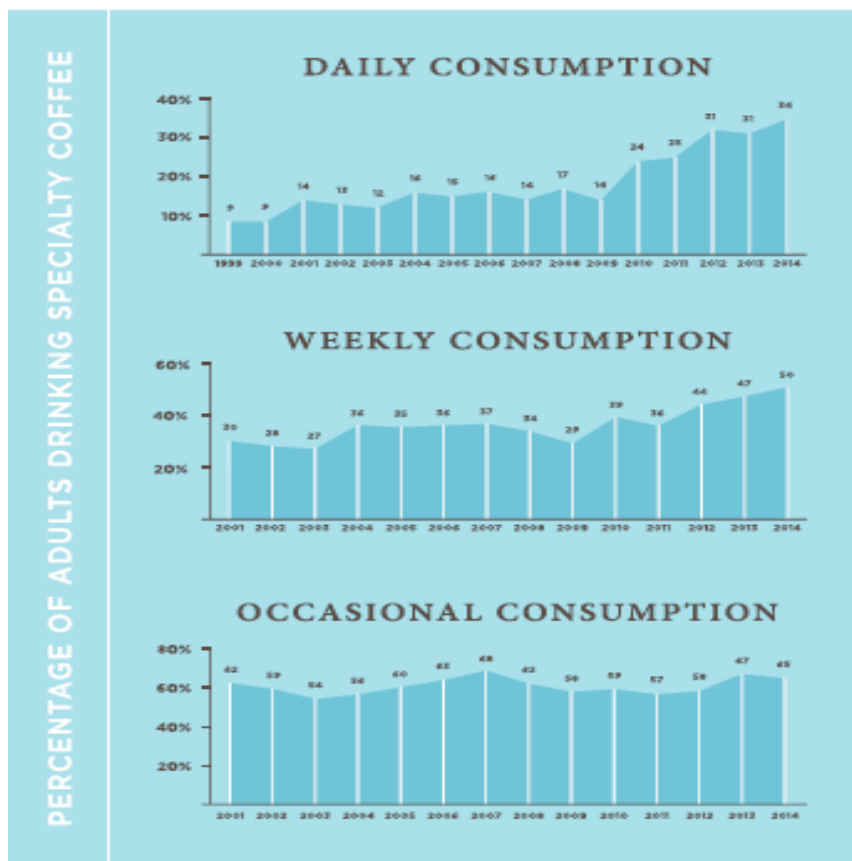


Figure 2.3.1 USA Specialty coffee consumption. Source: SCAA,2014.

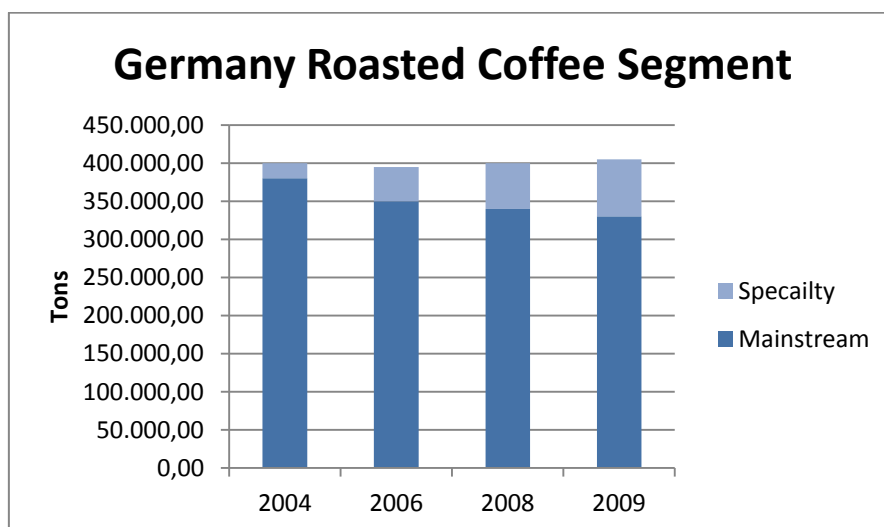


Figure 2.3.2 Germany specialty coffee consumption. Source: SCAE, 2010.

Bags x year	Roasters Wholesalers	Importers/ Traders/ Broker/Agents
Plus 100.000	43	19
1.000- 10.000	50	10
Less 10.000	136	30

Figure 2.3.3 Estimates of European specialty roasters according to SCAE. Source: Valcarce, 2014.

Van Hilten (2011) and interviews with coffee experts (Appendix A) state that the two areas display some differences. First of all, European market is more recent than the American one, and only in 20 years, Europe will see the same market situation which is present nowadays in the USA. Secondly, Europe is a vast area that covers many countries with different customer preferences. Therefore, it is difficult to identify a common idea about “specialty” and quality. Finally, Europe is a country where quality coffee has been already offered by larger roasters, operating mainly in mainstream market. Therefore, offering a specialty coffee could be harder than in the USA, where mainstream market is not able to offer comparable quality coffees.

### 3 Theoretical Framework

In the next page, Figure 3.1 shows the theoretical framework of this research. The next subchapters will explain the choice of each construct and related hypotheses.

#### 3.1 Customer Value Perception for a coffee offered by a new supplier

Customer Value Perception for a coffee offered by a new supplier is the dependent variable of the model. Indeed, understanding what makes a product more valuable from a specialty roasters perspective may support new suppliers, such as farmers and farmers' cooperatives, to offer a better way to modify the product and obtain a competitive advantage. This thesis refers **to a perceived value from specialty roasters perspective, for a coffee offered by a new supplier**. In other words, this research defines the construct **as the overall value perception for a green specialty coffee offered by a new supplier**.

Customer value perception has been studied both in B2C markets and in B2B. In B2C context, the value perception is based mainly on quality and price (Zeithaml, 1988). Final customers need to assess if the quality that they can obtain is comparable or superior to the price that they pay. On the contrary, it seems that B2B literature does not present a general trade off of dimensions applicable to all industrial contexts indistinguishably. Instead, benefits and sacrifices of customer value perception in B2B context are divided into different categories. Lapierre (2000) identified 13 drivers divided in product related, service related and relationship related. Relationships drivers have been identified also by a study of Ulaga and Chacour (2001). Moreover, price is not the only sacrifice that a business considers during the value perception. For example, time and effort in finding a good supplier represent other cases of "no monetary" sacrifices (Lam et al., 2004). Finally, Kumar and Grisaffee (2004) improved the literature by showing the presence of further 3 "extrinsic benefits" that play a fundamental role in B2B markets.

However, even though specialty coffee green market is a B2B market, some benefits and sacrifices presented in the industrial theory could be neglected in this study. Classic industrial buyers are looking for suppliers with responsiveness, flexibility, reliability in the delivery and technical competences (Lapierre, 2000; Ulaga, 2003). Obviously, these drivers are important for business relationships, but none of them could be considered the key point for the specialty coffee context. In the same way, also the so-called "interpersonal relationships", such as trust, solidarity and

communication, are not essential for the context of this thesis. Here, the specialty character of the market and the presence of farmers as new suppliers were the key elements considered to select the most important affecting dimensions of customer value perception.

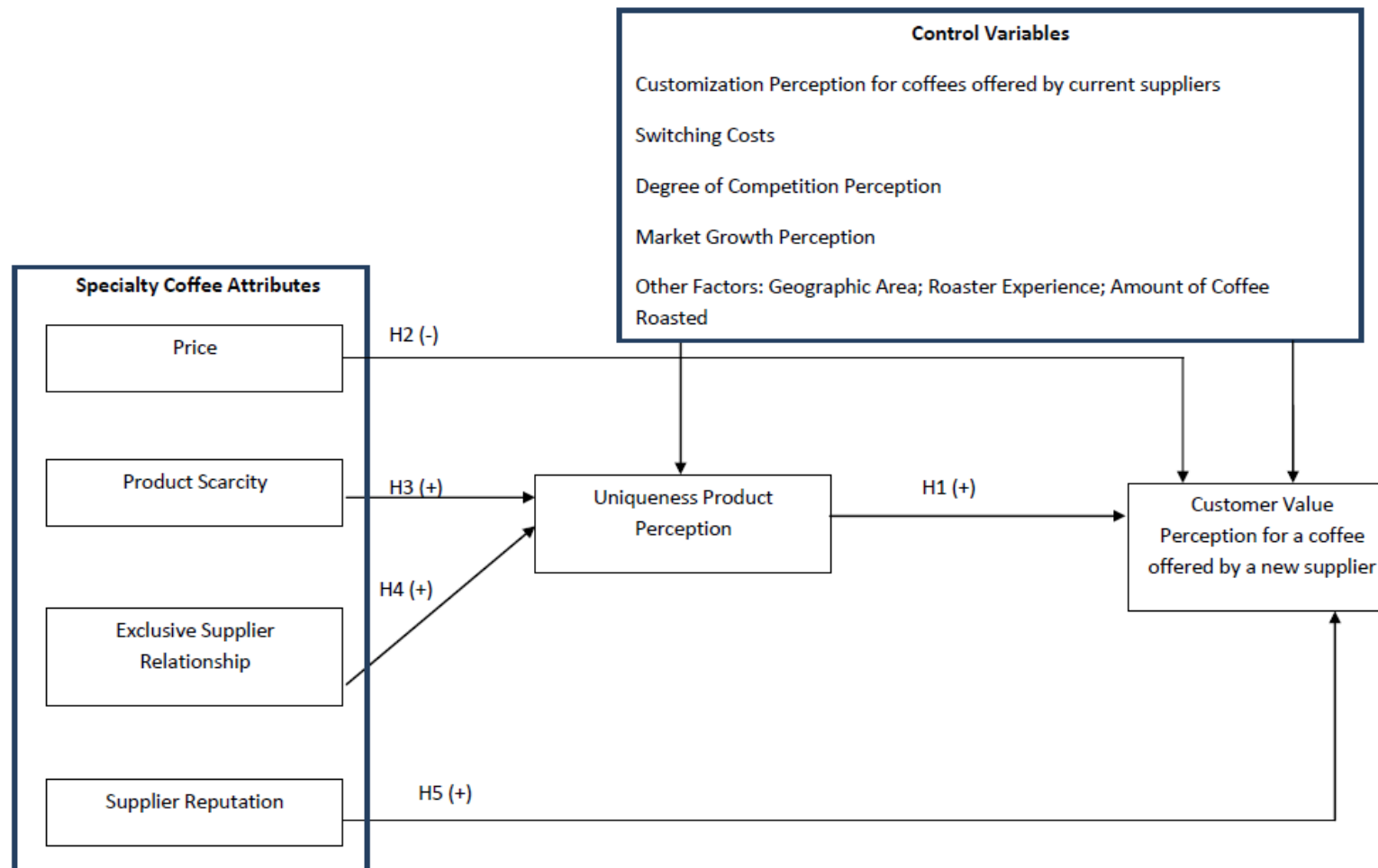


Figure 3.1 Theoretical Framework.

### 3.2 Uniqueness Product Perception

**Uniqueness product perception is defined as the capability to offer a product that is perceived as unique by buyers** (Lapierre, 2000). This chapter shows that literature already presents the uniqueness as driver of customer value perception in B2B markets. Moreover, the need of uniqueness of specialty roasters and the advantage for the farmers to enter a new market with unique products confirmed the need to select this affecting dimension.

Scholars studied uniqueness as benefit of value perception in B2B contexts. Buyers want to have a customized product, that meets unique specifications and that is different from the one offered by competitors (Lapierre, 2000). Buyers appreciate the ability of a supplier to know the market and to provide always new and unique alternatives (Ulaga, 2003). Suppliers have to focus on the buyer's need by offering a suitable product and service (Kumar and Grisaffee, 2004).

Buyers of this market (Specialty Roasters) are particularly interested in the research of uniqueness (Chapter 2.2). The concept of "need of uniqueness" was explained and summarized by Tepper Tian et al. (2001). Need of uniqueness has its manifestation in three behaviors. First of all, buyers who need uniqueness choose creative, original products that have to be appreciated as good products also by others. Secondly, some buyers make unpopular choices in order to be categorized as "unique", such as innovators or fashion leaders. Finally, buyers who need uniqueness want to avoid similarities. They lose interest for common, standard and mainstream choices, while they appreciate unique and uncommon products (Tepper Tian et al., 2001). Buyers are fulfilling the desire to be unique in different ways: showing the good possession (Belk, 1998), maintaining exclusive and interpersonal relationships (Maslach et al., 1985) and increasing the knowledge in the expertise field (Holt, 1995).

The theory on need of uniqueness seems to fit the characteristics of specialty roasters described in Chapter 2.2. Indeed, they are trying to buy a product that is different and unique. They are sourcing coffee by using channels that are not common places, and they are showing the "exclusivity" both in their products and in their social relationships with farmers. Moreover, trainings and international competitions are examples of tools that increase the specialty roasters' knowledge in this field.

Finally, product uniqueness and superiority towards competitors were considered also as advantages in the classic theory of new product development (Cooper, 1979). It is an advantage to

enter a new market with a product that is perceived by buyers as having unique features and superior to competitors' offers. Even in this context, if farmers want to enter the market, they need to consider uniqueness and superiority in order to be competitive.

In sum, offering a product that is perceived as unique for specialty roasters could lead to a higher Customer Value Perception for a coffee offered by a new supplier.

*H1: Higher Uniqueness Product Perception leads to higher Customer Value Perception for a coffee offered by a new supplier.*

Moreover, the model presents this construct as a mediator between some specialty coffee attributes and Customer Value Perception for a coffee offered by a new supplier. As a consequence the Uniqueness Product Perception will be tested both as driver (H1), and as mediator.

### 3.3 Specialty Coffee Attributes

Selecting some specialty coffee attributes is essential to answer the general research questions. Suppliers would like to know which concrete attributes of specialty coffee impact the customer value perception directly or indirectly (through Uniqueness Product Perception). There are many different coffee attributes that could affect customer value perception, but the global analysis is too complex as well as impossible. Given that this thesis wants to support farmers to enter the market as new suppliers, it was **decided to focus the analysis only on four relevant attributes, which could be used for a successful entry market strategy for this typology of suppliers**. The specialty coffee attributes selected were Price, Product Scarcity, Exclusive Supplier Relationship and Supplier Reputation.

Attributes like origin, variety, topographic conditions, agronomic techniques and method of production could affect the value perception. Indeed, studies on the impact of these attributes on some consumer behaviors, like the willingness to pay for specialty coffee, have already been demonstrated (Donnet et al., 2007). However, results on these impacts may not be useful for all green coffee suppliers, but only on big suppliers with broader products portfolio. For a small green coffee supplier, like a farmer or a farmer cooperative, knowing that origin affects the customer value perception may be useless. They are coming from one specific origin, region, altitude etc., therefore it is impossible to modify this attribute in order to gain a higher value perception. The same conclusions could be reached also for the other attributes.

### 3.3.1 Price

Specialty roasters have a doubting behavior with respect to the price of specialty green coffee. Most of them are looking for intrinsic quality cues and the price has just a marginal role (Pierrot and Teewuen, 2012). However, at the same time, stock prices and feature market are used as a reference before accepting any purchase (Pierrot and Teewuen, 2012).

From a theoretical perspective, price is a sacrifice of customer value perception (Zeithaml, 1988). Therefore, it is reasonable to test the direct negative effect of Price on Customer Value Perception for a coffee offered by a new supplier.

*H2: Higher Prices lead to lower Customer Value Perception for a coffee offered by a new supplier.*

The relationship between uniqueness and high prices has been studied by Amaldoss and Jain (2005): they demonstrated that the desire for uniqueness leads to higher prices, or better said, to a higher willingness to pay. This has also been demonstrated in the specialty coffee context. For example, in the cup of excellence auction, the desire to possess the first ranked coffee leads specialty roasters to pay higher prices (Donnet et al., 2007). When a product is considered as rare, customers assume higher prices due to a naive economic theory (Lynn, 1992). However, from a supplier perspective, it is more interesting to understand the opposite relationship: is the price a driver (cue) of uniqueness?

A piece of literature claims the idea that high prices could affect the feeling of uniqueness of customers (Groth and McDaniel, 1993). Customers that pay a more expensive product feel different from others (Wu and Hsing, 2006). However, specialty roasters are buyers very demanding and they may have a different purchase behavior in respect to the one of the most consumers. They are specialty buyers with high level of knowledge of the product, and the price information could not be sufficient to indicate the uniqueness of the product. Chen and Sun (2014) demonstrated that price does not affect the uniqueness of the product in “specialty” contexts. They conducted a study among buyers of video games limited edition and eventually they rejected the hypothesis that higher price leads to a higher uniqueness product perception for this typology of buyers. Most of expert buyers, do not use the price itself as an extrinsic cue (Mattila and Wirtz, 2001), and for this reason a direct relationship between Price and Uniqueness Product Perception was not considered in the model.

### 3.3.2 Product Scarcity

A commodity is scarce when there is a limited quantity or time limit that results in a limited supply (Wu et al., 2012). This could be really due to some constraints in production, or it could be “fake” like the limited editions. In the last case, the scarcity “appeals” are used to stress the uniqueness and limited availability of the product. In this context, some farmers may have limited productions due to some production constraints, such as amount of land, particular quality characteristics, topographic conditions etc..). They could translate this “limited availability” into a positive “scarcity appeal”. Therefore, this thesis defines **product scarcity as the limited supply, which could be evoked in a scarcity appeal.**

The theory on need of uniqueness states that scarcity of conspicuous goods leads to a higher level of uniqueness product perception (Wu et al., 2012). In this context, studies about online auctions of Alliance for Cup of Excellence confirm that specialty coffee lots with few bags are more appreciated by specialty roasters (Donnet et al., 2007).

Actually, it is difficult to hypothesize a direct relationship between product scarcity and customer value perception because different specialty roasters could assess the scarcity in different ways. For example, small roasters could see a scarce product as a good value purchase, while big roasters could see the scarcity as a limitation. However, it could be demonstrated that the product scarcity (evoked by a scarcity appeal) could lead to a higher uniqueness product perception. Both small and big roasters of this market niche could be affected by a scarcity appeal, and consider the product as unique. When a product is scarce, customers can perceive the scarcity as a level of uniqueness (Lynn and Harris, 1997). Therefore it can be hypothesized that Product Scarcity affects Customer Value Perception for a coffee offered by a new supplier indirectly through Uniqueness Product Perception. Specifically:

*H3: Product Scarcity leads to higher Uniqueness Product Perception.*

### 3.3.3 Exclusive Supplier Relationship

Exclusive Supplier Relationships are also called Partnership Coffees. In these relationships “**sellers may agree to sell this coffee only to a particular company, or to only a few companies that do not compete in the same geographic region**” (van Hilten, 2011). These behaviors are quite common in the specialty green coffee markets. Farmers can benefit from these arrangements for financial

reasons. At the same time, roasters appreciate these arrangements because they can prevent the competitors' actions (van Hilten, 2011).

It can be hypothesized that an Exclusive Supplier Relationship, where the supplier guarantees the exclusivity of supply, is a key aspect in increasing the Uniqueness Product Perception. Roasters with exclusivity can be the only sellers, or unique in a specific area, of that product. This could be perceived as a uniqueness (I am unique because none can sell the same product in my area). Similarly to the Product Scarcity, it can be hypothesized the indirect effect of Exclusive Supplier Relationship on Customer Value Perception for a coffee offered by a new supplier. Also in this case the mediator is the Uniqueness Product Perception and specifically:

*H4: Exclusive Supplier Relationship leads to higher Uniqueness Product Perception.*

### **3.3.4 Supplier Reputation**

Supplier reputation is defined as “the overall appeal of the firm when compared with other rivals” (Hansen et al., 2008). Even though theory is clear in the definition, it is vague in the interpretation of “overall appeal”. Indeed, many factors could affect the “overall appeal” of an organization, and many antecedents could lead to a different reputation. This context defines the reputation as **the “appeal” of a supplier with respect to other competitors, due to his quality assessment obtained by one or more independent and reliable expert commissions in every season**. The definition includes the quality as the main element of supplier reputation for two reasons. First of all, because of the importance of the quality and the quality certification in the specialty coffee market (Chapter 2.1). Secondly, Interviews with coffee experts (Appendix A) declare that for small suppliers, like farmers, the quality certification coming from an independent organization could be in many cases the unique marketing tools in order to enter the market in a competitive way.

Relationships between quality and reputation is discussed in the literature. Carmeli and Tishler (2005) investigated the roles of product quality as affecting reputation. It could be assumed that the more a supplier is able to offer a higher quality product and, this quality is reliable and consistent over time, the higher is its reputation. On the contrary, reputation could be also a tool to assess the quality. Indeed, when it is very difficult to assess the intrinsic attributes that are responsible for product quality, the corporate reputation is seen as a tool to evaluate the reliability of the service (Akerlof, 1970; Zeithaml, 1988).

Quality reliability is a benefit in B2B customer value perception. Customers want to buy a reliable quality over the year (Lapierre, 2000). Key aspects of product quality, playing an important role in B2B relationship, are performance, reliability, and consistency over time (Ulaga, 2003). Therefore, it is reasonable to test the direct positive effect of Supplier Reputation on Customer Value Perception for a coffee offered by a new supplier. Specifically, an increase in supplier reputation, measured by the increase in judgments coming by different expert commissions, may lead to a higher customer value perception.

*H5 :Higher Supplier Reputation leads to higher Customer Value Perception for a coffee offered by a new supplier*

However, similarly to the price, supplier reputation could not be sufficient to convince specialty roasters that a product is unique. The grade coming from an independent commission may not be sufficient to satisfy the quality request of expert buyers like specialty roasters. In most of cases, they know the intrinsic cues responsible for quality, and a certification may not be sufficient to grade the uniqueness. For example, in the wine industry Lockshin et al. (2006) discovered that “low involvement consumers use price and quality award to a greater degree than high involvement consumers”. For this reason a direct relationship between Supplier Reputation and Uniqueness Product Perception were not considered in the model.

### 3.4 Control Variables

There are theoretical reasons that could explain the effects of some other factors on the mediator and on the dependent variable of the framework. Those factors will be considered control variables, because they are important elements that may affect the model, but farmers cannot modify them. Therefore, it is reasonable to present them as variables independent from the main experimental manipulation.

#### 3.4.1 Customization Perception for coffees offered by current suppliers

Customization Perception for coffees offered by current suppliers was chosen as dimension of competition. **It is defined as the perception of the capability of competitors to customize (make unique) a specialty coffee.** In this case, **the perception of uniqueness for a product offered by a new supplier could be reduced by the perception of uniqueness (customization) of products already offered by current suppliers.** Entering a market, where competitors did not customize their

products, is easier from a supplier perspective. Indeed, without an existing customization, any marketing actions could lead to a higher Uniqueness Product Perception. On the other hand, if competitors have already worked on customization, the “uniqueness exaltation” could not be so easy. Specialty roasters have already been supplied by unique products (customized), and a new product could not be perceived as “unique” in spite of the marketing strategies. Same considerations are for customer value perception for a coffee offered by a new supplier. Indeed, **the customization of the competitors could reduce the value perception for a product offered by a new supplier** (Lapierre, 2000; Ulaga and Chacour, 2001; Gale, 1994).

### 3.4.2 Switching Costs

Switching costs are the onetime costs associated with the switch from one supplier to another (Burnham et al., 2003). However, for this context, they can also be defined as **the involved sacrifices due to a new supplier relationship**.

Theory demonstrated that customer value perception could be affected by sacrifices that are not in monetary terms (Lapierre, 2000; Lat et al., 2004). For example, the time and energy invested with a supplier are a “sacrifice” of perceived value (Lapierre, 2000). Switching Costs are investments in time, effort and money which are barriers to select a new supplier (Lam et al., 2004). The effort (money, time and energy) spent with a supplier is so high, that building a new relationship could be considered as a “sacrifice”. For these reasons, the presence of switching costs in the market could be seen as sacrifice for the value perception of a new specialty coffee. Particularly, **the presence of higher onetime costs could affect negatively the value perceived for a coffee offered by a new supplier**. Indirectly, a specialty roaster could associate the higher costs that he will have to sustain if he is going to purchase that product in the future (e.g. training customers on this new product, having the quality control of the product etc...). Analyzing the tradeoff between benefits and sacrifices, specialty roasters need to compare the benefits that they could obtain by having this new relationship, with the sacrifice, in terms of switching costs (time, effort and money), that they will have to sustain.

### 3.4.3 Degree of Competition Perception and Market Growth Perception

The Degree of Competition Perception was defined as the **number of specialty coffee roasters involved in the market**, while Market Growth Perception is referring to the **growth rate of the specialty coffee market**.

Nature of market place needs to be considered during a new product development (Cooper, 1979). For example, the degree of competition and market growth could affect the new product development and compromise its entrance into the market (Cooper, 1979). According to other authors, business needs to be more aggressive if the competition increases and if the market growth is low (Kohli and Jaworski, 1990). In these cases, business needs to better understand “what customers want and create superior customer value to satisfy them” (Slater and Narver, 1994).

### 3.4.4: Other Factors: Geographic Area, Roasters Experience and Amount of Coffee Roasted.

The geographic area defined as **main continent of operations**, the roaster experience defined as **number of years working in specialty coffee business** and **amount of coffee roasted in one year** were further control variables considered in the model.

## 4 Research Design and Methodology

### 4.1 Overview

The hypotheses were tested by analyzing the answers of an online questionnaire filled in by a sample of specialty roasters. The questionnaire was divided into two parts as showed in the Figure 4.1.1. Briefly, the first part showed a classic conjoint task where 12 coffees profiles were graded in terms of Uniqueness Product Perception and Customer Value Perception for a coffee offered by a new supplier; while the second part collected information on the control variables. Conjoint analysis was selected because it is the most studied method of consumer preferences as well as the one with highest applicability in marketing analysis (Green and Srinivasan, 1978). The digital version of the questionnaire was preferred for data collection method for two reasons. First of all, respondents had the access to the questionnaire in any moment. Secondly, it was the cheapest version to investigate the sample.

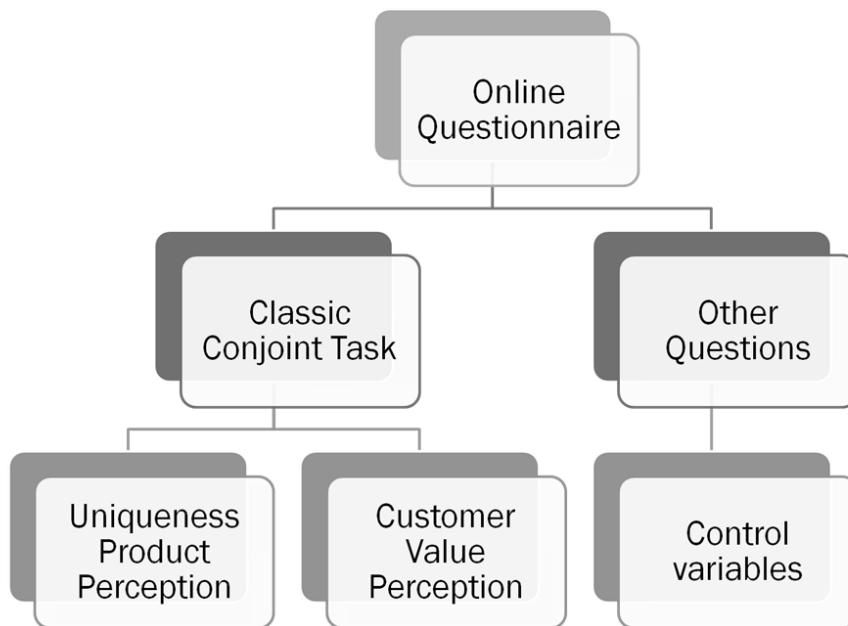


Figure 4.1.1 The questionnaire structure.

### 4.2 The Sample

Specialty roasters were the investigation population of this research. Unfortunately, a complete list of specialty roasters does not exist yet in any country and, as a consequence, the sampling frame was built by an online research of specialty roasters based in North of America and North of Europe.

Specifically, 247 specialty roasters based in the USA, Canada, The Netherlands, Germany, Belgium, Luxemburg, United Kingdom and Denmark were asked to participate. Even though these areas are quit big and could have internal differences, they were chosen because of their high specialty coffee consumption and easiness in finding specialty coffee roasters. Moreover, all the specialty roasters contacted had common characteristics such as production of high quality coffee, selling of single origin coffee and interested in having a direct trade with farmers. As a result, the respondent rate was of 23.08% because a convenient sample of 57 specialty roasters completed the whole questionnaire over a total of 247 specialty roasters contacted. Table 4.2.1 shows a summary of the sample divided in countries of origin. In the Table are present the gross sample (specialty roasters contacted), net sample (specialty roasters participating) and response rate per country. Moreover, it indicates further information on the data collection strategy and coffee consumption.

**Table 4.2.1 Sample of specialty roasters divided in countries of origin.**

	BE/LUX	DE	NL	UK	DK	USA+Canada	Total
<b>Coffee Consumption (Kg/Year)</b>	6.8	6.5	8.4	2.8	8.7	4.5	
<b>Main Target of the Collection</b>	X	X	X				
<b>Strategy Used</b>	email + phone	email	email + phone	email	email	email	
<b>Number of contacts before getting an answer</b>	4	3	4	3	3	3	
<b>Roasters Contacted (Gross Sample)</b>	13	66	61	25	14	68	<b>247</b>
<b>Roasters Participating (Net sample)</b>	1	9	27	6	3	11	<b>57</b>
<b>Response rate (%)</b>	7.69	13.63	44.26	24	21	16	<b>23.08</b>

Data were not collected among specialty roasters who did not take part in the questionnaire. As a consequence, no response bias analysis cannot be conducted, but some considerations about the country of origin can be done. The highest response rate is in The Netherlands and it could be due to three factors. Firstly, the highest level in coffee consumption could indicate the high involvement in coffee research; secondly, Dutch specialty roasters were contacted 4 times instead of 3 both by phone and by emails; thirdly, the research was conducted by a Dutch University (Wageningen University) that is mainly known among Dutch Specialty Roasters.

Specialty roasters were contacted three or four times by phone calls and/or by emails. All of them received an invitation email (Appendix B) that explained the aim of the research and questionnaire. The email explained that every respondent would receive a brief report with the results as a token of his participation. This email was the first approach with the potential respondents. The only difference in the first approach is that Belgium and Dutch roasters received a pre phone call that informed them about the invitation email. Later phone call was abandoned because its inefficiency as opposed to emails. After the first approach, other emails were sent in order to convince the

respondents. Most of the solicitation emails were equal except for those specialty roasters with specific requests. For those cases, the emails were customized.

### **4.3 The Conjoint Task**

The conjoint task started with an introduction scenario (Appendix C) that was built both to offer a concrete situation before rating the profiles, and to explain the conjoint attributes to the respondents. First of all, the “scenario” suppliers were all independent farmers because the results of this research have to be useful for farmers and farmers’ cooperatives that want to enter the market as new suppliers. Moreover, Brazilian scenario was chosen because Brazil is the largest producing country and it was easy to get specific information about variety, altitude, price, quality and method of production. Finally, a fixed level of quality was necessary to better understand how the supplier reputation attribute affects the Uniqueness Product Perception and Customer Value Perception for a coffee offered by a new supplier.

Then, respondents had to grade 12 specialty coffee profiles summarized in Table 4.3.1. The Table shows the orthogonal fractional factorial design (9 profiles) of this study. Only the main effects were measured because it was assumed that attributes do not present interaction effects. Moreover, a full factorial design with 36 profiles was too big to present to the respondents. Two-holdout profiles were added to the design in order to assess the predictive ability of the conjoint, while the warming up profile was used to accustom the respondents.

**Table 4.3.1 Conjoint profiles.**

Number of Profile	Price	Product Scarcity	Exclusive Supplier Relationship	Supplier Reputation	Status of profile
0	5\$/Kg	Limited Supply	No	QCI	Warming up
1	5\$/KG	Limited Supply	Yes	QCI	Design
2	15\$/Kg	Limited Supply	Yes	CoA and QCI	Design
3	5\$/KG	Abundant Supply	No	CoA and QCI	Design
4	15\$/Kg	Abundant Supply	Yes	QCI	Design
5	10\$/kg	Limited Supply	No	QCI	Design
6	10\$/kg	Limited Supply	Yes	CoA and QCI	Design
7	5\$/KG	Limited Supply	Yes	CoA	Design
8	10\$/kg	Abundant Supply	Yes	CoA	Design
9	15\$/Kg	Limited Supply	No	CoA	Design
10	15\$/Kg	Limited Supply	Yes	QCI	Holdout
11	5\$/KG	Abundant Supply	Yes	CoA and QCI	Holdout

The price was divided into three levels: 5\$/Kg; 10\$/Kg and 15\$/Kg. These three levels were selected by looking at three different sources: Specialty Coffee Auction ("Alliance for Cup of Excellence), website of a coffee importer ("Mercanta - The Coffee Hunters"), and a qualitative interview with a specialty green coffee trader (Appendix A). Specialty coffee auctions offer prices that go from 4 \$/Kg to 50 \$/kg, even though the average is between 6-8 \$/kg. Obviously, the average changes in accordance with the selected coffee category, but generally speaking, it can be seen that most of the coffees are sold between 6 and 8\$/Kg. Only the first ranked coffee (with grade quality around 92-95) can reach an auction price of 30-50\$/kg. Given that this research does not consider the first ranked coffees but a general good quality coffee, it was decided to consider 15\$/kg as highest price level. Empirical sources coming both from an importer of specialty coffee ("Mercanta - The Coffee Hunters") and from a qualitative interview with a specialty coffee trader confirmed the chosen price range.

Product Scarcity was an attribute already used by Wu et al., (2012). The presence or the absence of a scarcity appeal determined the product scarcity. Similarly, this study used the scarcity appeal to evoke the limited supply. Specifically, the attribute Product Scarcity was divided into two levels: **A) In every season, because it is a limited production, supplies are only limited in 20 bags of 60Kg each.** **B) In every season there is abundant and sufficient coffee.**

The Exclusive Supplier Relationship was divided into two levels as suggested by van Hilten's definition (2011). Therefore, the variable varied as: **A):there is an exclusive marketing arrangement**

where farmer agrees to sell this coffee only to you, or only to few companies that do not compete in your same market; B): no particular marketing arrangement.

Supplier Reputation was divided into three levels: **A) Alliance for Cup of Excellence conducted the quality assessment in every season. B) Coffee Quality Institute conducted the quality assessment in every season. C) Alliance for Cup of excellence and Coffee Quality Institute Conducted the quality assessment in every season.** The study assumes that suppliers of specialty coffee, and in particular small suppliers like farmers, have always a sort of “certification”. Therefore, an hypothetic option such as No quality assessment was not included.

Customer Value Perception for a coffee offered by a new supplier was measured by one single item already present in the literature. The item was: **“The product is considered to be a good buy”** and it comes from a study of Dodds et al. (1991). In the same way also the Uniqueness Product Perception was measured by one item coming from the literature of B2B theory (Lapierre, 2000). The item was: **“The product meets unique specifications”**.

Literature was consulted before choosing the proper response mode (rating vs. ranking). According to Cattin and Wittink (1982), rating is less time consuming for the respondent and it is easier to analyze. Moreover, a study by Wittink et al. (1994) showed that rating scale is the most preferred for a commercial use in Europe. Based on these reasons, it was decided to apply the rating as a response mode. The rating scale used is a 9 point Likert scale. Likert scale is one of the most used scales in conjoint analysis. Moreover, literature was consulted in order to set the best numbers of points. According to Jacoby and Matell (1971), the number of points does not affect the validity and reliability of the scale. Literature in conjoint analysis presents indifferently 5, 6, 7, 9 point scales (Tan, 1999; Poortinga et al., 2003; Sayadi et al., 2005). This research used a 9 point Likert scale in order to offer a larger rating to respondents.

### 4.3.1 Validity Analysis of Conjoint Profiles

The correlations between observed and estimated preference for Uniqueness Product Perception and for Customer Value Perception for a coffee offered by a new supplier were used to measure the validity of the conjoint design. Figure 4.3.1.1 and Figure 4.3.1.2 show the distribution of three correlation coefficients among respondents. The first two coefficients (Pearson's R and Kendall's tau) are considering the correlation between observed and estimated preferences per respondent by including all the profiles. In this case all respondents have a good validity. However, by considering the Kendall's tau only for the holdouts profiles, some respondents show a very inconsistent validity with coefficients of correlation equal to -1. Even though these respondents do not present a good validity for the holdout profiles, they have been included in the analysis. The sample is already very little and it has been preferred to maintain all 57 respondents than to delete the ones with lower validity for holdouts profiles.

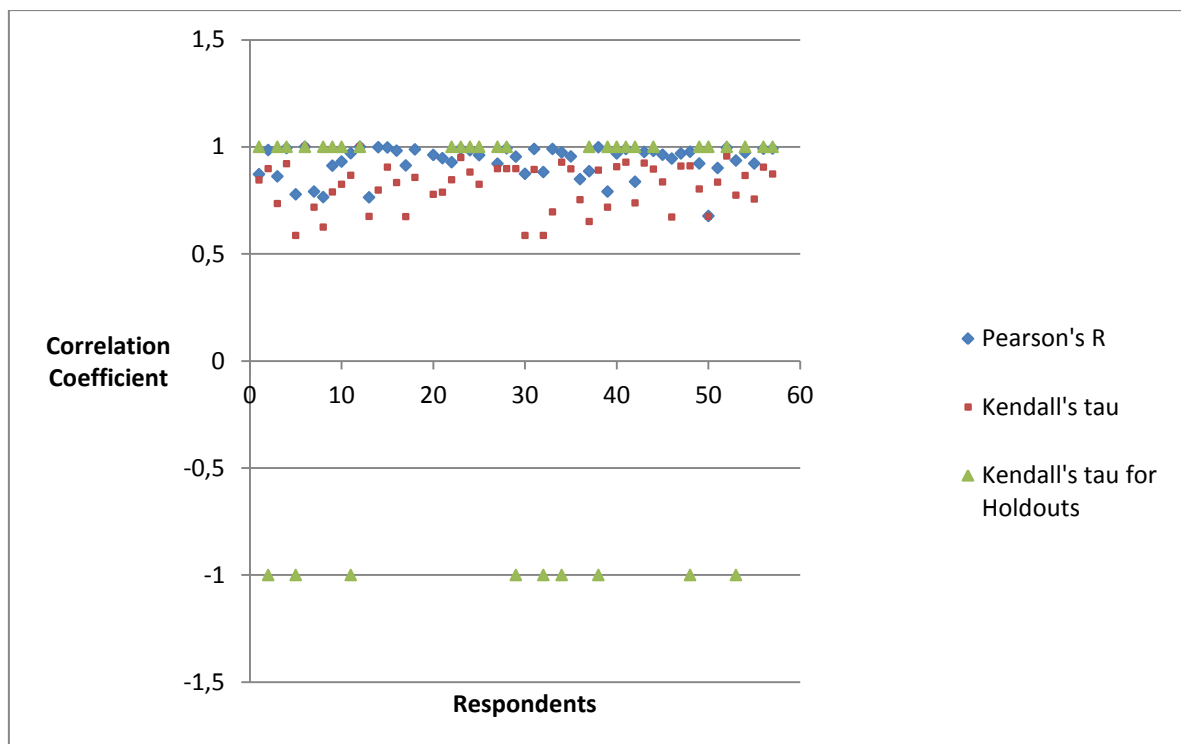


Figure 4.3.1.1 Distribution of correlations between observed and estimated preference of Uniqueness Product Perception among respondents.

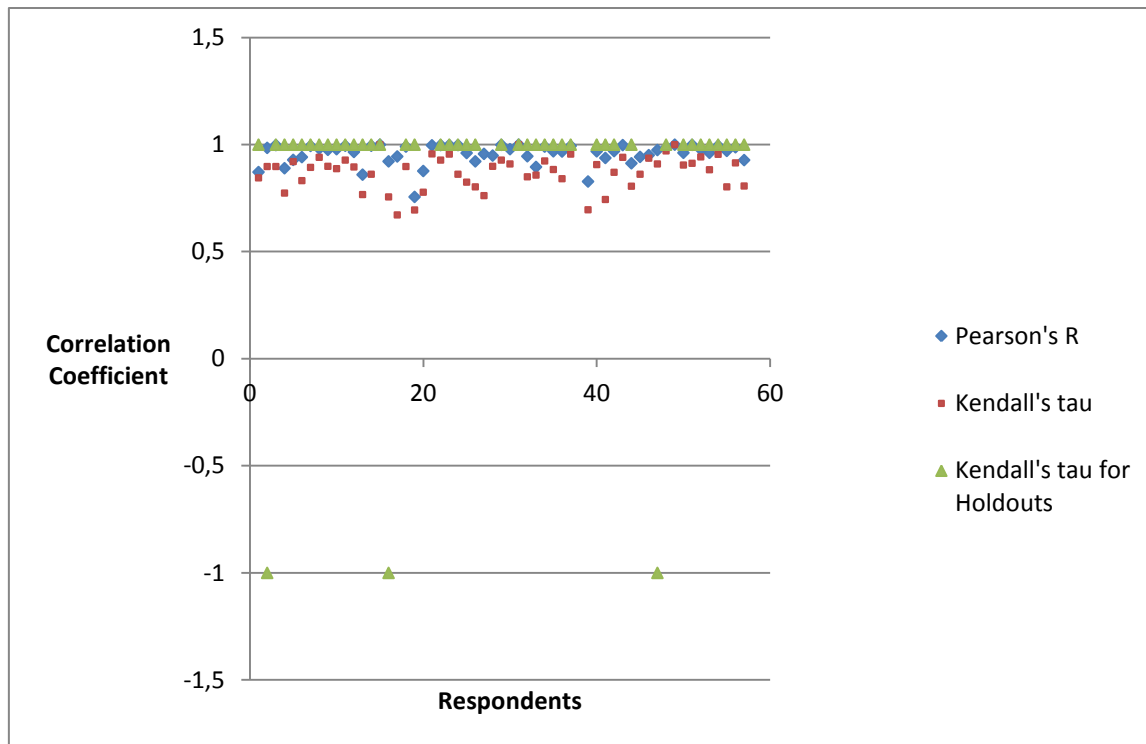


Figure 4.3.1.2 Distribution of correlations between observed and estimated preference of Customer Value Perception for a coffee offered by a new supplier among respondents.

#### 4.4 Measurement of Control Variables

At the end of the questionnaire, an independent set of questions was presented to measure the control variables. Specifically, Customization Perception for coffees offered by current suppliers and Switching Costs were multi items scales with 5 items each. In the case of Customization Perception for coffees offered by current suppliers, the items chosen were rearrangements of similar studies where this construct was used (Coulter and Coulter, 2003; Srinivasan et al., 2002; Lapierre, 2000). The scale is shown in the Table 4.4.1 At the same way, studies of Lam et al. (2004) and Heide and Weiss (1995) were used to operationalize the construct Switching Costs. The scale represented in the Table 4.4.2 measures the three classic dimensions of Switching Cost (money, effort and time), but also the general feeling in having a new coffee supplier relationship. Respondents expressed the agreement or disagreement with all the items presented, by filling a 9 point Likert Scale where 1 means strongly disagree and 9 means strongly agree.

**Table 4.4.1 Multi items scale for Customization Perception for coffees offered by current suppliers.**

	Strongly Disagree	2	3	4	5	6	7	8	Strongly Agree
My Current Coffee Suppliers <b>provide me with well-thought-out alternatives suited to my unique needs.</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My Current Coffee Suppliers <b>are able to offer extremely customized products.</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My Current Coffee Suppliers <b>work with me to define my particular needs.</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My Current Coffee Suppliers <b>are able to offer products with unique specifications for my business.</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My Current Coffee Suppliers <b>make me feel that I am a unique Roaster.</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Table 4.4.2 Multi items scale for Switching Costs.**

	Strongly Disagree	2	3	4	5	6	7	8	Strongly Agree
It would cost my company <b>a lot of money</b> to switch from my suppliers to another	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It would take my company <b>a lot of effort</b> to switch from my suppliers to another	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It would take my company <b>a lot of time</b> to switch from my suppliers to another	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company <b>would feel uncertain</b> if we have to choose a new supplier	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that developing a new relationship with a new supplier <b>will be a time consuming process</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The Degree of Competition was measured in terms of competition perception because of the lack of real data about the numbers of specialty roasters involved in the market. The item and the scale were selected by a study of Downey et al. (1975). Likewise, there are not reliable data in order to check the market growth rate of specialty coffee. In similar cases, literature used the perception of market growth rate defined as “the estimated annual growth rate of total sales in a business's principal served market segment over the past three years” (Slater and Narver 1994). Figure 4.4.3 shows the rearranged versions used to measure the moderator variables in this context.

- How many significant specialty roasters competitors are involved in your market? ( please select one option from the ones provided below)

Point of the scale	Number of competitors
1	1
2	3
3	15
4	25
5	50
6	100
7	more

- What is the average annual growth rate of specialty ROASTED coffee sales over the past three years? (Please answer with a percentage)

Figure 4.4.3 Operationalization of Degree of Competition and Market Growth.

Eventually, it was asked the respondents also to indicate the main continent of operations (USA or Europe) as an indication of geographic area, the number of years working in the specialty coffee business as an indication of roaster experiences, and the Kg of coffee roasted per year as tool to measure the amount of production.

#### 4.4.1 Reliability and Validity Analysis of Control Variables

Reliability analysis was conducted for the two multi items scale. The Principal Component analysis of all the 10 items together (5 items coming from Customization Perception for coffees offered by current suppliers and 5 from Switching Costs) shows the extraction of 2 factors based on the Eigenvalue criteria (Appendix D). Cronbach's alpha was computed on each of two groups of items. Respectively, the 5 items that represent Customization Perception for coffees offered by current suppliers show Cronbach's alpha of 0.846, while the other items that represent the Switching Costs show a Cronbach's alpha of 0.899. All the items were preserved in the original scale, because a potential deletion of items decreased either the Cronbach's alpha or the validity or the respective scale. Eventually, the means among the scores of each scale were computed to define respectively the variable Customization Perception for coffees offered by current suppliers and the variable Switching Costs.

Correlation among the control variables is a tool to test the validity of the constructs. Table 4.4.1.1 shows Pearson correlation coefficients among all control variables. Discriminant validity is good because most of the correlation coefficients are low. Interesting is the positive correlation between the Switching Costs and Customization Perception for coffees offered by current suppliers (0.192) This coefficient tests the nomological validity of the scales. Indeed, positive correlation is

expected between these two constructs because specialty roasters with high Switching Costs are likely to have also a high Customization Perception for coffees offered by current suppliers. Moreover, the nomological validity can be tested also between market growth perception and amount of coffee roasted. The high correlation (0.657) indicates that specialty roasters that produce more have a higher perception of the market growth. Finally, specialty roasters that perceive a higher degree of competition, are perceiving a lower market growth ( -0.124).

Table 4.4.1.1 Pearson Correlation among Control Variables.

	Customization Perception for coffees offered by current suppliers	Switching Costs	Degree of Competition Perception	Market Growth Perception	GEO area	Roaster Experience	Amount of coffee roasted
<b>Customization Perception for coffees offered by current suppliers</b>	1	0.192**	0.129**	-0.068	0.185**	0.190**	0.103*
<b>Switching Costs</b>	0.192**	1	0.033	0.193**	-0.111*	-0.083	0.329**
<b>Degree of Competition Perception</b>	0.129**	0.033	1	-0.124**	-0.017	0.092*	0.076
<b>Market Growth Perception</b>	-0.068	0.193**	-0.124**	1	-0.190**	-0.224**	0.657**
<b>GEO area</b>	0.185**	-0.111*	-0.017	-0.190**	1	-0.128**	-0.410**
<b>Roaster Experience</b>	0.190**	-0.083	0.092*	-0.224**	-0.128**	1	-0.020
<b>Amount of coffee roasted</b>	0.103*	0.329**	0.076	0.657**	-0.410**	-0.020	1

\*\* correlation significant at 0.01 level (2 tailed)

\* correlation significant at 0.05 level (2 tailed)

The Table 4.4.1.2 displays the sample in terms of central tendency and distribution of all continuous control variables. The sample varies mainly in terms of Market Growth Perception, Roaster experience and Amount of Coffee Roasted. These three variables present differences in terms of central tendency and, moreover they have a high standard deviation. The Degree of Competition, Customization Perception for coffees offered by current suppliers and Switching Costs are less dispersed.

**Table 4.4.1.2 Central tendency and standard deviation of all the continuous control variables.**

	N of Respondent	Mean	Median	Mode	Std. Deviation
<b>Degree of Competition Perception</b>	57	3.49	3 (15 competitors)	3 (15 competitors)	1.594
<b>Market Growth Perception</b>	57	50.868	17	15	137.9479
<b>Roaster Experience</b>	57	10.570	9	10	7.9605
<b>Amount of Coffee Roasted</b>	57	115,790.84	15,000	5,000	343,550.882
<b>Customization Perception for coffees offered by current suppliers</b>	57	6.07	6	6	1.48
<b>Switching Costs</b>	57	3.99	4	1	1.86

## 4.5 Analysis

The model and most of the hypotheses were tested by Analysis of Covariance (ANCOVA) conducted in SPSS. ANCOVA was chosen because it has been defined by Wittink and Cattin (1981) as the best procedure to analyse conjoint tasks in cases of compensatory models. Moreover, ANCOVA was preferred because of the nature of the control variables. These variables were not fixed and manipulated as other independent variables (Price, Product Scarcity, Exclusive Supplier Relationship and Supplier Reputation). They were collected in a separate block of the questionnaire and independent from the conjoint design. ANCOVA analysis carried by SPSS can distinguish the control variables from the explanatory variables of the model by assigning them in two different tasks. Indeed, control variables can be seen as covariates: they can maintain their nature of predictors on dependent variable, but they will be separated by the main experimental manipulation (Field, 2009).

As far as the model is concerned, ANCOVA can be seen as a multiple regression model that includes both dummy variables and continuous ones. The dummy variables are the attributes of the conjoint task, while continuous variables are the control variables. The model computes if the mean of dependent variable changes in accordance with the different levels of attributes of the conjoint task. In other terms, if the means are statistically different among different levels of an attribute, it means that the attribute has an effect on the dependent variable. The test statistic is a F ratio that

compares the amount of systematic variance in the data to the amount of unsystematic variance, and if it is significant indicates that the attribute has had some effects on the dependent variable

If independent variables (specialty coffee attributes) showed a significant effect on the mediator (Uniqueness Product Perception) and/or dependent variable (Customer Value Perception for a coffee offered by a new supplier), then hypotheses could be tested. The hypotheses were tested by analysing the impact that the independent variables had on the estimated marginal mean of mediator and/or dependent variable. If the impacts were in accordance with the pathways supposed in the theoretical framework, then the hypotheses were accepted. Similar procedure was used to see the effects of control variables on the mediator and on the dependent variable. The only difference is that control variables were continuous and in ANCOVA analysis they are called covariates. In other terms, it is possible to see the effect on the dependent variables in terms of parameter estimates.

Finally, the output of PROCESS (Hayes, 2012) was used as tool in order to test both Hypothesis H1, and the mediation analysis of Uniqueness Product Perception between the relationships Product Scarcity- Customer Value Perception and Exclusive Supplier Relationship-Customer Value Perception. PROCESS was chosen because of its accuracy. Indeed, unlike other tests, it can test the mediation effect by considering a model (Appendix E) very similar to the theoretical framework presented in this thesis. Other mediation analyses such as Baron and Kenny (1986) or Preacher and Hayes (2004) are considering simple mediation models that include only one independent variable, one mediator and one dependent variable. PROCESS can test the mediation by including all the other independent variables and control variables (Hayes, 2012).

The direct and indirect effects of an independent variable (X) on a dependent variable (Y) derive from two linear models: one that estimated the mediator (M) from X ( $a_1$ ) and one that estimates Y both from M ( $b_1$ ) and from X ( $c^i$ )

- $X = C + a_1X + ex$
- $Y = C + c^iX + b_1M + ey$

The direct effect of X on Y is  $c^i$ , while the indirect effect of X on Y thorough M is the product  $a_1b_1$  (see Appendix E for the Figure). The mediation analysis was tested by considering two procedures: the bootstrapping range of indirect effect and the Sobel ratio test.

Bootstrapping is a procedure that estimates the indirect effect in repeated sample from the data set. It offers a distribution of the indirect effect ( $a_1b_1$ ) and can compute the confidence interval. It is procedure that does not impose the normal distribution of the data in the sample (Preacher and Hayes, 2008). The mediation test is accepted if bias-corrected bootstrap confidence interval is entirely above zero in absolute terms.

Sobel ratio test provides a test of significance of indirect effect. The test involves a computation of standard error of  $a_1b_1$

- $SE_{a_1b_1} = \sqrt{b_1^2(SE_{a_1})^2 + a_1^2(SE_{b_1})^2 + (SE_{a_1})^2(SE_{b_1})^2}$

In large sample the ratio  $\frac{a_1b_1}{SE_{a_1b_1}}$  is interpreted as z statistic, which means that the indirect effect is significant at 0.05 level (two tailed) if its absolute value exceeds 1.96; the 0.01 level requires a value of at least 2.58.

This thesis will use both the procedures to test the mediation and Chapter 5 will present the results of the analyses.

## 5 Results

Table 5.1 shows the significance and effect size of each independent variable (Price, Product Scarcity, Exclusive Supplier Relationship and Supplier Reputation) on the mediator (Uniqueness Product Perception) and on the dependent variable (Customer Value Perception for a coffee offered by a new supplier). As suggested by West et al. (1996), all continuous variables were centred in order to reduce multicollinearity. The Table shows only the explanatory variables, even though the analysis included also all the control variables. Results on control variables are reported later in this chapter.

**Table 5.1 Significance and effect size of each independent variable on the mediator and on the dependent variable.**

Independent variable	Mediator/Dependent Variable	F	Sig.	Partial Eta Squared
Price	Uniqueness Product Perception	0.699	0.497	0.003
Product Scarcity (H3)		33.836	0.000	0.067
Exclusive Supplier Relationship (H4)		50.304	0.000	0.096
Supplier Reputation		0.606	0.546	0.003
Price (H2)	Customer Value Perception for a coffee offered by a new supplier	82.570	0.000	0.262
Product Scarcity		1.180	0.278	0.003
Exclusive Supplier Relationship		0.096	0.757	0.000
Supplier Reputation (H5)		1.516	0.221	0.006
Uniqueness Product Perception (H1)		36.535	0.000	0.386

Uniqueness Product Perception has a significant effect on Customer Value Perception for a coffee offered by a new supplier  $F(8, 464) = 36.535$ ,  $p < .05$ ,  $\eta^2 = 0.386$ . Table 5.1 considers Uniqueness Product Perception as a fixed independent variables like the others. However Uniqueness Product Perception is the mediator of the model and therefore the output of PROCESS (Hayes, 2012) is preferred to test the hypothesis H1. Indeed, PROCESS computes the relationship between these two variables by considering Uniqueness Product Perception as mediator. As a result, H1 is accepted given the positive coefficient of  $\beta = 0.6336$  (s.e. 0.0376),  $p < .05$ .

Price has a significant effect on Customer Value Perception for a coffee offered by a new supplier  $F(2, 464) = 82.57$ ,  $p < .05$ ,  $\eta^2 = 0.262$ . H2 is demonstrated by considering the impact of the different levels of Price on the estimated marginal mean (Table 5.2). The mean differences are significant at 0.05 level and they were computed by the adjustment of Bonferroni as suggested by Field (2009). H2 is accepted because higher levels of Price lead to lower Customer Value perception for a coffee offered by a new supplier.

**Table 5.2 Pairwise Comparison effect of Price on Customer Value Perception for a coffee offered by a new supplier.**

Price (i)	Price (j)	Mean Difference (i-j)	Std. Error
<b>5 \$/Kg</b>	10\$/kg	1.367*	0.173
	15\$/Kg	2.197*	0.172
<b>10 \$/Kg</b>	5 \$/Kg	-1.367*	0.173
	15 \$/Kg	0.829*	0.171
<b>15\$/Kg</b>	5 \$/Kg	-2.197*	0.172
	10\$/Kg	-0.829*	0.171

Product Scarcity has a significant effect on Uniqueness Product Perception  $F(1, 472)=33.836$ ,  $p<.05$ ,  $\eta^2 = 0.067$ . H3 is demonstrated because the presence of a scarcity appeal increases the mean of Uniqueness Product Perception  $\beta = 1.056$  (s.e. 0.181),  $p<.05$ . There is not a direct effect of Product Scarcity on Customer Value Perception for a coffee offered by a new supplier. However, from the output of PROCESS (Hayes, 2012), it can be demonstrated the indirect effect of Product Scarcity through Uniqueness Product Perception. Indeed, the range of indirect effect is different than zero (BOOT LLCI = -0.9173; BOOT ULCI = -0.4474), and the Sobel Ratio has a value of 5.50.

Similarly, Exclusive Supplier Relationship has a significant effect on Uniqueness Product Perception  $F(1, 472)= 50.304$ ,  $p<.05$ ,  $\eta^2 = 0.096$ . H4 is demonstrated because the presence of an Exclusive Supplier Relationship increases the mean of Uniqueness Product Perception  $\beta = 1.287$  (s.e. 0.181),  $p<.05$ . There is not a direct effect of Exclusive Supplier Relationship on Customer Value Perception for a coffee offered by a new supplier. However, from the output of PROCESS (Hayes, 2012), it can be stated the indirect effect of Exclusive Supplier Relationship through Uniqueness Product Perception. Indeed, the range of indirect effect is different than zero (BOOT LLCI = -1.0735; BOOT ULCI = -0.5856), and the Sobel Ratio has a value of 6.54.

H5 cannot be tested because there is not significant effect of Supplier Reputation on Customer Value Perception for a coffee offered by a new supplier.

## 5.1 Results of Control Variables

Table 5.1.1 reports the parameter estimates the significance and effect size of each control variable on the mediator (Uniqueness Product Perception) and on the dependent variable (Customer Value Perception for a coffee offered by a new supplier).

**Table 5.1.1** Parameter estimates, significance and effect size of each control variable on the mediator and on the dependent variable.

Control Variable	Mediator/Dependent Variable	$\beta$	Standard error	Sig.	Partial Eta Squared
Customization Perception for coffees offered by current suppliers	Uniqueness Product Perception	-0.002	0.063	0.978	0.000
Switching Costs		-0.078	0.051	0.125	0.005
Degree of Competition Perception		0.071	0.055	0.195	0.004
Market Growth Perception		0.001	0.001	0.124	0.005
GEO area		0.331	0.248	0.182	0.004
Roaster Experience		0.023	0.011	0.044	0.009
Amount of coffee roasted		0.000	0.000	0.438	0.001
Customization Perception for coffees offered by current suppliers	Customer Value Perception for a coffee offered by a new supplier	0.116	0.052	0.025	0.011
Switching Costs		-0.139	0.042	0.001	0.023
Degree of Competition Perception		0.170	0.046	0.000	0.029
Market Growth Perception		0.002	0.001	0.004	0.017
GEO area		-0.06	0.209	0.774	0.000
Roaster Experience		-0.028	0.010	0.004	0.018
Amount of coffee roasted		0.000	0.000	0.049	0.008

As far as the uniqueness perception is concerned, most of the control variables are insignificant except for the roaster experience  $\beta = 0.023$  (s.e. 0.011),  $p < .05$ . On the contrary, most of the control variables have a significant effect on Customer Value Perception for a coffee offered by a new supplier, but all of them have values of effects size very low that lie in a range between  $\eta^2$  0.000 and  $\eta^2$  0.03. The Degree of Competition Perception and Market Growth were tested also as moderators, but no significance effect was found.

## 6 Discussion of Results

The majority of results accept the model and related hypotheses. 4 hypotheses over 5 were in accordance with the theoretical framework, while the remaining one was not significant. Specifically, H1, H2, H3 and H4 were accepted while H5 was not tested because of its insignificance. Moreover, the descriptive statistic of the sample and the validity of the conjoint profiles show results that are not full satisfactory for the general validity of the study. The next paragraphs will discuss each part of the results in detail.

Results showed a positive coefficient  $\beta = 0.6336$  (s.e. 0.0376),  $p < .05$  between Uniqueness Product Perception and Customer Value Perception for a coffee offered by a new supplier. The causal relationship stated in Hypothesis H1 and accepted by the results needs to be discussed. Indeed, scholars could disagree on the causal relationship because Uniqueness Product Perception was a dependent variable in the conjoint task. In the research design both Uniqueness Product Perception and Customer Value Perception for a coffee offered by a new supplier were dependent variables. and none was manipulated by the researcher in order to demonstrate the causal relationship. However, this thesis assumed the causal relationship since it was already present in the literature (Lapierre, 2000). Making a product customized and unique was a driver of Customer Value Perception in B2B literature, and for this reason H1 can be accepted. Moreover, a Pearson correlation coefficient of 0.591 shows that the two constructs are positively correlated but they are not similar. This coefficient may be considered a tool to test the discriminant validity of the constructs. Respondents considered Uniqueness Product Perception and Customer Value Perception as two concepts related but different.

The Price seems to be an important factor affecting Customer Value Perception for a coffee offered by a new supplier, and it respects the pathways reported in the literature (Zeithaml, 1988). On the other hand, Price does not affect the Uniqueness Product Perception because the attribute is not significant  $F(2, 472) = 0.699$ ,  $p > .05$ ,  $\eta^2 = 0.003$ . As mentioned in Chapter 3, price itself does not indicate the uniqueness of specialty coffee. As expert buyers, specialty roasters need other information in order to grade and to appreciate the uniqueness.

Product Scarcity and Exclusive Supplier Relationship have shown pathways in accordance with the hypotheses. Indeed, the scarcity of the product (evoked by a scarcity appeal) and the exclusiveness

of the supply increase the perception of product uniqueness, and affect indirectly Customer Value Perception for a coffee offered by a new supplier.

Supplier Reputation does not affect neither Uniqueness Product Perception  $F(2, 472)=0.606$ ,  $p>.05$ ,  $\eta^2 = 0.003$ , nor Customer Value Perception for a coffee offered by a new supplier  $F(2, 464)=1.516$ ,  $p>.05$ ,  $\eta^2 = 0.003$ . The results confirm the “specialty” character of the market and expertise of this buyer typology (Specialty Roasters). Post study interviews (Appendix A) confirm that quality is very important in this market, and specialty roasters know the intrinsic cues responsible for the quality. However, specialty roasters consider only partially the grade coming an independent commission like Alliance for Cup of Excellence or Coffee Quality Institute. The decision to consider a specialty coffee as a good buy or a unique is due to their own cup and their own quality assessment. Before any purchase and any judgment about quality, they want to taste the coffee. They do not trust any grade coming from any commissions. Those are just tools to confirm their own judgments. The results are in accordance with the study of Lockshin et al. (2006) where they tested that wine buyers with high level of product knowledge and involvement considered only partially price and quality award during purchase.

Control variables present either insignificant, or significant but weak impacts on Uniqueness Product Perception and Customer Value Perception for a coffee offered by a new supplier. Interesting is the effect of Switching Costs on Customer Value Perception for a coffee offered by a new supplier  $\beta = -0.139$  (s.e. 0.042),  $p<.05$ . The negative coefficient indicates that the presence of higher onetime costs could affect negatively the value perceived for a coffee offered by a new supplier.

## 7 Limitations

As far as the theory is concerned, this thesis narrowed the investigation about competitive advantage only to the B2B customer value perception theory. Here it was considered the positive correlation between customer value perception and competitive advantage, however other theories could be included in order to increase the advantages of farmers. Another limitation of this thesis is the selection of benefits and sacrifices. Chapter 3 explained the motivations and the theoretical reasoning behind each choice, however many other drivers could be taken into account. All drivers present in B2B customer value perception theory should be considered in order to have a full understanding of the model.

From a practical perspective the thesis cannot have a strong general validity due to the sampling of the research design. It was difficult to obtain the real number of specialty roasters that represent the population, and maybe the sample is too small as well as too variegate in order to generalize the conclusions to the whole specialty coffee market. The specialty roasters were not randomly selected, they were very different in terms of experience and production, came from different markets and perceived the market growth in a very different way. These reasons are sufficiently strong to state that the general validity of the thesis is limited. Moreover, an analysis on country/continent differences was not conducted because the sample was not proportionally distributed among countries or continents. In terms of countries, 48% of the sample was based in the Netherlands and the remaining 52% was distributed in other 7 countries, while in terms of continents, 20% of the sample was based in America and 80% in Europe.

Finally, specialty roasters requested to taste the coffee in order to fill in the questionnaire in a proper way. Specialty roasters interviewed after the questionnaire (Appendix A) declared that was difficult to assess the coffees without having the possibility to taste them. The wish expressed during the conjoint task is a further confirmation that explains the impossibility to have a pure B2B e-commerce in the Specialty Coffee Market.

## 8 Conclusions

Results of this thesis could be useful for farmers entering the specialty coffee market as new suppliers. Basically, every strategy targeted to increase the uniqueness product perception is important in order to affect the customer value perception. This thesis found product scarcity and exclusive supplier relationship as attributes increasing the uniqueness of the product. Specialty roasters have to taste the products before any purchase, therefore information about the quality reputation without a real concrete coffee sample cannot affect customer value perception. Price is a monetary sacrifice like in any other B2B relationship.

This thesis contributes to improve the current literature on B2B customer value perception. Indeed, most of the available literature either considers undifferentiated drivers applied to all kinds of industries, or it focuses the discussion on service industries. This could not be sufficient for particular B2B contexts, for example relationships that trade high quality products. B2B customer value perception theory cannot identify a general trade off of affecting drivers. It is more reasonable to have drivers that are industry specific. In this thesis Uniqueness Product Perception was considered the main driver affecting the customer value perception of specialty roasters. The research could be used as a case study for B2B relationships that have reasons to consider uniqueness as the main affecting driver, such as high quality products or conspicuous good.

## Appendix A: List of Experts and Specialty Roasters interviewed for pre and post qualitative studies

Name	Profession	Pre/Post Qualitative Research
<b>Pieter Koerts</b>	Specialty Coffee Trader	Pre Research
<b>Don Jansen</b>	Researcher at Wageningen University	Pre- Research
<b>Paul Verbunt</b>	Specialty Coffee Roaster	Pre-Research
<b>Kelsey Mutter</b>	General Manager roast Magazine	Pre- Research
<b>Elmer O.</b>	Specialty Coffee Roaster	Post Research
<b>Felipe C.</b>	Specialty Coffee Roaster	Post Research
<b>Wolfram S.</b>	Specialty Coffee Roaster	Post Research
<b>Katie G.</b>	Specialty Coffee Roaster	Post Research

## Appendix B: Invitation email

Dear Specialty Roaster,

My name is Michele Mondolo and I am writing on behalf of the Marketing and Consumer Behaviour Group of Wageningen University (Netherlands) in order to request your help for an important project. As part of a larger program to better understand the Specialty Coffee Market, our group is conducting a survey among current Specialty Coffee Roasters with some questions about the potential business relationship between Farmers and Specialty Roasters. Nowadays, we are interested in having better insights of Specialty Coffee Market and finding opportunities that could help Coffee farmers to strengthen their position in the supply chain. We think that Specialty Coffee is an important market to finally meet the increasing demand in high quality coffee. Moreover, studies about potential direct relationships between farmers and specialty roasters will benefit all actors of this chain.

This survey will involve many specialty roasters coming from Northern Europe and USA and having similar characteristics in common with you. I know that you are busy and conducting a survey is time consuming for you. However, I hope that you will be willing to spend just 10-15 minutes of your time participating in this brief web survey created by the Wageningen University.

For the scientific purpose of this study, your contribution is really important. If you decide to complete the survey online, please go to the URL below and then follow the online survey's instructions. Once you have completed the survey, I would ask you to send an email where you explicitly confirm your participation in the survey. In this way, I will not try to contact you further by other emails or phone calls.

As a token of our appreciation for your participation in this important study, Marketing and Consumer Behaviour Group will be glad to share part of this market research with you. At the end of this project (estimated around May/June 2015) you will receive an exclusive brief report (2-3 pages) about our market research on Specialty Coffee Market. Participants of this questionnaire will have exclusive access to this report. The report will provide with information about specific marketing strategies which can be applicable between coffee farmers and Specialty Roasters. It will explain the main affecting characteristics of the market and it will underline the difference between European and American Specialty Coffee Market. Moreover, it will provide profitable solutions in B2B relationships in order to increase the value of Specialty Coffee Supply chain.

Your answers will be completely confidential and anonymous. The results of the survey will be used only for this scientific purpose and reported only on scientific platforms. They will not be advertised by any coffee magazines or Specialty Coffee Organizations in order to ensure the exclusiveness only to participants of this questionnaire.

We warmly thank you in advance for your participation in this important project. If you have any questions or concerns about the survey, please contact Michele Mondolo, researcher in Marketing and Consumer Behaviour of Wageningen University at +31 616175312 or [michele.mondolo@wur.nl](mailto:michele.mondolo@wur.nl)

Sincerely,  
Michele Mondolo

URL OF QUESTIONNAIRE: [Click here to take a survey.](#)

## Appendix C: Scenario for the Conjoint Task

Imagine the following scenario...12 different farmers want to supply you with their specialty green coffee. All of these farmers are new suppliers for you and none is a current supplier of yours. All of them have common characteristics:

1. They are producing Arabica Coffee varietal Caturra
2. All of them are producing Organic Coffee
3. All of them come from Brazil
4. The production area is around 1200 meters of altitude
5. All of them are using Natural Processing
6. All of them are single independent farmers that want to sell coffee directly to specialty roasters in order to reduce the gap between production and selling point, in the hope that they will obtain a higher margin for their coffee.
7. All of these farmers are offering specialty coffee. Independent organizations have assessed lots of these coffees in the last 5 seasons. In every season all of them always receive a grade higher than 85/100.

However, these new suppliers and their coffees have specific characteristics that make each of them different from others.

1. Some of them can produce **abundant quantity of coffee, while other have a limited supply.**
2. The Quality assessment of the specialty coffee could be conducted by **Alliance for Cup of Excellence** (<http://www.allianceforcoffeexcellence.org>), **Coffee Quality Institute** (<http://coffeeinstitute.org>), **or both.**
3. Some of them can have **a particular marketing arrangement, that ensures an exclusive relationship between farmer and roaster.**
4. The selling price of the coffee per Kg is different ( **5\$/Kg, 10 \$/Kg or 15 \$/Kg**).

Based on these differences, we are asking you to assess independently the uniqueness and the value perceived of the coffees offered by these 12 new potential suppliers. **The uniqueness is the capability of the product to meet unique specifications.** While the **perceived value is your general evaluation about the product.** Please assess the uniqueness and the value perceived for each of them on a scale from 1 to 9, where 1 means strongly disagree and 9 means strongly agree. The first profile called Supplier 0 is an example that will help you to understand better.

## Appendix D: Reliability Analysis for Multi Items Scales (Customization Perception for coffees offered by current suppliers and Switching Costs)

Table D1 Total Variance Explained by Principal Component Analysis..

Component	Total Eigenvalues	% of Variance
1	4.174	41.745
2	2.594	25.942
3	0.832	8.319
4	0.601	6.008
5	0.491	4.910
6	0.420	4.199
7	0.375	3.748
8	0.225	2.251
9	0.207	2.066
10	0.081	0.812

Table D2 Pattern Matrix Rotation Method.

Items name	Factor 1 (Switching Cost)	Factor 2 (Customization Perception for coffees offered by current suppliers)
My Current Coffee Suppliers provide me <b>with well thought-out alternatives suited to my unique needs</b>	0.088	<b>0.738</b>
My Current Coffee Suppliers <b>are able to offer extremely customized products</b>	0.030	<b>0.838</b>
My Current Coffee Suppliers <b>work with me to define my particular needs</b>	-0.070	<b>0.845</b>
My Current Coffee Suppliers are able to <b>offer products with unique specification for my Business</b>	-0.085	<b>0.822</b>
My Current Coffee Suppliers <b>make me feel that I am a unique roaster</b>	0.076	<b>0.679</b>
It would cost my company <b>a lot of money</b> to switch from my suppliers to another	<b>0.717</b>	0.055
It would take my company <b>a lot of effort</b> to switch from my suppliers to another	<b>0.941</b>	0.026
It would take my company <b>a lot of time</b> to switch from my suppliers to another	<b>0.897</b>	0.047
My company <b>would feel uncertain</b> if we have to choose a new supplier	<b>0.835</b>	-0.212
I think that developing a new relationship with a new supplier will <b>be a time consuming process</b>	<b>0.799</b>	-0.157

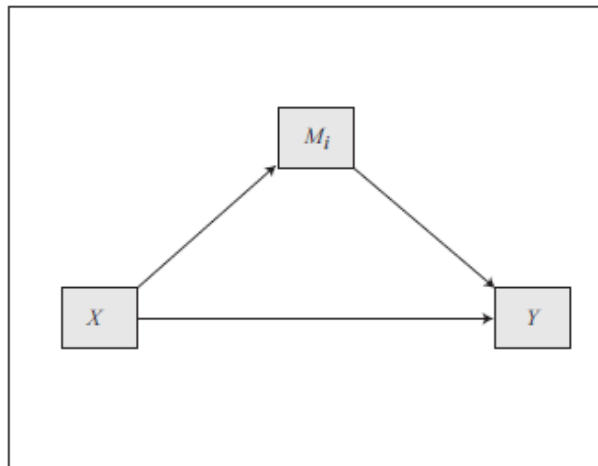
## Appendix E: Template 4 of PROCESS (Hayes, 2012)

Model Templates for PROCESS for SPSS and SAS  
©2013 Andrew F. Hayes, <http://www.afhayes.com/>

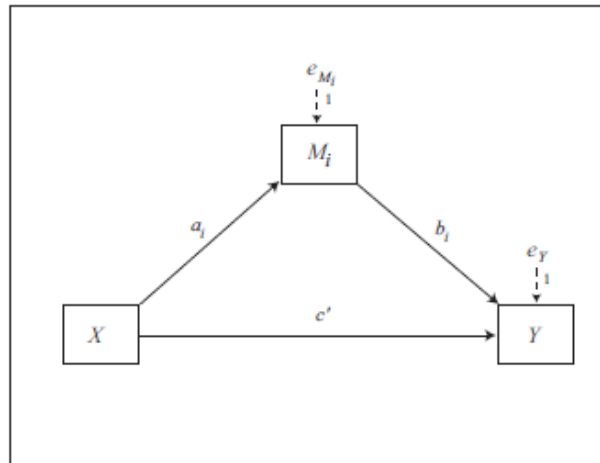
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### Model 4

Conceptual Diagram



Statistical Diagram



Indirect effect of  $X$  on  $Y$  through  $M_i = a_i b_i$

Direct effect of  $X$  on  $Y = c'$

Note: Model 4 allows up to 10 mediators operating in parallel.

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