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Quality attributes of a high specification product: Evidences from the speciality coffee business

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# Quality attributes of a high specification product

# Evidences from the speciality coffee business

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#### Abstract

**Purpose** – High-specification food products that reach prices or expert reviews above average, results from buyer-supplier engagement in quality management. The purpose of this paper is to identify the main attributes of the coffee industry supply chain that deals with high-specification products. Coffee may be included in this category of consumption goods that has increasing importance at consumption level around the world. Several groups of high-quality food products such as wine, coffee, spirits and cheese seem to have a very similar supply chain.

**Design/methodology/approach** – This study was based on multiple case studies. Three research techniques were used in the investigation: secondary data analysis, direct observations and interviews with coffee company's managers and experts. The within-case and the cross-case analyses made it possible to find the main attributes of a high-specification product supply chain.

**Findings** – The cases studies pointed out differences between the two groups of coffee shops in relation to their supply chain strategies. The first group can be called Independent Coffee Shops, since they are focussed on the coffee preparation business. The second group can be called Integrated Coffee Shops, due to the fact that these organizations are responsible to manufacturing activities in addition to the coffee preparation activities. Despite this supply chain configuration difference, both groups have a similar perception about their role for the final consumer, to provide a premium experience with coffee.

**Research limitations/implications** – The main limitation of this research comes from the fact it was possible to interview only one person in each organization. Only the commercialization of the supply chain was analyzed, if the agricultural production was also analyzed, this paper could have broader implications.

Originality/value – The results of this research show the configuration of a supply chain that handles a high-specification product. They are set to transform the trade of a product that has a component of volatility in its quality attributes into a trade of a product that embodies all the desirable attributes preferred by a specific group of costumers. The logic of a supply chain that deals with commodities is different, since in most of the cases it will try to accommodate the variations on quality that comes from nature. This paper describes the market based strategy of 12 organizations and their supply chain configuration in order to offer a premium product.

Keywords Supply-chain management, Buyer-seller relationship, Coffee, Product quality Paper type Research paper

# 1. Introduction

Supply chain (SC) driven by high-quality standards is generally found in the fashion and luxury industries. For both, the driver that leads to the configuration of the SC is hardly aiming mass consumption. The objective of this study is to identify the main attributes of the coffee industry SC that deals with high-specification products.



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Coffee may be included in this category of consumption goods that has increasing importance at consumption level worldwide. Coffee is one of the main segments of the food and beverage industry. Its global volume of trade, at the retail side, is estimated by the International Coffee Organization to be over US\$173.4 billion in 2012 (ICO, 2014). Due to the fact that this grain is mainly produced at tropical regions of the planet and consumed at the temperate regions, coffee is recognized as very important for the world international commerce. The trade of this product is also regarded as very important to facilitate development, predominantly because it is a merchandise that helps to bring economic resources from the developed world to the developing parts of the world (ICO, 2014).

Traditionally coffee has been traded as a commodity, only more recently, new alternative schemes to trade coffee emerged. These new arrangements to trade coffee were put in place because a fundamental change happened at the consumption side, the customers became more interested to drink a better quality coffee (Alvarez et al., 2010; Nunes et al., 2013). Since this structural change, the new trade arrangements became more watchful about quality issues, and consequently coffee sensory analysis reached a new dimension for the coffee trade. Apart from this introduction, this study also brings a literature review (quality management and SC management), a brief description of coffee trade and distribution channels, the employed research methods, the obtained empirical results, implications for theory, which is followed by the final conclusions and research implications.

# 2. Literature review

Concepts of quality

Trentin *et al.* (2012) consider that the concept of quality presents two different perspectives. The first is related to a manufacturing perspective and it is defined as conformance to specifications (Garvin, 1987). The second focus follows a user-based approach and it considers the fit between the characteristics of a product and the customer's needs (Ophuis and Van Triip,1995).

Based on a multitude of concepts of quality as an attribute, Dobler and Burt (1996) mention another perspective. For them, quality also is consequence of high specifications. In other words a product or a service is evaluated in absolute terms according to the value of the material or the specialised service that is part of the product. In this paper, this last perspective is examined. But before to proceed it is important to clarify about the adopted meaning of two important concepts: high quality and high specifications.

There is a demand for products and services developed to attend very stringent customers, those that want and are willing to pay for, reliable performance, perfection of details and a clear emotional and status appeal (Mortelmans, 2005; Brun *et al.*, 2008). High quality is a concept that is not so precise. If the original specifications are present in a product, it can be said that high quality is present. In most of the cases the concept is more related to price of the product that is traded than the real specifications of the product (Prajogo *et al.*, 2008). Due to this lack of precision the term high quality will not be employed for the analysis of this research.

High specifications, on the other hand, have a very clear meaning. Dobler and Burt (1996) stated that a high-specification product in most of the cases is composed by valuable materials and is also accompanied by specialized or customized services. This concept is also present in the luxury industry and encompasses also brand, technical features and "those (characteristics) which, in the eyes of the customer, are primarily

symbolic" (Brun *et al.*, 2008). Dobler and Burt (1996) also mentioned that a high-specification products are evaluated in absolute terms, in other words there will be a metric that will help to find the value or price of the product. For products with high specification in quality, Shukla and Purani (2012) found that cultural issues influences the perception of level of importance in aspects like self-directed symbolic values; other-directed symbolic values; experiential values; utilitarian values and financial values. Therefore, high-specification products are aimed to satisfy the needs of an extreme of the consumption market, those customers that know in details what they want and have high expectations to be fulfilled.

Based on the operations strategy approach, different configurations can be put in place to achieve quality. Cagliano *et al.* (2005) grouped these manufacturing strategies into four different groups: market-based strategy, product-based strategy, capability-based strategy and price-based strategy. In a market-based strategy an organization offer a high-quality product surrounded by a variety of alternatives, by a premium service and by the capacity to be flexible to the client's demand. In a product-based strategy the producing company make use of innovations and improvements to conciliate quality with lower prices. In a capability-based strategy, the focus is on the development of the production capacity in order to obtain high quality, lower costs and high flexibility. Finally, in a price-based strategy the main objective is to reach a lower selling price and to preserve the standards of quality.

# SCs of high-specification products

Beyond the manufacturing strategy, the successful delivery of a product to the final customer is the result of the work of several organizations that have added value at different phases of the product cycle (Carey *et al.*, 2011). It is also possible to affirm that the final quality of a product traded is dependent on the quality management activities performed by each organization that has some influence in the product value chain. Zu and Kaynak (2012) stated that an effective quality management system of a SC is a key aspect for delivering high-quality products and services to customers. Basic aspects for a continuous SC quality are co-ordinated efforts, technology application, risk management, and reliability improvement (Zhang *et al.*, 2011). A potential problem is that even when a company adopts the most advanced internal quality management programs, there is chance that the final product will fail in terms of quality, as a consequence of negligence by trade partners (Handley and Gray, 2013). To overcome this obstacle the alternative for an organization is the careful selection of trade partners and also to put in place supplier development programs (Modi and Mabert, 2007).

Caniato *et al.* (2009) based on the relations present in the Italian luxury industry listed the main attributes of these specialized SCs, which are: protection of unique sources of raw materials, responsiveness to the demand, agility enough to capture short product lifecycles and high quality and craftsmanship embodied in the product. The authors also emphasized that the extensive use of design can be employed in order to differentiate their products, since the final objective is a call for an emotional appeal associated with the traded product. Finally the use of the "country of origin" concept also helps to increase the value of their product.

In order to achieve some of these aspects above, Chadwick and Rajagopal (1998) highlighted the benefits of developing stable and strategic partnerships with key suppliers for longer periods of time, which will give a chance for developing common interests and loyalty.

In this way, Porter and Kramer (2011) showed that companies like Nestlé, when develop actions throughout the SC are able to improve shared value, quality and productivity.

product

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high specification

The creation of value demands tight relationships between SC agents as showed in the organic SC by Vieira et al. (2013). The consolidated body of practices regarding quality are valid mainly for industrialized component parts or materials that are suitable to standardization. In this case the requirements are posed, production processes are adjusted, costs are negotiated and an agreed price will be reached so buyers and sellers can interact with a relatively lower transaction cost since both sides will not need to always negotiate quality and price. Under these conditions, the volume of transactions can easily grow and buyers and sellers will benefit from the productivity gains.

The SC of a high-specification product, aims to transform a product that has a component of high variation on its attributes, into a product of high specification, which embodies a known set of attributes elected by a specific part of the consumption market. It is important to know how this happens. Figure 1 illustrates this relation.

There are some important issues about coffee chain and its importance for Latin American countries. First, these developing countries rely on coffee export and their governments have been treating coffee as a strategic commodity (Ponte, 2002); second, over 90 percent of coffee production takes place in developing countries, while consumption happens mainly in industrialized economies. Third, coffee bar chains sell more than coffee but also ambience, social content (e.g. fair trade certification), and origin, among others. However, coffee prices for the green coffee have been decreasing for producers in developing countries. In sum, there is a paradox related to the value perceived by consumers and the prices paid for growers.

This can be explained due to the high concentration in the coffee SC in the roast activity with low interest in vertical integration (Ponte, 2002). On the other hand, coffee suppliers are divided in two groups: high-quality coffee (such as the Colombian) and large scale low cost (among them, the Brazilian suppliers) (Ponte, 2002). However, the inclusion of small coffee producers through the adoption of fair trade or organic certification is a reality that tried to balance the rules of the game as described by Borrella et al. (2015) and other authors pointed out in recent literature (Killian et al., 2004; Donovan and Poole, 2014). The "latte revolution" or Starbucks "phenomenon" changed the way that consumers are targeted and the way this process is happening in Brazil led by local companies is described in this paper through an analysis of the integration between production and retail.

It is imperative to remember that a SC of a high-specification product tries to eliminate all quality variation that comes from nature. In an opposite direction, a SC that deals with a commodity product, in majority of the cases tries to accommodate most of the quality variation that comes from nature by performing standardization processes (Gibbon, 2001).

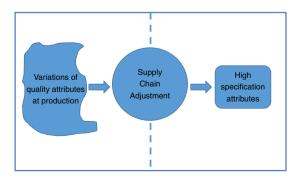


Figure 1. The adjustment mechanism of a high specification supply chain

Sensory analyses of quality

Different techniques are used in order to analyze product quality. Sensory analyses are employed to evaluate wine, whisky, tequila, olive oil, tea and coffee. They are composed by systematized procedures, put in place in order to determine differences among products. They are ultimately based on human senses but they are highly structured processes of scientific methodologies, strict classifications and traditional terminologies developed by experts with the main purpose of evaluation. In most of the cases they make use of score cards, rankings and paired tests to bring more accuracy and reliability to the analysis. Due to the fact that the price of the product is highly dependent of the quality judgment, it is fundamental to bring transparency to the sensory analysis procedures.

Regarding coffee, there is a vast consolidated body of knowledge related to sensory analysis. In order to find the precise attributes of a coffee lot, the organoleptic sensory analysis makes use of the physical and chemical properties of the product under analysis. At the end, the appearance, the flavor and the aroma of the roasted coffee will help to identify its quality level (Chalfoun *et al.*, 2013). According to Coelho and Pereira (2002) and also Borém (2008) the final quality of an coffee drink will be affected mainly by: the chemical composition of the bean, which is influenced by its genetics, environment and agricultural routines at plantations; harvest, post-harvest and storage methods; and roasting, packaging and final preparation.

Since the creation of the Specialty Coffee Association of America (SCAA) in 1982 by coffee traders in the USA, it became very influential in sensorial analysis performed in the coffee trade. Its original purpose was to discuss coffee issues and to set quality standards for the industry. At this time, the American costumer was already willing to drink higher quality coffee. The first edition of the *Coffee Cuppers Handbook* was published in 1985, and since then SCAA has managed to publish a long list of documents (some of them protocols and standards) that have become new references for the coffee trade. Among all these documents, it is important to draw attention to the protocol for "Cupping Specialty Coffee" and for "Grading Green Coffee" protocol (SCAA, 2009a, b).

The different standards and protocols by SCAA, specified the different procedures to perform a more precise sensorial analysis of coffee. The SCAA also developed a clearer meaning for the expression "specialty coffee." Can be called specialty all the coffee that can reach a grade of 80 points or superior in the sensorial scales developed by SCAA. The main evaluated sensorial attributes are: fragrance/aroma, flavor, aftertaste, acidity, body, uniformity, balance, clean cup, sweetness and overall (SCAA, 2009a, b). The sensorial analysis must be performed by an accredited professional.

Taking quality attributes into account, some benchmark companies in specialty coffee trading and retailing adopted very distinguished business models, most of them bring quality evaluation of coffee to the central stage. Juan Valdez is a Colombian coffee grower co-operative that sell directly to consumers in its own brand coffee shops to compete against Starbuck's (Norton and Dann, 2013). Colombia is the third largest coffee producer but has a high-quality reputation. The Juan Valdez is an attempt to capture the value added through coffee shops and aggregated services. Other successful business model created by Nespresso is the espresso coffee capsules that reaches 30 percent growth in sales market annually in more than 50 countries. Alvarez et al. (2010) support that the perceived quality relies on two capabilities: relational and technical. Nespresso has tight relationships with coffee growers spreading worldwide that involve technical upgrading. These authors, as well others (Kolk, 2005; Joo et al., 2010; Reinecke et al., 2012) suggest that productivity improvement is more efficient

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than paying premium price to have a high-specification input. These previous studies suggest that tight relationship between producer and retail makes a difference to guarantee coffee quality.

# 3. Research methods

This study was based on multiple case studies. Three distinct research techniques were used in the investigation: secondary data analysis, direct observations and interviews. Each of them is presented and discussed in the following sections.

The two most widely used qualitative research techniques are interviews and direct observation. These two techniques were combined in this research to reveal the particularities of the specialty coffee trade. The qualitative methodologies used in this investigation were based mainly on Yin (2003) and Barratt et al. (2011).

Secondary data analysis enables a researcher to put his investigation in the context of research conducted previously on the same or similar topics. There is also the advantage of economy since it is not expensive to use data already available. In this specific study, the secondary data were obtained in two different fronts, the websites analysis of the premium coffee shops in Sao Paulo and the evaluation of the different premium coffee shops published at the specialized press in Brazil (VEJA SÃO PAULO COMER E BEBER, 2013).

The main market for specialty coffee in Brazil is Sao Paulo city; due to this, the city was selected to be the focus of this research effort. The main publication on the culinary and gastronomy for the city was accessed (VEJA SÃO PAULO COMER E BEBER, 2013). From this publication it was used the list of the best-ranked coffee shops. These organizations were visited and asked to be part of this research. It was possible to obtain eight valid interviews with high-end coffee shops in Sao Paulo city. Five of the interviewees were the presidents of the organizations, two were the head buyers of coffees, one of them was the master roster of coffee. It is also important to mention that three of the coffee shops offered the opportunity to observe their coffee roasting facilities.

In addition to the data gathering at the coffee shops four integrated producers and traders of specialty coffee were also interviewed. The main reason for these interviews comes from the fact that, in the coffee business, structural changes are happening and it is becoming more and more possible to sell specialty coffee directly to organizational buyers (supermarkets, coffee shops, food specialty stores) and to the final customers (Nunes et al., 2013; Jardim et al., 2013, Saes et al., 2006). These organizations were indicated by a group of five industry specialists of the Brazilian specialty coffee sector (Table I).

At the end of the data gathering process, it became possible to fully describe and analyze 12 cases. The case write-ups were the base to the creation of insights. After the individual case analysis it became possible to perform the cross-case analysis, by comparing and contrasting cases. (Barratt et al., 2011). The within-case and the cross-case analyses made it possible to find the main attributes of a high-specification product SC.

In order to increase reliability, a case study protocol was developed and applied to all the different cases. Each organization was described and analyzed individually before the cross-case comparisons, in addition to that a study database was structured to preserve fieldwork notes and transcriptions of interviews. To enhance internal validity it was possible to develop the different categories of organizations according to the literature review. Two main references were used to develop the main categories that guided the analysis: Cagliano et al. (2005) and Caniato et al. (2009). The different cases were then compared to these categories. To increase external validity,

DDI			
BFJ 118,1	Code	Organization	Professional title
110,1	IS 1	CNA	Technical assistant for
		(National Union that represents agricultural producers in	international issues
		Brazil)	
	IS 2	IF Sul de Minas	Professor
138		(Educational organization based at the main coffee production	
100		region in Brazil)	
	IS 3	Polo de Excelência do Café	Researcher
		(Research and extension organization focussed in the coffee	
Table I.		industry)	
Prominent industry	IS 4	EMBRAPA Café	Researcher
specialists - industry		(Brazilian federal research organization that coordinate coffee	
trade associations,		research efforts in Brazil	
government agencies	IS 5	Sindicafé – SP	Consultant – coffee quality
and academia		(Trade association - São Paulo coffee industry)	issues

a systematically structured analysis was performed before any generalization (Stuart *et al.*, 2002). The results are summarized in tables with the main features and classifications proposed in the literature review and found for each organization. Besides, the organizations interviewed are divided in two groups of analysis according to the number of value chain activities performed.

# 4. Data analysis and results

The responsibilities of producers and sellers of specialty coffees

In order to perform the analysis of each case and to process the cross cases comparisons six synoptic tables were put in place. They helped to highlight the structural characteristics in the trade of a specialty coffee.

Table II brings the main technical activities performed by high-end coffee shops of São Paulo city. According to the technical capacity to perform sensory analysis of quality coffee, two distinct groups were found. One group is composed by the first four coffee shops, which buy their roasted specialty coffee from suppliers that have the capacity to perform sensory analysis of coffee. These four coffee shops are unable to fully perform sensory analysis of coffee according to the prevailing protocols, to overcome this limitation they maintain a trust-based relationship with their suppliers, which are evaluated according to the results perceived by the coffee shop managers and clients.

This first group of coffee shops has a more restricted role in the specialty coffee SC, being them only responsible for the very last stages of the coffee production and consumption sequence, in other words, coffee preparation and sales to the final costumer (Table II). It is important to emphasize that this group of coffee shops reported to maintain long-term relationship with their coffee suppliers and to have a very frequent exchange of communication about the transacted products. This long-term relationship is a way to have access to specialty coffee without having to internalize the capability of sensorial analysis.

The second group of coffee shops is composed by the remaining four coffee shops (E, F, G and H) that were visited and interviewed in this research. These organizations are bigger, more complex and do have the capacity to judge the quality of the coffee that they buy, by the use of the SCAA sensory analysis protocols. Due to this fundamental capacity

Code	Professional title	Traded product	Type of coffee	Technical activities executed by the organization	Quality attributes of a
A	President	Grounded coffee Prepared coffee	Gourmet	Preparation of coffee and direct sales	high specification product
B C	President President	Prepared coffee Roasted coffee Grounded coffee Prepared coffee	Gourmet Gourmet	Preparation of coffee and direct sales Preparation of coffee and direct sales	139
D	President	Roasted coffee Grounded coffee Prepared coffee	Gourmet	Preparation of coffee and direct sales	
Е	Master roaster	Roasted coffee Grounded coffee Prepared coffee	Gourmet	Coffee sensory evaluation; roasting and grinding; packing; distribution; preparation of coffees; direct sales	
F	Head buyer and roaster	Roasted coffee Grounded coffee Prepared coffee	Gourmet Special	Coffee sensory evaluation; roasting and grinding; packing; distribution; preparation of coffees; direct sales	
G	Head buyer	Roasted coffee Grounded coffee Prepared coffee	Superior Gourmet	Coffee sensory evaluation; coffee production; post-harvest processing; storage; roasting and grinding; packing; distribution; preparation of coffees; direct sales	
Н	President	Green coffee Roasted coffee Grounded coffee Prepared coffee	Superior Gourmet	Coffee sensory evaluation; coffee production; coffee sensory evaluation; post-harvest processing; storage; roasting and grinding; packing; transport; preparation of coffees; direct sales	<b>Table II.</b> Coffee shops of Sao Paulo city

these organizations are able to assume far more responsibilities in the coffee trade. To begin with, they will need to know about coffee agricultural production and coffee producers in order to find coffee that is suitable for purchase. It is a truly coffee supply hunting activity, an endless search for the best coffee available at the different regions of Brazil. The purchasing activity is strongly focussed in quality and high specifications.

It is important to highlight both coffee shops "G" and "H" were originally coffee producers. From their origin, both expanded vertically to coffee processing and coffee preparation businesses and are currently performing all stages of coffee business. It can be said that these two organizations presented a high level of verticalization in their value chains.

Table II also shows that this second group of coffee shops is fully capable to perform the industrial processing of coffee (roasting, grinding and packing), as a consequence they are able to sell roasted coffee to a big variety of clients (coffee shops, business offices, restaurants, supermarkets and final costumers). These four coffee shops also provide services to their wholesale buyers of coffee. These services are: barista training programs, the maintenance of coffee preparation machines and the provision of information about market trends. To sell prepared coffee is only one part of their role in the coffee production and consumption chain.

Due to the fundamental differences between the two groups of coffee shops, it is important to distinguish their SC strategies. The first group can be called Independent Coffee Shops, since they are focussed on the coffee preparation business. The second group can be called Integrated Coffee Shops, due to the fact that these organizations are responsible to manufacturing activities in addition to the coffee preparation activities.

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Despite this difference, both groups have a similar perception about their role for the final consumer, to offer a premium experience with coffee.

Table III brings a different group of organizations present in the specialty coffee business; they are mainly coffee producers that acquired the capacity to fully process coffee (post-harvest processing, storage, roasting, grinding, packing and distribution). In addition to the production and trade of specialty coffees these organizations also produce and trade conventional coffee. One of the technical capabilities of these organizations is to perform coffee sensory evaluation according to the SCAA protocols. By evaluating their own production they will know the attributes of their coffee and that gives them the possibility to find buyers that are willing to buy a coffee with those attributes present in their coffees. Even more important, those coffee producers can do adjustments in their production and processing sequence that will help to improve the quality attributes of their coffee.

It is important to recognize that for those producers, the sensory analysis of their own coffee offers them an important resource capable of setting them in a new track of business, the production and trade of specialty coffee. It is a market that is very different from the commodity coffee market (Ponte, 2002), where the logic of the commodities trade (mass production, standardization, cost reduction and negotiation in the futures market) is applicable. By having a distinguished product with distinct and clear attributes, these coffee production organizations can use all resources of marketing to create a brand to trade their product. It must be observed that most of coffee producers will not be able to perform sensorial analysis of their product and as consequence will not have all the necessary information to be on the track of quality improvement or even to build a brand for a distinct product.

All four organizations presented in Table III are clearly developing brands for their products and are trying to find niches to trade their coffees. In addition to the industrial processing of coffee (roasting, packing and grinding) they do most of the distribution to their main clients. Three of the organizations (I, J and L) are trading their coffee to final costumers, by the use of internet resources. Another important indicator comes from

Code	Professional title	Traded product	Type of coffee	Technical activities executed by the organization
I	President	Green coffee Roasted coffee Grounded coffee	Gourmet	Coffee sensory evaluation; coffee production; post-harvest processing; storage; roasting and grinding; packing; distribution; internet sales
J	Sales manager	Roasted coffee Grounded coffee	Gourmet	Coffee sensory evaluation; coffee production; post-harvest processing; storage; roasting and grinding; packing; internet sales
K	Sales manager	Roasted coffee	Traditional Superior Gourmet	Coffee sensory evaluation; coffee production; post-harvest processing; storage; roasting and grinding; packing; distribution
L	President	Roasted coffee	Traditional Superior Gourmet	Coffee sensory evaluation; coffee production; post-harvest processing; storage; distribution; internet sales

Table III.
Integrated coffee
production and trade
companies: technical
activities executed
by each organization

product

attributes of a

high specification

the fact that these four organizations maintain an active web page and use them to communicate with their final customers. To associate themselves with sophistication. a refined palate and high quality is a clear objective.

The capacity to perform sensory evaluation of coffee associated to the production of specialty coffee, brings an additional and important outcome. It offers the coffee producers a chance to find a more balanced equilibrium with their buyers, since the coffee growers have a better chance to negotiate their quality product with different clients that are interested in finding suppliers able to deliver consistent quality. Clients like the coffee shops present on Table II. The higher prices paid for specialty coffees, when compared with prices reached by commodity coffee are a clear indication of that.

# Operations and services strategies

After the identification of the agents and their role in the trade of specialty coffee market it is now the time to characterize their partnerships, operations and positioning strategies.

Table IV brings the results of the interviews with independent coffee shops that are trading specialty coffee and are unable to do a full sensory analysis of coffee used by them. These organizational buyers of coffee overcame this technical limitation by doing partnerships with specialty coffee suppliers. Once this type of partnership is able to guarantee the quality of the coffee that they sell, these sellers of a high-end product can concentrate their efforts to develop coffee based products and services to their clients.

Regarding operations and services strategies, Table IV helps to reveal a very homogeneous group, since all four coffee shops adopted a clear market-based strategy to organize their operations. According to Cagliano et al. (2005) in this type of strategy, the "competitive priorities would be quality, service, flexibility and variety of product." Also, "organizations in this category basically seek differentiation through high quality, premium service to customers, high flexibility and product diversity." The interviews revealed that these organizations are ready to always offer new products and services to their customers.

Table IV also shows that partnerships with the suppliers of coffee are a common strategy for coffee shops of this group. These suppliers are fully capable of performing coffee sensory analysis and to guarantee the delivery of a high-specification coffee. Again, all the four coffee shops reported to receive technical assistance and training from their suppliers.

The operations and services strategies of integrated coffee shops are presented on Table V. These organizations are capable of performing all coffee processing activities and act as coffee suppliers of specialty coffee. This capability opens new opportunities to the integrated coffee shops; one of these opportunities is to forge partnerships with

#### Code Partnerships

# Operations and services strategies

- Partnership with coffee suppliers, the buyer has Α exclusivity around the coffee shop
- В Partnership with the coffee supplier that also offers technical assistance and training
- C Partnership with the coffee supplier that also offers technical assistance and training
- D Partnership with the coffee supplier that also offers technical assistance and training. The coffee supplier is the same for more than 10 years

Market based strategy. Focus on high quality

Market based strategy. Always try to adjust demand to new trends

Market based strategy, always try to adjust products and services to the local demand Market based strategy, focus on high quality for sophisticated clients

Table IV. Independent coffee shops operations and positioning strategies

BFJ 118.1	Code	Partnerships	Operations and services strategies
110,1	Е	Partnership with organizational buyers of coffee (business offices, supermarkets, coffee shops, restaurants); offers training and technical assistance for these partners; has no	Market based strategy. The long-term objective is to develop new products, services or concepts for a sophisticated market
142	F	partnership with coffee suppliers Has no partnership with suppliers; there are some suppliers that are more regular providers of coffee than others; partnership with coffee shops and restaurants to provide roasted coffee	
	G	Partnerships with clients (restaurants, coffee shops and business offices) to provide technical assistance, training and indication of providers of services and products to their business; no	Market based strategy. The company aims to be a reference for all coffee shops in the country
<b>Table V.</b> Integrated Coffee Shops – operations and services strategies	Н	partnership with coffee providers Partnership with clients (restaurants, and coffee shops) to sell green coffee, roasted coffee and grounded coffee; partnerships with major processors of coffee that are present in both internal and external markets	Strategy based on product, the company wants to control the full circle of coffee production, processing and preparation of the final product; The main identity of the company comes from its agricultural operations related to coffee production

organizational buyers of coffee (business offices, supermarkets, independent coffee shops and restaurants) in order to supply them with coffee and specialized services like staff training, technical assistance, and market assistance. The partners of these organizations are entitled to display in their stores or facilities, the brand of the coffee providers.

Concerning the operations strategy, Table V reveals that, this group is not so homogeneous. Three of the integrated coffee shops (E, F and G) reported to adopt a market based strategy, in other words they are in a constant effort to adapt products and services in order to offer a premium quality experience to their clients. Part of this effort is to find new types of specialty coffee to buy and offer. The fourth (H) integrated coffee shop is also responsible for its own coffee production. This organization will only serve its own coffee at the coffee shop. It reported to use the bespoken technology available to produce, process and select the grains so it will offer a gourmet coffee.

It is important to recognize that the operations strategies adopted by these premium coffee shops are centered on the provision of a high-end product to the final costumer.

The results of the interviews with integrated producers and processors of specialty coffee are presented on Table VI. Three of these organizations chose to have full control of their production, post-harvest processing, roasting, packing and distribution operations, in a clear vertical integration strategy. Integrated producer "L" make all these operations but roasting. All the interviewed organizations are structured to maintain partnership with strategic clients, and their main partners are coffee shops. To these organizational clients, besides coffee, they also offer technical assistance for the operation and maintenance of coffee preparation machines. The integrated producer "I" also provide training for baristas.

All four organizations presented on Table VI have a very similar origin, as agricultural producers of coffee. From agricultural production they expanded to process and trade their own production, in a move that is not common in the coffee business. The construction of their brand reputation was centered on the premium

Code	Partnerships	Operations and services strategies	Quality attributes of a
I	Partnership with clients (coffee shops, restaurants, business offices) to provide coffee, technical assistance, and training	Product centered strategy; The company controls the full circle of coffee production, processing and the direct sales of the industrialized product	high specification product
J K	Partnership with clients (coffee shops) Partnership with clients (coffee shops and	Product centered strategy Product centered strategy	143
L	supermarkets), renting coffee preparation machines and providing roasted coffee Partnership with clients (coffee shops and supermarkets)	Product centered strategy	Table VI. Integrated producers and processors of specialty coffee

quality of their coffee production, in an operation strategy that can be characterized as product centered. Most of the production activities at farm level and at manufacturing facilities are organized to reach premium quality for their coffee beans. These organizations also informed also that they developed the capacity to buy specialty coffee from other producers and to process these grains. Producer I reported that they only would buy coffee from neighbor producers, which are growing the same coffee varieties under the same conditions.

The other eight organizations analyzed in this paper, are markedly different in terms of positioning. Organizations E, F, G, and H are at an intermediary point of the production and consumption chain of specialty coffees. These organizations developed the technical capacity to search, evaluate and process coffee, by doing so they are able to forge and maintain partnerships with organizational buyers of coffee (Tables I and V). Organizations E, F, and G are also positioned at the end of the consumption chain since they are fully capable of preparing and selling coffee to final costumers.

On the subject of positioning, the data reveals that integrated coffee shops (E, F and G) wants to maintain independence from their suppliers; this strategy gives them the freedom to search for the best coffees. The down side of this strategy is to be always in hunting for new coffees. The coffee shop H informed that they want to keep using their own coffee production, even so they want to diversify the varieties of coffee that are grown. These organizations are positioned to be a nexus for the production and consumption chain of specialty coffee since they act as intermediaries in the trade of coffee (Table VII).

Integrated coffee producers (organizations I, J, K and L) are positioned at an intermediary point of the production and consumption chain. Tables III and VI show

Type of organization	Main technical activities	Operation strategy	Quality judgment	Positioning
Independent coffee shop	Preparation to final customer	Market based	Limited capacity	Final end of the supply chain
Integrated coffee shop	Purchase of coffee; industrial processing; Preparation to customer	Market based	Full capacity	Focal organization; Present at the middle and the final end of the supply chain
Integrated coffee producers	production of coffee; industrial processing	Product centered	Full capacity	Focal organization; Present at the beginning and at the middle of the supply chain

**Table VII.** Influences on the positioning strategy

that this group of organizations can fully perform the sensory evaluation of specialty coffees, which allow them to process and sell roasted coffee to other organizations like coffee shops and retailers. They are also capable of selling coffee to final customers. The integrated producers and processors of coffee are only interested to maintain partnerships with organizational buyers of quality coffee. It can be said that this group of organizations are fundamentally positioned to act as intermediaries in the trade of processed specialty coffees (Table VII).

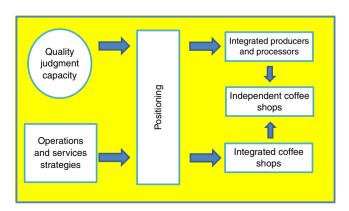
It can be said that sensory quality evaluation act as a qualifier that helps to select a product that is highly variable in its attributes into a product that is stable and with attributes that are fully characterized and described.

Another important relation was perceived, one organization that is able to perform a complete quality evaluation of a transacted product, create to itself an opportunity to become an intermediary of the coffee trade. It is indicated by this research that if the integrated producers and coffee shops are able to provide consistently a high-specification product, they are entitled to forge stable partnerships with the independent coffee shops and organizational buyers of quality coffee, thus assuming the role of intermediary and quality judges for these commercial partners (Figure 2).

# Discussion and implications for theory

The results of the study indicate that the coffee shops adopted a market-based strategy for their operations. By doing so, the coffee shops chose to always develop or adjust new products and services for a sophisticated market (Tables IV and V). As a direct consequence of these strategies the coffee shops are present at one extreme of the coffee market, the high end. It is important to say that these coffee shops have a direct and daily contact with their final costumers and under these circumstances it becomes easier to adjust products and services to the demand. It can be said that it is a SC where the organizations close to the consumption side are oriented to add more value to their final clients (Carey *et al.*, 2011).

A common feature to the totality of organizations that were part of this research was to claim that they have access to an exceptional source of specialty coffee. Most of the respondents were prepared to give detailed and lengthy explanations about the different origins of coffee that were being served. In most of the cases, the explanations would mention technical details and resources such soil, altitude, the coffee variety and



**Figure 2.** Relations present at the specialty coffee trade

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the post-harvest processing. The interviewees at the integrated coffee shops and the integrated coffee processors could give more details of their products since they have direct access to the different coffee sources.

In most of the cases, the information given about the coffee try to emphasize the quality and the expertise involved with the coffee production and processing. Again the integrated coffee processors and the integrated coffee shops were able to give full details of the production processes and how meticulous they were in order to deliver a high-specification product. It is important emphasize here that all these details about the coffee are given in top of a sound sensory analysis of the product that was previously performed according to the SCAA protocols. The results of these analyses give more credibility for the product. Zu and Kaynak (2012) recognized that the effectiveness of the quality management system is pivotal for the success of a SC. In this specific SC, it happens that the sensorial analysis is a fundamental phase of the quality management system.

The responsiveness to the demand is central for the three groups of organizations found in this research. It became clear from the interviews obtained with the independent coffee shops, integrated coffee shops and integrated processors of specialty coffee that their organizations aim to adapt to the new demands from their customers. Since these organizations are not supplying the mass market, they need to develop the capacity to react quickly to the new trends of coffee consumption. Seven of the interviewed respondents highlighted that more than reacting to the trends, they aim to propose new experiences to their customers.

To capture short lifecycles of the specialty coffee market is not a problem for most of the organizations, since they deal with low volumes of trade and tend not to keep high volumes of stock. The independent coffee shops were found to be in a very favorable situation due to the fact that they have daily and direct interaction with their coffee clients. Their interpretation of the clients' reactions will help to maintain their coffee sources or to proceed with new origins of coffees. The capacity of the independent coffee shops to have shorter product lifecycles is higher than the capacity of the integrated coffee shops and the integrated coffee processors since these two groups of organizations do have direct relations with coffee production and need to keep higher volumes of stock.

All integrated processors of specialty coffee and all the integrated coffee shops developed their own brands of specialty coffee, six of the interviewees of these two groups emphasized that a sophisticated packaging must reflect the quality of the beans inside. Three of the four independent coffee shops visited were displaying the brands of their suppliers. The interviewee "C" mentioned that she wants to associate her store to the sophistication of her coffee provider.

A common feature observed in all interviewed organizations of specialty coffee trade is detaching their coffee from the commodity group of products that predominates in the industry. By presenting a product with a clear origin and clear attributes, and by telling a history related to their coffee, the different coffee shops and coffee processors are disengaging their products from the multitude and transforming it into "special." It is important to emphasize here that this "special" derives originally from a precise sensorial evaluation that was performed before. All the additional information that was given about the product were built on the top of the grade obtained by the coffee in its sensorial classification, in other words the coffee obtained a grade above 80 at the SCAA sensorial classification system.

All the above elements that could be observed on the SC of specialty coffee are in line with the main attributes of a luxury SC that were proposed by Caniato et al. (2009). It is important to recognize that a precise quality evaluation of the transacted product is central to the functionality of a SC that deals with a high-specification food product like coffee.

In order to fully disclose the positioning strategies of the 12 organizations considered in this research, it is necessary to compare the technical activities performed by each one and also their operations and services strategies. Tables II and IV are showing that the organizations A, B, C and D, are at the very end of the production and consumption chain of specialty coffee. Their partners are the suppliers of specialty coffees; they do not maintain partnerships with clients. These organizations are unable to perform the full sensory analysis of coffee and as a consequence they cannot act as intermediaries and sell coffee to other organizations. Table VII brings the main influences on their positioning strategy.

#### Final considerations

The results of this research show the configuration of a SC that handles a high-specification product. They are set to transform the trade of a product that has a component of volatility in its quality attributes into a trade of a product that embodies all the desirable attributes preferred by a specific group of costumers. There are costs to find the appropriate raw material and to perform a complete quality evaluation of the transacted product. There is also the need to pay extra for the privilege to buy from producers, the goods with higher specifications. Both types of costs are a responsibility of the focal organization in the SC.

The logic of a SC that deals with commodities is different, since in most of the cases it will try to accommodate the variations on quality that comes from nature. It can be said that a SC which deals with a high-specification product is a response to those that want stability in the attributes of a product that they are willing to buy.

In fact the market for specialty coffees revealed a group of organizations that operates under a logic that is different from the mass consumption market closes to the luxury industry. The SC relations that emerged are organized around a central concept: to produce and trade a high-specification product. This logic supersedes the pursuit of efficiency gains, cost reduction and volume increase of the transacted good. It is important to stress that the need for a premium quality does not reject the search for efficiency gains; it only must be contemplated first. The other main attributes of this type of supply that are important to highlight, first is the recurrent need to evaluate the quality of the transacted product, based on its absolute attributes. The main relevant attributes of the transacted products are the central focus of the SC relations. Second is the limited size of the operations when compared to the SC of a mass consumption product. The third attribute is related to a more balanced equilibrium between sellers and buyers (higher prices paid to the seller are an indication of that). Since the sellers offer a premium product, the chances are higher to find alternative buyers. The fourth attribute is the association with refinement and sophistication. The higher selling price of the final product is a clear statement that the product being served is not common. Finally the SC members are consciously willing to find and fulfill the niches of a high-end market that pays higher prices.

The main limitation of this research was the use of single interviews in each organization. In this research, only the final end of the SC was analyzed, if the agricultural production side was also analyzed, this study could have broader implications. Future studies may analyze the relations present in the SC of other high-specification food products like wine, olive oil or whisky. By extending this research to other products, it would become easier to distinct, from those described relations, which ones are related to specialty coffee only.

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