

THE QUALITY PILLARS OF A CERTIFICATION PROCESS: THE COFFEE QUALITY PROGRAM (CQP) IN BRAZIL

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ABSTRACT

The aim of this study is to analyze the implementation process of the coffee quality program (CQP) and its implications on R&G coffee companies in Brazil. First, a theoretical analysis model - the 3 "Quality Pillars" - was build, based on the philosophy and objectives of the CQP and with the support of Transactional Costs Economics (TCE) as well as concepts of the Quality Theory. Afterwards, a field research with thirteen coffee roasters – adopters and non-adopters of the CQP - was conducted, in order to analyze their raw material supply, theirs productive process and marketing strategies. The research data were analyzed with support of the 3 "quality pillars" model: product quality, process quality and quality signal, represented by CQP quality labels that communicate quality to consumers. Main results reveal that to focus on quality issues was the main factor that increased vertical coordination among researched companies and their suppliers/partners. Therefore, CQP implementation process lead companies to adopt vertical coordination strategies with its suppliers and deliverers. On the other hand, all researched companies have problems to maintain their products' quality standards. Non-adopters have high difficulty to implement traceability in their production process. It is possible to imply that traceability imposed by a certification process is a competitive advantage for some CQP adopters in comparison to non-adopters. Moreover, roasters that focus their businesses on product differentiation by quality attributes need as support a certification label or a strong brand to transmit credibility to consumers.

Key-words: coffee, quality, certification, marketing, standard, Brazil

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RESUMEN

La presente investigación tuvo como objetivo principal analizar el proceso de implementación del Programa de Calidad del Café (PCC) y sus implicaciones en las compañías de café tostado y molido T&M en Brasil. En primer lugar, fue construido un modelo de análisis teórico –“los 3 pilares de calidad”– sobre la base de la teoría y objetivos de la PCC y con el apoyo de la Economía de los Costos de Transacción (ECT) y de los conceptos de la Teoría de la Calidad. Luego se llevó a cabo una investigación de campo con los tostadores de café –con trece adoptantes y no adoptantes del PCC– para analizar su suministro de materia prima, el proceso productivo y las estrategias de marketing. Los datos de la investigación se analizaron con el apoyo del modelo de los “pilares de la calidad”: calidad del producto, calidad del proceso y señal de calidad, representado por las etiquetas del PCC que comunican calidad a los consumidores. Los principales resultados dan cuenta que el enfoque en los temas de calidad fue el factor principal para aumentar la coordinación vertical entre las empresas investigadas y sus proveedores y socios. Por lo tanto, el proceso de implementación del PCC lleva a los tostadores a adoptar estrategias de coordinación vertical con sus proveedores y repartidores. Por otro lado, todas las empresas investigadas presentaron problemas para mantener los estándares de calidad de sus productos. Los tostadores no adoptantes tienen gran dificultad para aplicar la trazabilidad en sus procesos de producción. Es posible inferir que la trazabilidad, impuesta por los procesos de certificación, constituye una ventaja competitiva para algunos adoptantes del PCC en comparación con los no adoptantes. Además, los tostadores que centran su negocio en la diferenciación de productos por atributos de calidad necesitan como apoyo a una etiqueta de certificación o una marca fuerte para transmitir credibilidad a los consumidores.

Palabras clave: café, calidad, certificación, mercadeo, normas, Brasil

RÉSUMÉ

La recherche suivante a eu comme principal objectif d'analyser le processus d'implantation du Programme de Qualité du Café (PCC, en portuguese) et ses engagements dans les entreprises du café grillé et moulu T&M au Brésil. En premier lieu, un modèle d'analyse théorique –«les trois piliers de qualité»– a été construit sur la base de la théorie et sur les objectifs du PCC et avec l'appui de l'Économie des Coûts de Transaction (ECT) et les concepts de la Théorie de la Qualité. Après une investigation sur le terrain que nous avons menée à bonne fin avec ceux qui torréfient le café treize –adhérents et non-adhérents du PCC– afin d'analyser le fournisseur de matière première, le processus de production et les stratégies du marketing. Les données sur l'enquête ont été analysées avec l'appui des «Piliers de qualités» du modèle: la qualité du produit, la qualité du procédé et le signe de qualité, représentée par les étiquettes du PCC qui informent aux consommateurs sur la qualité. Comme résultats principaux on a laissé entendre qu'une réflexion en termes de qualité a été le facteur principal pour l'augmentation de la coordination en amont parmi les entreprises recherchées, leurs fournisseurs et associés. Donc, le processus d'implantation du PCC emmène le commerçant qui vend du café qu'il torréfie lui-même à adopter des stratégies d'organisation verticale avec ses fournisseurs et distributeurs. Autrement, toutes les entreprises interrogées auront des problèmes pour maintenir des standards de leurs produits de qualité. Aussi, les commerçants qui vendent et torréfient du café et qui ne sont pas adhérents ont une très grande difficulté à appliquer la traçabilité dans leurs processus de production. Il est possible de concevoir que la traçabilité imposée par un processus de certification est un avantage concurrentiel envers quelques adhérents du PCC en comparaison avec ceux qui ne sont pas adhérents. Ceux qui torréfient le café et qui concentrent leurs affaires sur la différenciation de produits par les attributs de qualité, ont besoin, comme appui, d'une étiquette d'attestation ou d'une marque considérable afin d'être crédibles auprès des consommateurs.

Mots-clé: café, qualité, certificat, marché, normes, le Brésil

RESUMO

O presente estudo teve como objetivo principal analisar o processo de implementação do Programa de Qualidade do Café (PQC) e suas implicações junto às empresas de café torrado e moído no Brasil. Foi construído inicialmente um modelo teórico de análise – os três «Pilares da Qualidade» – baseado na filosofia e nos objetivos do PQC, com apoio do referencial teórico da Economia dos Custos Transacionais (ECT) e nos conceitos da Teoria da Qualidade. Em seguida, foi realizada uma pesquisa de campo com treze torrefadoras de café – adotantes e não-adotantes do PQC – buscando analisar o fornecimento de matéria-prima, o processo produtivo e as estratégias de marketing. Os dados da pesquisa foram analisados com base no modelo dos três «pilares da qualidade»: qualidade do produto, qualidade do processo e sinal da qualidade, representado pelos selos do PQC que comunicam este atributo aos consumidores. O foco em questões relacionadas à qualidade foi o fator que principal que aumentou a coordenação vertical entre as empresas pesquisadas, seus fornecedores e compradores. Por outro lado, todas as empresas pesquisadas apresentaram dificuldade em manter os padrões de qualidade de seus produtos. As empresas não adotantes da certificação demonstraram grande dificuldade em desenvolver a rastreabilidade em seu processo produtivo. É possível inferir que a rastreabilidade, exigência da certificação, torna-se uma vantagem competitiva para os adotantes do PQC. Torrefadores que focam seu negócio em diferenciação de seus produtos por atributos de qualidade necessitam do suporte de um selo de certificação ou de uma marca forte para transmitir credibilidade aos seus consumidores.

Palavras-chave: café, qualidade, certificação, marketing, padronização, Brasil

1. INTRODUCTION

There are many examples of marketing segmentation strategies by quality attributes. Such growth is due to several factors, like a high competitive market place and high demanding consumers with greater concern on social and environmental issues. This is also a response to markets deregulation faced at the end of 20th Century, and particularly chain agents' perception that their goals must be focused to meet final consumers' demands.

The Brazilian roasted and ground coffee (R&G) market is a typical example. After a long period of government regulation, domestic consumption had declined to lowest levels in history, because official policy favored productivity and not quality of the coffee produced. What was offered in domestic market was low quality coffee, if not tampered with impurities, such as shells and sticks, corn and barley. Consumer response came soon, and polls showed that their perception was that coffee was «all the same» and worse, a very low quality coffee.

However, actions focusing on quality began to change this scenario. In the domestic market, at the beginning of the 1990's Brazilian Coffee Roasters Association (ABIC) created the «Purity seal», aiming to standardize roaster's coffee production and avoid fraud. Consumer's answer to those initiatives came

with a continuous increase in per capita consumption of coffee in Brazil since 1990's (Saes & Farina, 1998).

On the other hand, consumers in developed countries began to demand certified quality coffees, either by means of production processes (like organic or sustainable initiatives) or by cup quality (like *gourmets*). The search for certified quality made coffee production of specialty coffees (differentiated by production or cup quality) grow to meet the demands of different consumers' segments, with Brazilian coffee growers included.

In 2004, ABIC decided to push coffee market once again by starting the implementation of a new program, the Coffee Quality Program (CQP). In fact, the great challenge for such a quality program was to teach Brazilian coffee consumers the different quality issues that distinguish a regular coffee from a high cup quality one.

From consumers' point of view, coffee quality is a relative concept; it depends on their needs, interests and desires. Moreover, on an industry point of view, a product has quality when it meets product and/or process standards previously established. The roaster with ABIC's CQP must attend a series of basic program requirements. For ABIC, the basic aspects are product quality, the cup taste profile maintenance and good process

practices, that involves quality in all ways.

This research was important because it shows how it is hard to start a new certification program from the point of view of the adopters and industry leaders. It also shows how quality issues are important in organizing production and changing the mind and market view of the entrepreneurs certified.

Thus, the main objective of this study was to investigate the implementation process of the CQP and its implications on R&G coffee companies in Brazil, relating this search with the Transactional Costs Economics (TCE) theory. It was researched a way to describe the philosophy and goals that support CQP concept through the construction of a theoretical analysis model, the «quality pillars», with TCE and quality theory support.

To investigate how CQP goals were viewed by roasters and the application of the quality pillars model, effective actions toward quality issues in their companies were studied, regardless if he or she is an adopter or non-adopter at first sight. Those strategies and difficulties identified on the CQP program implementation were then analyzed by using as support the «quality pillars» model.

2. THEORETICAL FRAMEWORK

2.1. STANDARDIZATION AND CERTIFICATION WITHIN TRANSACTIONAL COSTS ECONOMICS (TCE) PERSPECTIVE

TCE was systematized by Williamson (1985, 1991), but its origin dates back to 1930's when Coase (1988) showed a new concept –the transaction costs–. Simply, the transaction cost is the cost of making the economic system work. These costs are associated with economic activities' coordination, such as *ex ante* costs to acquire market information and to do a business deal, and *ex-post* costs, which are associated with monitoring and contracts execution enforcement (Azevedo, 1997; Farina, 1997, 2000).

According to TCE, contracts are drafted under two behavioral assumptions: people have bounded rationality and can act opportunistically. As transactions differ from each other, Williamson (1985, 1991) used objective and observable elements to characterize them: The transaction specific investments, transactions frequency and uncertainty. Under associating behavioral

assumptions with those three elements that characterize transactions, it is possible to identify some transactions that may be more vulnerable to opportunistic actions by one or more parties involved and their respective costs to other parts. Specific assets investment is the transaction attribute that weighs more in transaction costs. So, depending on transaction attributes, many costs can be incurred, which requires a different organizational structure to control them (Azevedo, 1997; Farina, 1997).

The most efficient coordination structure for each type of transaction is the one able to minimize transaction costs. These coordination structures range from market structures and vertical structures, although hybrid forms are common. Briefly, an important point for this study is how economic actors will deal with information asymmetry that can lead to opportunistic actions in their business transactions of buying inputs and selling products throughout supply chain, and how certification structures coordinate the relationships in this chain.

In this context, standards and certification appear as important coordination tools in a supply chain. They communicate information to customers and consumers in a consistent and reliable way, reducing transaction costs in buyer/seller's relationship since they eliminate and reduce quality uncertainty and create incentives for horizontal and vertical cooperation between firms (Farina, 2003; Machado, 2000; Nassar, 2003). In order to a certification to become effective, there must be cooperation and coordination between chain agents as well as incentives for staff members to integrate themselves into a certification system.

Thus, this study assumes that CQP act as a certification tool that has the ability to play an important role: Reducing information asymmetry between agents of the coffee chain. Therefore, it could gather those agents and reduce uncertainty about certified R&G coffee quality, so that consumers have a reliable source of information to make a better purchasing decision.

For Machado (2000), certification is the institutionalization of standardization, because it represents the formal guarantee of systematically establish and give reputation to

specific standards. She also points out that a key issue is the credibility of a certification process.

According to Machado (2000) to meet segmented markets, behind tools such as labels, certificates and trademarks, firms depend on coordination strategies that are based not simply on price to supply raw materials or even to distribute clients' products. In agribusiness for example, vertical coordination occurs most commonly through intermediary organizational structures located between market and hierarchy. Those structures are commonly based on cooperative actions such as strategic partnerships and formal and informal contracts with few participants. All strategies are in balance with free market competition (Machado, 2000).

Based on TCE principles and basic assumptions, it is expected that the CQP certification adoption by coffee roasters will imply on:

- Increase their coordination activities with their suppliers, seeking to purchase superior quality raw material (green coffee), and also to establish a minimum quality requirement in their purchases in order to attend certification standards;
- Use strategies like paying premium price awards for quality, start partnership investments together with growers or

guarantee the purchase of high quality green coffee from some specific coffee growers.

- Another possible strategy is to start a backward vertical integration, *i.e.*, roasters could acquire farms and aim to control the supply of those quality beans;
- To deliver their superior quality coffees, companies could adopt strategies in partnership with retailers to achieve consumers with higher purchasing power that could pay for those coffees.

2.2. QUALITY THEORY AND ITS ROLE ON CERTIFICATION STRUCTURES

Quality is a relative concept. According to Reeves & Bednar (1994), none quality definition can be considered as the best in all situations, because each definition has both strengths and weakness, depending on the measuring criteria and generalization level, management utility and importance to the consumer (Maximiano, 2000). Table N° 1 shows some quality definitions.

Due to this great variety of definitions, there is a need to identify the quality vision that CQP pretends to communicate to other agents in the supply-chain, *i.e.*, what is quality in accordance to CQP parameters.

Slack, Chambers & Johnston (1996) proposes a definition that summarizes many quality approaches: «*Quality is consistent*

Table 1

| Quality definitions | |
|------------------------|--|
| Definitions | |
| Excellence | • Quality as excellence means the best that can be done, the higher performance standard in any activity or field. |
| Value | • Quality means having more attributes, the usage of rare materials or services that are more expensive. |
| | • Quality and value are relative concepts that depend on customer's purchase power. |
| Specifications | • Planned quality; product design; definition of what the product or service should be. |
| Compliance | • Product or service in accordance with project's specifications. |
| Regularity | • Uniformity; identical goods or services. |
| Fitness for use | • Quality of a design: excellent design and product/service in accordance with the project that fits a customer's defined purpose. |

Source: Reeves & Bednar (1994), quoted by Maximiano (2000, p. 185)

conformance to customers' expectations», where the word *conformance* indicates that there is a need to meet a clear specification, ensuring that a product or service complies with specifications originally set. *Consistent* means that materials, facilities and processes have been designed and controlled to ensure that product or service meets specifications, using a set of measurable characteristics throughout time. Finally, *Customer's expectations* recognize that a product or service must satisfy customers and that they might be influenced by product's price (Slack *et al.*, 1996).

The authors also emphasize that expectations of individual customers differ. Thus, companies seek reconciliation between customer's expectations and customer's perceptions on quality. So, it is possible to introduce the "perceived quality" attribute that can be defined as the suitable degree between customer's expectations and perceptions about a product or service.

The perceived quality concept is a union between consumers' expectations and perceptions about a product or service, as shown in the Figure N° 1 below.

Taking the coffee roasters' as example, they aim to attend consumers' expectations on their coffee. So, they could use the CQP T certification to achieve this objective, since they believe that there are different market segments among coffee consumers.

The CQP certification is also aligned with a global trend, since consumers in developed countries are demanding more quality and food safety attributes in their purchases.

Machado (2000) says that a brand reduces transaction costs helping to identify products and ensure a quality pattern, regardless where

the acquisition took place. Private brands and collective brands, coupled with origin specifications and production, when recognized by consumers can add value to their products.

«Consumers perceive quality information contained in a product label. Behind these more visible elements, producers must be able to produce in accordance with a given standard and obtain a certification from third party as guarantee» (Machado, 2000, p. 106).

The «iceberg effect» is an analogy proposed by Machado (2000), in which a visible quality sign for consumer is made of several signaling elements of the product quality. The non visible part of the iceberg, under sea level, represents costs that a company and/or chain's agents must assume responsibility with.

3. THE COFFEE QUALITY PROGRAM (CQP) AND ITS QUALITY PILLARS

The Brazilian Coffee Roasters Association (ABIC) plays an important role in the national coffee agri-system. It is a private interest group that gathers Brazilian coffee roasters since 1973. But it's most important action started in the end of the 1980's and beginning of 1990's, when it implemented actions to increase R&G coffee consumption in Brazil.

In 1988 a poll to analyze the habits of the Brazilian coffee consumer showed that 67% of them believed that «pure coffee was only the exported one –the one for the domestic market was always adulterated–» (ABIC, 2010). As reflect, coffee consumption reached its lowest level in many years. This was the trigger for the industry to start working together to change this scene. One of its main strategies

Figure 1
Perceived Quality-gap between consumers' expectations and their perceptions about a product or service



Source: Slack *et al.* (1996)

was the launch of the «Purity Seal» program, whose goal was to curb fraud and ensure product purity, thus seeking to change Brazilian consumer's vision about coffee quality (Mario, 2002; Saes, 1998).

But «coffee purity» does not mean cup quality. So in 2006 ABIC tried to go a step further and launched another initiative to promote, this time, to change consumers' perception on coffee cup quality.

Thus, the Coffee Quality Program is an evolution of ABIC's Purity program and aims to give domestic coffee consumption a continuous growth, fetched from 1990's. For this reason, ABIC bets on increasing quality of the products offered, showing consumers quality differences of R&G coffee using a label, and by doing this, creating a product segmentation and new consumption patterns (ABIC, 2006).

By analyzing the program description, the CQP intends to ensure R&G coffee quality improvement through three major points: first is the use of coffee beans equal or better than type 8 (Brazilian Official Rank, the COB), with strict limit to 20% of defective beans –PVA: black (P), green (V), soar (A)– and certified product purity. Another important aspect is the preservation and control of coffee cup attributes along time, which is verified every year by the Program. The information of the cup quality must be indicated by the roaster in the coffee «flavor profile», another label on the package. Product samples must be collected annually to ensure the quality pattern.

To ensure a minimum quality standard through a «global score» attributed to coffee cup, the CQP raises the possibility of product segmentation through quality attributes according to cup characteristics. Depending on the analysis outcome, obtained through sensory tests (cup tests) conducted in certified third party laboratories, the coffee acquires different labels, or quality seals: traditional, superior or gourmet.

The simple fact that the program has a minimum certification requirement on cup quality is important since it already shows a worry, or a quality parameter, not only about the cup, but also about the procedures and process in the industry.

Finally, roasters must have a good process practices guarantee. Those roaster's qualities must be certified by third party companies' audits.

With the CQP implementation ABIC aims to work on quality attributes in the whole industry. From the certifying bodies' data collection, it intends to benchmark the roasters practices, so this may help rise the Brazilian R&G coffee quality standard. Overall, CQP aims to satisfy Brazilian coffee consumers, teaching them to demand certified quality coffee thus enhancing their product requirements in non-certified coffee (ABIC, 2006).

4. METHODOLOGY

This research was conducted during the implementation stage of the Coffee Quality Program, from 2006 and beginning of 2007. Therefore, the best approach to achieve the objectives of this study was to use an exploratory qualitative research, since we have few adopters and it was important to understand the essence of the program (Triviños, 1987). The objects of study are roasting companies from the R&G coffee industry in Brazil associated to the Brazilian Coffee Roasters Association (ABIC).

Relevant data about the CQP were surveyed by document analysis, *internet* and in interviews with ABIC's directors in charge of CQP development and implementation. The staff and directors of the selected companies were interviewed to collect data on the adoption of the program and about quality practices of the non-adopters. The collection method was the *focused-interview* (Alencar & Gomes, 1998). In search for a connection between these work whole theories, it is proposed a theoretical analysis model to the problem studied, as Figure N° 2 shows.

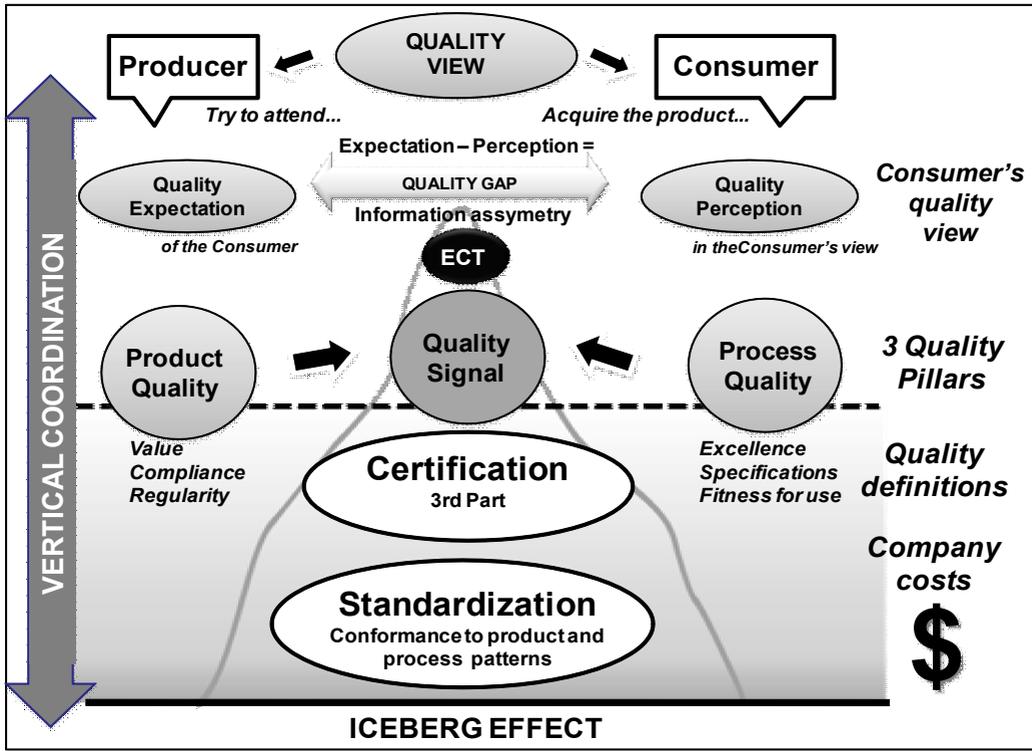
The three CQP pillars are the model basis:

(1) The first pillar is «product quality»;

(2) The second pillar is «process quality»; and

(3) The third pillar is the «quality signal», which means coffee has its characteristics established by the certification maintained throughout time, represented in reality by the CQP label stamped on coffee packages (in brown, silver and gold) and the «taste profile»

Figure Nº 2
The three CQP quality pillars, the “iceberg effect” and the quality vision



Source: compiled by the author, based on Machado (2000), ABIC (2006), Maximiano (2000) and Slack (1996)

Figure 3
Showing quality to consumers: Labels and quality standards of the CQP



Source: ABIC (2006)

label (a clover, indicating different cup attributes).

The quality signal establishes a link between the three quality pillars and the «iceberg effect» proposed by Machado (2000). According to CQP basis, the «quality signal» and the «taste profile» goals are to reach consumers and transmit product information. However, behind these visible symbols, roasters must have the capacity of producing a R&G coffee in accordance with patterns and they must obtain a certification from a third party body.

Giving support to the other two pillars (product quality and process quality), essential for the third's existence, we use the six quality definitions summarized in Table N° 1 by Maximiano (2000).

In the first pillar, «product quality»:

- Value: roasters use of top quality green coffee means higher acquisition costs.
- Compliance: R&G coffee must achieve certain specifications (cup profile) determined in the initial project.
- Regularity: products have to be uniform and identical with no quality variation.

In the second pillar, «process quality»:

- Excellence: R&G coffee quality is the best possible, resulting in the highest quality patterns throughout production process.
- Specifications: ensure the initially planned coffee quality pattern.
- Fitness for use: excellent design and product/service in accordance with the project that fits customer's needs.

Vertical coordination based in TCE assumptions enters in the model reassuring that certification through quality attributes requires higher integration between supply chain agents.

The last part of the model refers to the final consumer. Accordingly, a company seeks to meet consumer's quality expectations on coffee cup quality. On the other hand, when consumers buy a product and use it, they create their own product quality perception. If consumers' quality perception depends on their product expectation, the more information they have about coffee quality attributes, lower will be the gap between their product quality perception and expectation; consequently, a satisfied consumer (Slack *et al.*, 1996).

At this point, we present the final link between our theoretical model and practice. With TCE support, the program objective is therefore to reduce information asymmetry between two players: final coffee consumers and roasters.

5. RESULTS

Thirteen coffee roasters were surveyed in the states of Minas Gerais and São Paulo. Of them, seven were adopters of the CQP certification and six were non-adopters. Their activities focus were diverse, ranging from exports and international market, gourmet coffees, the institutional market, store's own-brand retail and to the traditional coffee market in Brazil.

We will call the companies as A, B, C, D, E, F, G, H, I, J, K, L and M to protect their confidentiality. We conclude based on the Table N° 2 that the sample was heterogeneous and very representative of the reality of the quality coffee market in Brazil. Table N° 2 shows the sample characterization.

6. DISCUSSION

6.1. PRODUCT QUALITY PILLAR

First, we identified that the raw material supply (green coffee) is crucial to achieve good cup quality. So, we tried to identify whether the CQP adopters have vertical coordination structures to minimize market oscillations.

Roasters that match coffee processing structures, storage warehouses and green coffee trading companies with its roasting factory (structure), even when they are different companies (independent legal persons), have good raw material supply. This is very important to maintain quality, being an adopter or a non-adopter that focus his/her production on quality coffees.

Among the adopters, only the company H has an independent green coffee processing company that belongs to the group, but the adopters used another strategy to have a good supply of green coffee, in quality and quantity: they are located in Brazil's largest coffee producing areas (Minas Gerais and São Paulo). This also explains why there were no major changes in the coffee purchasing process by CQP adopters.

Some non-adopters, like the F, J and L companies have high quality coffees and have

| Sample characterization | | | | | | | | | | | | | |
|---|---------|---|---|---|---|---|---|-------------|---|---|---|---|---|
| Sample analysis | Adopter | | | | | | | Non-adopter | | | | | |
| COMPANIES | A | B | D | H | I | K | M | C | E | F | G | J | L |
| Location: Minas Gerais | | X | X | X | | | | X | X | | X | X | |
| Location: São Paulo | X | | | | X | X | X | | | X | | | X |
| Size: Small (S), Medium (M), Large (L) | S | M | L | L | S | L | M | S | S | L | M | L | S |
| Have CQP since the program began | | X | X | X | | X | | | | | | | |
| Adopted CQP lately | X | | | | X | | X | | | | | | |
| Starting CQP implementation process | | | | | | | | | | | | X | |
| Prepared to adopt CQP | | | | | | | | | X | X | X | X | X |
| Plans to adequate its structure in the future | | | | | | | | X | | | | | |
| Presence of other certifications | X | X | X | | X | X | X | | | | | X | X |

Source: research data and ABIC (2006)

in common the fact that they have coffee processing units, storage and exporting companies under the same business group, that work independently of the factory. The business groups also export high quality green coffees to important companies worldwide and this explains why they have good green coffee to their roasting facilities.

The major question in this quality pillar was the problem of maintaining a specific quality pattern. A CQP requirement is that companies have to maintain quality over time, offering customers always the same quality standard established by the certification initially. We can conclude that this point is critical to roaster's strategies.

Quality standard maintenance is no problem for CQP adopters surveyed, mainly due to the fact that they have many supply channels to purchase raw material and are also located in major Brazil's coffee producing regions. Thus, we can conclude that the green coffee acquisition cannot be considered a specific asset according to TCE.

It is important to notice however the special case of the CQP adopter D: Despite it is a large company, with high production capacity, despite it is producing high quality coffees for the international market and it is having a high quality control, the company chose not to show the CQP label in its traditional coffee line packages. There are two possible explanations for this behavior: (1) the company uses the same coffee in different brands according to a local market situation; or, (2)

the company uses this specific product in fighting brands and since this product must fight for the lowest price, the company chooses to adjust its quality according to the price of green coffee, which makes impossible to maintain a quality pattern.

For non-adopters, maintain a specific quality pattern is more critical to justify not joining CQP program, especially because some of them have only a single coffee brand and must adapt the coffee quality to regional tastes.

It is important to mention a sentence that summarizes the thirteen interviewed roasters vision about product quality: «As coffee quality improves, total coffee consumed increases» (Company F director).

6.2. PROCESS QUALITY PILLAR

The certification of the production process is another important aspect for the CQP program, since it is the one who guarantees process standardization and the traceability of the production. Like other certification programs, the CQP uses as its basis the standards and procedures of the ISO 9000 series.

Traceability was identified as the critical point in this pillar, *i.e.* surveyed companies, both adopters and non-adopters, had or have difficulty in implementing traceability in their production process. The main reason is that they do not have an efficient system for receiving, purchasing and documenting green coffee input at the factory. Since CQP implementation, all adopters acquired high

control in their production process.

The most interesting point refers to earnings with CQP adoption, especially with waste reduction and consequently, costs reduction. B, H and M companies' representatives told that they adopted CQP as an alternative to teach consumers; but, it was clear for them that the CQP adoption showed improvements in many areas of the companies. The roaster B changed its product line and intended to use the certification as an incentive to launch new quality certified products. Roasters H and M clearly presented gains with traceability, more efficiency in the production process and employee motivation. Often these gains are not aimed when a company decides to adopt the program.

The roaster H uses CQP as marketing tool against competitors: «My product is certified, and yours?» (Company H slogan).

For roasters A and I, CQP gains are related to marketing strategies. The company A was at the period answering to a big retail company in Brazil that was demanding the CQP certification for coffees on its shelves. For the roaster I, whose objective is to outsource roasting services, CQP attracts clients that want to roast their own high quality coffees.

6.3. QUALITY SIGNAL PILLAR

Communicate credible information is one of the CQP goals. Consumers must have ways to identify their coffee's preferences and based on this data make their purchasing decisions. There will not be a financial compensation for the roaster if consumers do not recognize its efforts throughout the production chain to improve quality.

The label is a resume of all efforts made during the certification and production process. In doing so, it is important to analyze marketing strategies and business relationships of the adopters and non-adopters.

All adopters have gourmet coffees in their portfolios. This reflects the need to differentiate specialty coffees from others in market through certification usage and demonstrates the importance of transmitting quality with credibility to consumers.

Analyzing adopters marketing strategies, it is possible to imply that quality is part of companies' philosophy and of its

entrepreneur's business behavior. The adopter H has quality as its main objective and uses CQP successfully to transmit this philosophy to clients.

This is the objective of the roaster K, to transform the constant search for quality improvement in a marketing strategy to also gain consumers' loyalty. Some adopters like the companies M and I bet that the gourmet coffee market will be very important in the future.

The adopter D uses quality as a key to achieve international market or to place its coffee in the retail shelves of Pão de Açúcar (a retail company) specialty coffee line and to be present in the best stores of the country.

Among non-adopters, the quality search is also present in some companies. The roaster J uses quality as a strategy to conquer a large metropolitan region market. The goal is to show consumers that coffee quality does not always need to be more expensive. The roaster F seeks to give support to its «fancy» gourmet coffee business, the specialty coffee and gourmet line, with institutional coffee production and own-store coffee brands for retail.

Another non-adopter, the roaster L, focuses on high cuisine, offering high quality coffee in the Brazilian market. According to the interviewee, origin certification is much more important to its marketing strategy than the quality certification offered by CQP.

His distribution channel has also a special feature: Direct sales to final consumers via internet. By using this strategy, the company reaches a hierarchical governance structure very difficult to be found in agribusiness: A complete vertical integration.

Generally, companies are increasingly searching for market segmentation as a successful strategy. Thus, we can conclude that CQP helps adopters in defining their marketing segments and the also the quality they want to offer to their clients/consumers.

6.4. CQP IMPLEMENTATION PROCESS ANALYSIS

Given the main objective of this research, it is possible to identify which major points concerning CQP implementation process were, based on all surveyed data arranged in the quality pillars model.

First, there is some resistance from some companies to adopt CQP in a first moment.

This fact can be considered normal, since the program is complex and was –at the time of the research– still in its implementation step. A reactive behavior also reflects some companies conduct to join the program only when the market effectively demand it, or when consumers and/or retail starts to identify CQP as a rule for their coffee purchases.

Other companies (like roasters F and L) rely on strong brands to transmit credibility and quality to their customers, and they do not identify CQP certification as a priority. It is a clear case of certification label versus roasters' private brand.

The maintenance of the coffee cup profile over time as shown in the «profile taste» label, avoiding quality variation, has been identified as difficult to be implemented by most companies because to compete at low prices market they must search for low quality/low price green coffee. This will ultimately limit competitive capacity of roasters that already have CQP against others that does not have the certification.

Meanwhile, companies that have already joined the program have some advantages to maintain quality pattern: (1) they have a green coffee trade company combined with its roasting structure or, (2) are located in producing areas and coffee commercialization centers.

However, those evidences can be applied not only for CQP adopters, the non-adopters that have high quality patterns in its products or production processes also present those strategies.

There are companies that are using hybrid governance structures, as pointed by Machado (2000), with high vertical coordination. Consequently, they can minimize transaction costs by reducing uncertainties about coffee quality purchased or produced by its own farms and/or partners.

In the research results it was possible to identify that some respondents recognize that CQP can become a competitive advantage in near future; particularly, considering some ABIC's strategies to boost program implementation, such as partnerships with retailers, like the chain Pão de Açúcar, and the requirement of certain government agencies to include CQP quality patterns on public

auctions for coffee acquisitions. Since government is a great institutional client, as this coffee acquisition criteria starts to prevail, finally cup quality will began to be a primary factor for coffee purchasing, taking off the factor «price» as the only acquisition prerogative.

Beyond these actions, ABIC launched in November 2006 a partnership that clear up its intention to turn CQP into a coordination tool in coffee agribusiness. The «Brazil's Sustainable Coffees» is a partnership between ABIC and the Cerrado Coffee growers Associations Council (CACCCER)³, institution in charge of «Café do Cerrado» certification. In 2008, as an evolution of those partnerships, ABIC started to gather other recognized certifications, such as UTZ Certified, Rainforest Alliance, 4C, Fairtrade, Organic, etc. It is interesting to notice that those certificates association reflects consumers' wishes to pay an additional value to products that contain all certification benefits: from social-environment protection with food safety, to products with higher sensorial attributes. The answer of the market is no clear though.

«Top-down» strategies that pull certification demand from retail to industry seem to have higher impact, and perhaps this should be the way to do it, since to reach final consumers in a strong and effective way, it would be necessary a massive marketing investment, something that is out of ABIC's plans nowadays.

7. CONCLUDING REMARKS

The work achieved its main objective, i.e., to study CQP implementation process and its implications in R&G coffee companies in Brazil. The «quality pillars» theoretical model was developed as an attempt to gather CQP philosophy and goals with TCE basis and quality theory.

The starting point was the theoretical assumption that quality management focused on R&G coffee quality requires vertical coordination between agents in industry. Thus, to ensure CQP effective implementation, companies need strategies to create better coordination tools with their suppliers and

³ Acronym of «Conselho das Associações dos Cafeicultores do Cerrado», in Portuguese.

deliverers. The key to increase coordination among economic agents is therefore to establish a quality pattern for roasters, what requires a better coffee quality acquisition, even if they have to pay an additional price for it. Those demands demonstrate the importance of «product quality» pillar for a certification program to succeed.

It was identified that traceability has been another critical point for surveyed roasters. All adopters said they encountered difficulties in implementing and documenting traceability of their production process, and it is the traceability absence that does not allow most of the nonadopters to start certification. The gains adopters identified with standardization and traceability adoption shows “process quality” pillar importance.

Roasters that need support to their marketing strategies for quality differentiation needed a certificate or a strong brand to transmit credibility to their consumers. This explains why some companies do not want to join CQP program, because they already have a strong brand to communicate with consumers and they do not need a label to prove their quality to these latter. It is a clear certification label versus roasters brand conflict. On the other hand, roasters that link their brands with CQP label are in search for a marketing differentiation from competitors that do not have this option. Those strategies confirm the importance of the “quality signal” pillar, namely the importance of using an efficient way to transmit information, searching for an information asymmetry reduction between suppliers and customers.

This work contribution is the CQP theoretical analysis model. It provides support to better comprehend which are the certification process critical points, although we cannot widespread it, since it is a picture that shows researcher’s perception about a specific study object.

Overall, there is a clear perception that CQP has potential to become an essential program for Brazilian coffee market, it can also acquire a status of a major coordination tool in supply chain, placing ABIC as an important coordination agent within coffee agribusiness.

REFERENCES

- Associação Brasileira da Indústria de Café, *ABIC* (2006). Programa de Qualidade do café ABIC – Selo de qualidade Passo a Passo. *ABIC, Programa de Qualidade do café ABIC – Selo de qualidade Passo a Passo: 1-5*. Retrieved from <http://www.abic.com.br>
- Associação Brasileira da Indústria de Café, *ABIC*. (2010). Programa de auto-regulamentação da indústria de café. *ABIC, Programa de auto-regulamentação da indústria de café: 1-2*. Retrieved from <http://www.abic.com.br/publique/cgi/cgilua.exe/sys/start.htm?sid=91>
- Alencar, E. & Gomes, M. A. O. (1998). *Metodologia de pesquisa social e diagnóstico participativo*. Lavras: Universidade Federal de Lavras.
- Azevedo, P. F. (1997). *Competitividade: mercado, estado e organizações*. São Paulo: Editora singular.
- Coase, R. H. (1988). *The Nature of the Firm*. Chicago: University Press (originally published in 1937).
- Farina, M. M. Q. E. (1997). *Competitividade: mercado, estado e organizações*. São Paulo: Editora singular.
- Farina, M. M. Q. E. (2000). *Economia e gestão dos negócios agroalimentares*. São Paulo: Pioneira.
- Farina, M. M. Q. E. (2003). Padronização em sistemas agroindustriais. Zylbersztajn, D. & Scare, R. F. (Orgs.), *Gestão da qualidade no agribusiness: estudos e casos*. São Paulo: Atlas.
- Machado, R. T. (2000). *Rastreabilidade, tecnologia da informação e coordenação de sistemas agroindustriais*. (Tese inédita de Doutorado). Universidade Federal de Lavras, MG, Brasil.

- Mario, T. M. do C. (2002). *Dinâmica comportamental dos consumidores de café: um fator gerador de ações mercadológicas*. (Unpublished M.Sc. Thesis). Lavras: Universidade Federal de Lavras, MG.
- Maximiano, A. C. A. (2000). *Teoria geral de administração: da Escola Científica à competitividade na economia globalizada*. 2º edição. São Paulo: Atlas.
- Nassar, A. M. (2003). Certificação no agribusiness. In Fava Scare, R. & Zylbersztajn, D. (Orgs.), *Gestão da qualidade no agribusiness: estudos e casos*. São Paulo: Atlas.
- Reeves, C. A. & Bednar, D. A. (1994). Defining quality: Alternatives and implications. *Academy of Management Review*, 19(3), 419-445. doi: 10.5465/AMR.1994.9412271805
- Saes, M. S. M. & Farina, E. M. M. Q. (1998). Associação Brasileira da Indústria de Café – ABIC: Ações conjuntas e novos desafios frente a reestruturação de mercado. *VIII Seminário Internacional Pensa de Agribusiness*. Retrieved from http://pensa.org.br/wp-content/uploads/2011/10/Associação_brasileira_da_indústria_de_café_ABIC_ações_conjuntas_e_novos_desafios_frente_a_reestruturação_de_mercado_1998.pdf
- Slack, N., Chambers, S. & Johnston, R. (1996). *Administração da produção*. São Paulo: Atlas.
- Triviños, A. N. S. (1987). *Introdução a pesquisa científica social: a pesquisa qualitativa em educação. O positivismo. A fenomenologia. O Marxismo*. São Paulo: Atlas.
- Williamson, O. (1985). *The economic institution of capitalism*. New York: The Free Press.
- Williamson, O. (1991). Comparative economic organization: the analysis of discrete structural alternatives. *Administrative Science Quarterly*, 36(2), 269-296. doi: <http://www.jstor.org/stable/2393356>