

Key Success Factors in the Brazilian Coffee Agrichain: Present and Future Challenges

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ABSTRACT

Coffee production has grown 100% in volume over the past 30 years, with 30 million bags of coffee consumed every year in the world. Brazil is responsible for 35% of this production, followed by Vietnam (16%), Indonesia (7%), Colombia (5%), and Ethiopia (5%). At this pace, consumption has expanded not only in traditional markets such as the United States of America (4.2 kg/year), Germany (6.9 kg/year) and France (5.7 kg/year), but also in tea-driven markets such as Japan, Korea, Russia and China (CECAFE 2013). In 2013, Brazil harvested 49.15 million 60 kg bags of processed coffee, 38.29 million of which were of Arabica coffee and 10.86 million of Conilon species (CONAB 2014). The planted area in Brazil is 2.3 million hectares and there are about 287,000 producers, predominantly mini and small farmers. Having continental dimensions, the country presents a variety of climates, reliefs, altitudes and latitudes that allow the production of a wide range of types and qualities of coffee (MAPA 2014). This research aimed to clarify present and future challenges for the Brazilian coffee agrichain, considering the growing demand and also competitiveness between the coffee countries' producers. To capture the vivid perception of the actors in the coffee chain, a qualitative approach was employed. The research was conducted in three phases. In the first phase, 10 coffee specialists were interviewed using the snowball technique with the saturation premise, to identify the coffee sector's main milestones for Brazil over the next 30 years. In the second phase, desk research was conducted to collect data and bibliographical information. This culminated in eight key success factors for coffee farming management. Finally, in the third phase, the results of phase two were submitted for analysis by 39 coffee farmers through three discussion panels held in the major producing regions: Sul de Minas (corresponding to 60% of the national production), Cerrado Mineiro (with 20%), and Matas de Minas (with 15%) (CECAFE 2012). The first outcome was a comparative analysis of the three regions using the lens of the key success factors and, secondly, the main future challenges faced by each region. Added to those results, the panels provided insights for public policies and private strategies. The study consolidated new drivers of change that directly impact corporate strategies and public policies, namely: a) increasing complexity in coffee farming, b) farm succession, c) mechanization, d) increased use of pesticides, d) climate change, e) consumer behavior, and e) risk management in the coffee agrichain. Given these drivers of change, companies in the Brazilian coffee agrichain may move forward with relevant strategic focus on important issues, leading to: i) loyalty from the farmer to guarantee high quality coffee supply, ii) increase in entry barriers to ensure the maintenance of leadership in world coffee production and exportation, iii) operational risk minimization for companies as well as coffee farmers, iv) encourage and participate in the farmers' actions to make coffee activity more environmental friendly, and finally, v) designing marketing plans connected with the coffee consumers' habits and desires, current and future.

Key words: coffee; agribusiness; key success factors

1 Introduction

"What I think about coffee is this: that we fulfill the cycle. It was an important instrument to finance the growth of this country. It was the catalyst for investment, the entire railway, ports, all energy, all turned out to be linked to coffee. The coffee produced, in fact, the currencies that were necessary for the start of this industrialization. The coffee made Brazil and Brazil made the coffee." Delfim Netto, former Brazilian Economy Minister (Saes, Nakazone, 2002)

This study aims to identify and describe the main drivers of change for the current stage of the Brazilian coffee sector, presenting a scenario of trends and challenges for coffee production in the next 10 to 20 years. Therefore, it also investigates the new organizational forms that are being shaped to meet the identified drivers of change.

Interviews were conducted with 10 experts, including producers, exporters, leaders of associations, managers of governmental departments, and technical agencies, in order to identify the main drivers of change in the last 60 years and the current scenario of the Brazilian coffee sector. The information collected highlights eight critical success factors that account for the main challenges faced by coffee agrichain managers and technicians, with a main focus on the reality of coffee farming.

The critical success drivers were subjected to analysis and discussion by 39 Brazilian producers located in three major producing regions: Cerrado Mineiro, Matas de Minas, and Sul de Minas. Therefore, three panels were formed in the aforementioned regions, collecting data on the perceptions of farmers concerning the future and how they are preparing for the future demands of coffee sector.

The study identifies some crucial factors in all regions, suggesting the need for more coordinated management between the agents in the coffee chain. Issues such as marketing, mechanization, succession, and sustainability are the main challenges for the development and competitiveness of the coffee sector within and outside the country.

The panels captured the diversity in the investigated regions, and also similarities related to the current stage of coffee production in the country, influenced by external factors such as legislation, non-tariff barriers in consumer countries, the enhancement of local labor, and the resulting need for mechanization in order to increase productivity and quality in coffee farming.

This paper is presented in four sections including this introduction. In the following section, the development of the research and methods are discussed. Section 3 presents the compilation of the panel results for each region investigated, pointing to perceptions regarding the critical factors and the future of coffee farming. Section 4 highlights the new drivers of change for the Brazilian coffee sector and presents final remarks.

2 Conceptual Framework and Research Methods

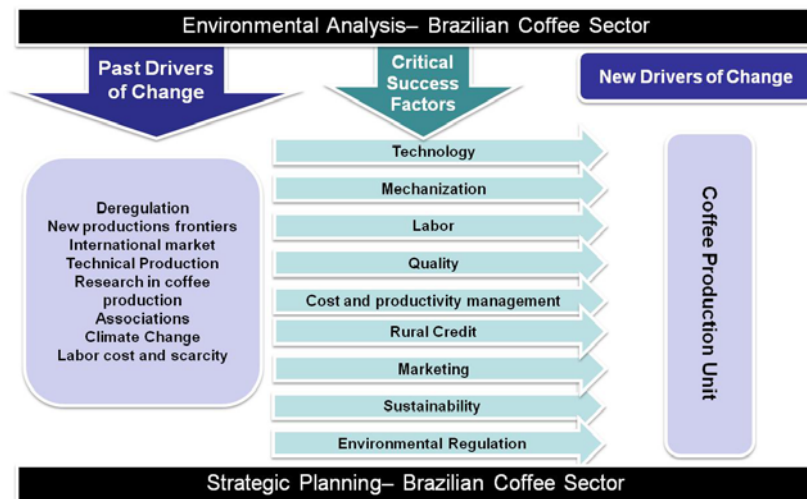
This research was part of a Strategic Planning Process focusing on the Brazilian coffee sector. In the first part of the project, an environmental analysis was conducted based on desk research and a literature review, aiming to identify the major milestones of the Brazilian coffee agrichain, and also important prior studies and technical reports published around the research theme.

The second part comprised three phases, the results of the last two of which are presented in this paper. In the first phase, the main objective was to confirm and deepen the environmental analysis conducted in part one of the Strategic Planning Process through personal interviews with 10 experts. The number of participants was determined using the saturation method (Glasse and Strauss, 1967). All the interviews were based on a structured script covering

8 great milestones in the Brazilian coffee sector on which the interviewees were asked to comment. They were also asked to identify and comment on five or more critical success factors for Brazilian coffee production. The responses were compiled into eight critical success factors related to the actual status of Brazilian coffee and the past main drivers of change were also identified.

In the second phase, the 8 critical factors were submitted to validation by 39 producers from the main Brazilian producing regions: Cerrado Mineiro, Matas de Minas, and Sul de Minas. In the third and last phase, the producers were asked to indicate future challenges and concerns related to the critical factors identified, and also point to other factors that might affect agrichain activity over the 20 years ahead. Based on this, new drivers of change were identified as crucial. Figure 1 summarizes and illustrates the phases, and the resulting conceptual framework applied.

Figure 1 - Conceptual Framework and Research Development in three phases



Source: authors

3 Critical Success Factors for the Main Coffee Producing Areas

Table 1 provides a summary overview of the panels, focusing on each critical factor investigated. It can be noted that the region of Cerrado Mineiro exhibits a more modern mode of coffee production composed of medium- and large-sized coffee farms in constant pursuit of productivity and grain quality. Furthermore, the local farmers have been working in cooperation to achieve common goals, such as maximizing the marketing of the original seal designation through participation in international fairs to publicize the regional coffee, as well as engaging in direct dialogue with the industry to promote the adoption and dissemination of the Cerrado Mineiro brand on their coffee packaging.

The region of Matas de Minas is represented by strength in family farming and sharecroppers, with a strong appeal in terms of sustainability certifications, fair trade, and carbon credits. The local farmers have been approached by international buyers in search of certified and good quality coffee. However, the farmers still rely mostly on traditional sales channels, ignoring the benefits that other alternatives could bring or believing that their quality of coffee production does not meet the buyers' procurement requirements. The region is also characterized by low mechanization given its topography. The cost of coffee processing by farms is high due to the expense of maintaining and upgrading machines, as well as maintaining a labor-intensive production structure. There is a lack of strong farmer associations and cooperatives, predominantly because of the local producers' distrust of existing organizations.

The region of Sul de Minas comprises traditional coffee growers merged with more professional coffee farms. All revolve around the world largest cooperative, Cooxupe, and also other important organizations, such as COOPARAÍSO. These firms determine the quality of the coffee and exert a considerable influence on crop management through the provision of technical support for pesticides and the utilization of machinery. Production costs are high for the

majority of farmers, considering the significant use of labor, and their income is in great measure dependent on the cooperative's pricing system.

Table 1. Production regions and their characteristics based on critical factor analysis

Critical Factors	Cerrado Mineiro	Matas de Minas	Sul de Minas
Technology	Intensive use of agricultural tools and modern management techniques.	Minimal mechanization given the topography. High cost of processing for small property management and lack of farming (pruning, harvesting, labor, costs, etc.).	Mix of mechanization in flat areas and low use of machinery in the mountains.
Labor	Use of skilled labor with investment in training and differentiated pay.	Intensive labor and sharecroppers, plus family workforce.	Mix of mechanization and hired labor, but still with low qualifications.
Quality	Designation of origin and coordinated communication efforts concerning the regional coffee.	Certification in progress for the region. The quality of grain is still little exploited in marketing, with the prevailing use of traditional intermediaries.	Selling primarily to the cooperatives, so quality is a function of the cooperatives' procurement requirements.
Costs and productivity management	Increasing number of producers adopting modern tools for cost and productivity management.	Shortly to be adopted by local farmers, who are mostly households with traditional property management. Absence of agents to support the farmers, such as cooperatives and government entities.	Adopted mainly in medium-sized and large farms, but still in a simplified manner.
Financing	Access to the governmental rural credit program and other alternative forms of finance.	Access to PRONAF (the government's rural credit program for family agriculture) and alternative credit options. Challenge of efficient resource allocation.	Access to the governmental rural credit program and other alternative forms of finance.
Commercialization	Use of various sales channels (cooperative, direct trade, exporting, etc.), including risk protection tools, such as forward contracts and derivatives.	Presence of intermediaries such as traditional marketing channels, but with increasing participation of direct trade, selling to exporters and participation in quality competitions.	Selling primarily to local cooperatives, with Cooxupe having a greater share, and targeting special coffee to exporters or direct trade.
Sustainability	Conformity, along with bureaucratic processes.	Few properties with sustainability certification or fair trade status, but increasing numbers of adopters.	Concern of the producer to meet the buyers' requirements. Lack of support from the cooperatives.
Legislation	Increasingly important for farm management – need for specialized support.	Increasingly important for farm management – need for specialized support.	Increasingly important for farm management – need for specialized support.

4 New Drivers of Change and Conclusions

Despite advances in the complexity of coffee farm management, the producers are optimistic about the future of coffee farming. This perception is based on the potential increase in its yields caused by the growth in coffee consumption around the world and in the domestic market, in addition to the increasing consumption of quality coffees that provide higher income.

The research undertaken with experts and its validation by the producers make it possible to consolidate new drivers of change that directly affect corporate strategies and future prospects in the country, namely: a) the increasing complexity of the activity, b) farm succession, c) mechanization, d) increased use of pesticides, d) climate change, e)

consumer behavior, and e) risk management in the coffee agrichain. Figure 2 summarizes the meaning and main concerns related to the new drivers of change.

Figure 2. New Drivers of Change for the Brazilian Coffee Agrichain

Farm Management Complexity	The producer should gather other skills that go beyond the production spectrum
Succession	Succession planning and / or professional hiring as key to business continuity. <i>The business is attractive to young people?</i>
Mechanization	Complex Process that demands careful planning. <i>The current machines are efficient? The workforce is prepared?</i>
Agrochemicals	Essential for crop's productivity versus health issues. <i>What is the real impact on people's health and the environment?</i>
Change Climate	Real impact in production volume and productivity. <i>What are the real risks for coffee?</i>
Consumer	Consumer behavior as trigger changes. <i>Who will be the coffee consumer for next 10, 20 years ahead?</i>
Risk Management	Increasing volatility in prices along the chain. <i>How to minimize the impacts of high volatility of prices in the farm management?</i>

Source: Authors

Regarding the organizational forms, the main change concerns the growing possibility of the gradual disappearance of medium-sized properties, giving way to large, professionally managed properties and small farms mostly operated by families. The reason for this shrinking phenomenon is the cost structure based on intensive labor vis-à-vis the volatility of prices, which incurs increasingly tight margins even if farmers apply cost and productivity management. This is the scenario found in the regions of Cerrado Mineiro and Sul de Minas. The average property size is around 200 hectares with an average investment of R\$13,000.00 per hectare, and thus working capital of R\$2.6 million, considering a cycle of 15 months, employing around 60 permanent employees and another 180 at harvest. Many of these properties are in the mountains. Some experts predict the sale of these properties and the reallocation of land to reforestation.

Another important determinant of the configuration of production units relates to the process of succession in small- and medium-sized farms as, in many cases, the successors are studying and working in cities, and rural activity has little appeal for these young people compared to the range of possibilities in the urban setting.

References

- ABIC (2014). Indicadores da indústria. Available at: <http://www.abic.com.br/publique/cgi/cgilua.exe/sys/start.htm?sid=61>.
- Almeida, L.F. (2014) Direcionadores de Mudança na Cafeicultura Brasileira: passado, presente e desafios futuros. Universidade Brasil do Café: Relatório de Pesquisa. São Paulo, 31p. (in portuguese).
- CECAFE (2013). All about 2011-2012 crop. Sao Paulo: Cecafer Publisher.
- CECAFE (2015). Internal documents, 2015.
- CONAB (2015). Coffee Production Statics. Available at <http://www.conab.gov.br> . Accessed in 2015.
- EMBRAPA, UNICAMP (2009). Aquecimento Global e a nova Geografia da produção agrícola no Brasil. Campinas, Unicamp. (in portuguese).
- Glaser, BG., Strauss, AL. (1967) The discovery of grounded theory: strategies for qualitative research. New York: Aldine de Gruyter.
- ICO (2014). Renewed Concerns Over Brazil Crop Cause Price Jump. Available at: <http://icocoffeeorg.tumblr.com/post/94443030175/renewed-concerns-over-brazil-crop-cause-price-jump>.

- KANTAR WORLDPANEL (2013). Comportamento de compra espontânea do consumidor brasileiro, sessão café. (in portuguese).
- MAPA (2015). Coffee Statistics. Available at <http://www.agricultura.gov.br>.
- Martins, A.L.(2012) A história do café. 2ª Ed. São Paulo, Contexto. (in portuguese).
- NIELSEN (2013). Relatório de estudo setorial de café. (in portuguese).
- Saes M.S.M.; Nakazone D. (2002). Estudo de competitividade de cadeias integradas no Brasil: Impactos da zona de livre de comércio. Campinas,Unicamp. (in portuguese).
- Saes, S. (org) (2008). Pesquisa sobre o perfil do produtor de café do Brasil. Universidade Brasil do Café: Relatório de Pesquisa. São Paulo, 25p. (in portuguese).
- SCAA (2014). Consumer understanding. Available at: <http://www.scaasymposium.org/tracy-ging-speaks-at-symposium-2012-on-consumer-understanding/>.