REPORT WRITEN BY THE COMMISSION ON COFFEE COMPETITIVENESS IN COLOMBIA
EXECUTIVE SUMMARY

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I. INTRODUCTION

The dynamics of the Colombian economy was associated to the coffee sector during most of the XX Century and some authors consider that, before the coffee era, Colombia was atomized into regions and had not yet constituted a Nation because of enormous communication difficulties. Coffee changed an economy based on mules, tobacco and gold into another based on railroads and banks. Coffee production used previously unexploited resources[1] and did not require large amounts of capital. Coffee exerted a deep influence in the country's cultural formation and gave rise to the Colombian obsession on the importance of the small coffee farmer, a marked risk aversion and strong "conservatism" in some areas of economic policy. Coffee allowed wealthy growers and exporters in the regions to acquire political power at the national level and some authors even suggested that wedding and natality rates in the country depended on coffee prices in certain periods. The coffee economy was closely associated to *Antioquia's colonization,* to the expansion of the agricultural frontier, and to the enlargment of the internal market and the industrialization of the country.[2]

Important institutions developed around coffee. The National Coffee Growers' Federation (FNC), created in 1927, upon the initiative of its producers and exporters, was from the beginning endowed with the proceeds of some coffee export taxes. The FNC became "a nation within the Nation" among other things because it was able to ensure the reinvestment of a major part of the coffee tax revenues in the coffee growing regions. The resources from these taxes entered the National Coffee Fund (FoNC), which was the epicenter of the country's macroeconomic stabilization policy since the early 1930s up to almost the end of the XX century.[3]

For a long time, Colombia was a protagonist in the international coffee market. The institutional arrangement of the FNC-FoNC (Federación Nacional de Cafeteros and Fondo Nacional del Café) allowed the country to face market failures and positioned our coffee in a high quality segment. All this made sense given the characteristics of the then existing international supply and demand, at times when the market was less differentiated and sophisticated. This institutional scheme was very effective for the management of the international quota system (Pacto Cafetero) at that time.

The world has changed, however, and the country's performance has not been brilliant after 1989, in a market characterized by more competition, multiple varieties, alternative production techniques and niche markets. Our country has not participated in the dynamic robusta market, by deliberately discarding it as an inferior quality product. Colombia has not participated in the dynamic market of 'natural coffees'– another winner; and it has just recently entered the niche of special coffees. Colombia consistently lost share in Arabica coffees, in mild coffees and in mild washed coffees – varieties in which the country had traditionally specialized. Competitors from different countries have dramatically taken away market share from us in the United States and, even more markedly, in Europe and Japan.

While other countries changed production techniques, altered the geographical composition of production, transformed the coffee firms, the institutions and the regulatory environment, this did not happen in Colombia. The country adapted very slowly to the new market conditions and has just recently been doing so reluctantly and lately in some fields. The loss of leadership in international markets is the result of this slow adaptation, largely explained by very rigid policies and institutions.

Colombian coffee exports represented close to 18% of the international market early in the 90s, at the end of the International Coffee Agreement, and less than 10% in 2013. The country would export 25 million bags just to maintain its initial participation. Coffee exports represented 54% of Colombia's total

[1] Coffee was efficiently grown practically in all the country's mountaineous regions, coexisting with other agricultural products; it was permanently grown in lands that were otherwise just partially cultivated during the year and it promoted the incorporation of new plots of land.

[2] See Cárdenas y Yanovich (1997), Echavarría (1989), chap.1, Junguito y Pizano (1991), Palacios (1980) y Urrutia (1980).

[3] FNC was created in 1927, and FoNC in 1940.

exports in 1971-73, close to 20% in 1991-1994, and a mere 5% in recent years. The global demand for robusta has grown much faster than for Arabica, and Colombian 'suaves' have lost participation in the market of mild coffees. Summarizing, Colombia has been losing participation in the international coffee market, in the Arabicas market, and in the market of mild Arabicas. Furthermore, our country has lost participation in the coffee markets of Europe, the United States and Japan. Productivity (production per hectare) has grown less than in the group of successful countries worldwide and relative costs have also increased. Among the group of successful countries are Brazil and Vietnam, India, and Indonesia, but also Honduras, Nicaragua and Peru. Coffee represents today less than 1% of GDP and 3% of total employment in Colombia.

In 2002, amidst one of the worst crisis in recent history, the Mission on Institutional Adjustment (Misión de Ajuste Institucional, (Silva, et al., 2002)), recommended a series of reforms, but few of them have been completed. It was thought at the time that it was possible to negotiate a new International Pact, and also that the nominal exchange rate and coffee production would increase permanently, with larger and larger coffee revenues in pesos. Therefore, the 2002 Mission submitted a proposal for temporary (few years) subsidies until market conditions improved. Their price projections were gloomy: "It is time to stop dreaming about the past and to get busy building the coffee growing sector of the future. No political scenario shall foresee sustainable international price increases above US $1/lb. in the medium term" (Silva, et al., 2002), p.14. Fortunately, the price of mild coffees has remained above one US dollar since 2005, and in some months in 2011, it reached three dollars per pound.

What actually happened was that projections scarcely materialized. The coffee sector not just was unable to overcome the crisis but the latter became more acute at the time when incomes and revenues in pesos fell. Instead of temporarily aiding the coffee sector the government had to fund programs traditionally funded with the sector's resources (parafiscales). Thus, for example, in 2013 the Government disbursed $1.3 trillion for the 'Programa de Protección al Ingreso Cafetero-(PIC)' (Coffee Revenue Program), a sum largely exceeding the amount granted annually between 2002 and 2010, and equivalent to one third of the domestic price. When adding the support, credits and subsidies delivered by Banco Agrario and Finagro it reaches 1.5 trillion pesos. This amount is similar to the volume of resources given by *Familias en Acción*. Furthermore, while the latter program focuses on the poorest groups in the population, and covers more than 2.5 million families, the PIC just covers 378,000 out of the 500,000 coffee sector families and excessively benefitted medium and high-income growers: 10% of the coffee growers got 60% of that subsidy.

The 2002 Mission considered important not to evade any open and democratic debate on coffee institutions. As mentioned in its conclusions, institutions had guaranteed good prices and services,[4] but a deep rethinking was required so the FoNC would be viable in the future and could continue complying with its mandate to maximize and stabilize producers' revenues and improve competitiveness. This democratic debate is today more urgent than in the past: in 2002 the FoNC was self-sustainable, but the national budget and taxpayers contributions are the main sources of funds today. Furthermore, between 2002 and 2014 Colombia continued losing ground in the international markets.

That Mission also considered it essential to segregate clearly the three functions of the FoNC, not only for accounting purposes. According to them it required "an integral change of institutions, with deep legal changes both at contractual and equity levels, and also to redefine the Colombian competitive strategy." Coffee institutions should concentrate both on the provision of technical assistance, research and scientific experimentation - public goods which should be financed with the resources obtained from the coffee contributions - and on the promotion of Colombian coffee.

Changes did not go deep enough, and the comprehensive integral reform did not take place. This, for example, trading and regulatory functions of the FNC and FoNC were not separated (the two functions

[4] Not only the institutions. The decision also that a good part of the coffee revenues would return to the sector, with an elevated international price thanks to export restrictions (at a period when Colombia was still a major player in the international markets).

continued being managed by the same entity), with an evident conflict of interests that adversely affects coffee competitiveness in Colombia. Nevertheless, the development of special coffees began as well as the implementation of renovation programs to recover somewhat the lost productivity. However, as we will explain throughout this document, efforts to regain competitiveness have been timid and very limited. The FoNC did not focus on technical assistance, research and promotion, and important resources went to non-coffee activities in the regions. Prices fell abruptly in 2011, and the coffee sector went back to crisis, strikes and generalized discontent.

As it happens every ten years in Colombia, but also in response to the political situation, the government issued the CONPES 3763 document dated March 2013, creating the new Expert Mission specifically designed to "perform a deep and integral analysis of the sector's different aspects both at global and local levels. And, based on this analysis, to design a set of public policies and strategies aiming at coping with the sector's structural problems in the areas of production, trade, innovation, generation of value added, risk management, income, employment and other social variables and, lastly, under the institutional framework of the sector. All this, in order to contribute to competitiveness and to the sustainable development of the Colombian coffee sector in the medium and long term."

An expert Commission formed with expertise in coffee production and trade, with deep knowledge in the fields of economics, history, management, and the environment was set up. The Commission's members were: Oswaldo Acevedo, Juan José Echavarría, Dub Hay, Eduardo Lora, Marco Palacios, Gonzalo Restrepo and Cristian Samper; it also included Mr. Fernando Castro, representing the Coffee Federation and the Colombian institutions (Comité Directivo de Cafeteros), and Mr. Teódulo Guzmán in representation of Dignidad Cafetera. Differently from the former Missions,[5] this Commission included members from multiple social sectors, regions and occupations with a breadth of visions on the strengths and weaknesses of the coffee sector in Colombia. Furthermore, it worked with full independence amidst a difficult political situation characterized by strikes and the rise of the Dignidades movement. FNC created a Technical Secretariat under the direction of Juan José Echavarría, with the participation of Pilar Esguerra, Daniela McAllister and Carlos Felipe Robayo.

The Commission worked for almost two years. To perform the in-depth analysis required, it was necessary to update the diagnosis in many fronts. Eighteen independent consultants were hired, and the documents produced by these authors will be in a book accompanying this report. Those documents served as central inputs into the discussions of the Commission and used extensively in this document. We had the ongoing support of the FNC, especially from its general manager, Luis Genaro Muñoz, its Advisor, Ricardo Villaveces, as well as from the Oficina de Asesores Cafeteros, under the direction of Nicolás Pérez. Ample discussions took place with the Federation's directors, we had access to all the information and documents required, and allowed to work with total independence at all times.

The Technical Secretariat met with all the different Comites Departamentales de Cafeteros, and Strategic Planning workshops took place (under the direction of Jorge Ramírez & Rafael Puyana) with those Committees, with the Comité Directivo at the FNC, with Dignidad Cafetera and with private exporters. Central questions were discussed at those meetings such as: should the *FNC* promote the current model concentrated on small coffee farmers, poverty reduction and the provision of public goods in the coffee regions? Should the FNC export and regulate simultaneously? Should the FNC promote the production of robusta and other types of coffee in areas other than in the Andean region? Should the National Government collaborate directly as a member of the FNC - FoNC? Shall the extension service provide only technical assistance? How could the Centro Nacional de Investigación de Café (Cenicafé) provide more decentralized services? These discussions and experiences also provided inputs to the analysis inside the Commission.

In general terms, the Technical Secretariat of the Mission considers that the current coffee institutions (in essence, the contractual Nation-FNC complex, together with the laws and standards ruling the coffee

[5] Clavijo, Jaramillo y Leibovich (1994), under the direction of Francisco Ortega; and Silva *et al*.(2002).

activity)[7] are oversized, lack transparency, require more flexibility and do not promote competitiveness and innovation. Furthermore, they have become excessively dependent on the Nation's resources that could become a latent problem for the country's public finances. For these reasons, they are unsustainable and need to be reformed. Many years have gone by since the end of the International Coffee Agreement and a progressive deterioration of the account called FoNC is now evident. Many years have gone by as well since the enactment of the 1991 Constitution expressly forbidding monopolies and defending economic freedom in its broader sense. Our recommendations go in the same direction but are more drastic than those of the 2002 Mission. Furthermore, we consider that the protection of the environment must gain space among the different public goods financed with the coffee contribution. Finally, to achieve the 2002 Mission's objectives truly we propose to privatize the commercial function of the FNC-FoNC totally.

The Mission gives substantial recommendations on what should be done – and in some cases it describes potential scenarios – understanding that the matters regarding 'who are the players' (National Congress, National Executive Branch, Judicial Power, Coffee Congress and FNC authorities*)*, 'when' or 'how' they will play, are essentially political matters in the Government's hands. Coffee activities or the coffee value chain (from cultivation to end consumers) is immerse in some practices coming from the past (such as the predominance of small coffee farmers) as well as in some other realities emerging both from a strong readjustment of the global geography of supply and consumption, and from the most complex and varied ways of drinking coffee recently assumed by consumers. This implies for instance, international agreements related with sustainability; training aspects, sustainability, social capital; historical trend of Colombian coffee cultivation to maintain current costs at a high level, and aspects of the rigid and oligopoly forms (FNC) of the internal market that have inadvertently hindered aggressive policies to strengthen the consumption of high quality coffee.

The group of coffee producers face huge future challenges, summarized in the following terms: how may Colombia regain the share it had in the international markets by producing these volumes in a profitable way, even at times of low international prices, with important quality premiums, in a sustainable way? To achieve this we should produce about 25 million bags per year (Colombian market share was 17.4% in 1990-1994), with international prices that could fall below one dollar per pound. It is likely that prices will never return to such low levels, but one must not disregard this possibility. In 2002 Silva *et al.* (2002) considered that coffee prices would never be above one dollar.

After this Introduction, Section II discusses the evolution of agriculture in Colombia and the special characteristics of coffee; Section III considers the main trends in global market and Section IV compares the evolution of productivity (production per hectare) costs and profitability in different countries and in the Colombian regions. Section V compares poverty and the social situation in the coffee and non-coffee regions; Section VI discusses the environment and the main characteristics of the *good agricultural practices (buenas practices agrícolas,* BPA). Section VII describes the main coffee institutions, compares them with those in other countries, and proposes reforms. Section VIII considers the pros and cons of coffee exports and regulations; it discusses the practical possibilities of implementing price stabilization schemes and proposes actions related to the 'so called' *garantía de compra*. Finally, section IX presents the Mission's ten main messages and recommendations.

[7] Institutionalism is understood herein, as not including the sector's social capital and service networks, as this concept may sometimes be considered.

II. AGRICULTURE & COFFEE IN COLOMBIA

From 1990 to 2013, Colombian agriculture grew at an average annual rate of only 2.2%, lower than the region (3%), and lower also than successful countries like Chile (4.8%), Paraguay (4.2%), Nicaragua (3.6%), Ecuador (3.6%), or Argentina (3.5%), among others. Export dynamics have been also low, partly because tariff and non tariff protection are high compared to the region and this introduces a clear anti-export bias. Large extensions of the Orinoquia are not used, and thousands of hectares destined to cattle raising could be used to produce food. A rural development strategy should incorporate more investment, roads and technology in rural areas; land titles and ownership; joint and associative investment projects; solid and clear "rules of the game" and an investment plan for the altillanura and for new agricultural areas in the country. On the other hand, Colombia's agriculture can no longer remain isolated from international competition and from major global technology trends.

The Government has abandoned the rural areas during decades. Public expenditure in agriculture oscillates between 1.5% & 2% of the total – much lower than the participation of agriculture in GDP (close to 6% today, with higher figures in the past). More than 90% of expenditure is allocated to direct subsidies and only 10% to public goods (90% in Costa Rica, Nicaragua, Uruguay or Brazil) adversely affecting long-term productivity. Expenditure in science and technology in the sector is proportionally much lower than in other Latin American countries. The poor dynamics in production and exports, as well as low public expenditure produce very large levels of poverty in the rural areas.[8] The recently created Rural Mission will consider all these topics and the results will be published in mid-2015.

As mentioned in the Introduction, Colombian coffee exports represented close to 15.5% of the international market early in the eighties, 18% early in the nineties (at International Coffee Agreement failure), and less than 10% in 2013. The country would be exporting today about 25 million bags if it had maintained its share of the early nineties. Coffee exports represented 54% of our total exports in 1971-73, 60% in 1980, and merely 5% in recent years. It only represents today close to 0.9% of the GDP (3% in the early eighties), 6% of the agriculture GDP (25% in 1980), and 2.8% of the formal workforce. The level of production reached in 2012/13, close to 10 million bags, is much lower than the average in 1990-1992 (15.6 million) or than the peak of 18.1 million reached in 1991/92 (12 million in 1980).

The coffee sector is much more export-oriented than any other sector in the economy (90% of production is sold abroad), it is very labor intensive (like the rest of the agriculture, but more than other sub-sectors of the economy), and has a large participation of wages in the value added. Other agriculture sectors are also labor intensive but they use more imported inputs than coffee does and hence, do not suffer such an adverse impact by a revaluation of the exchange rate. Coffee production stands out among the products that help avoiding extreme poverty, in part thanks to the action of the coffee institutions. However, as we will see below, the quality of life of the coffee population does not seem to exceed today that of the rest of the agriculture.

The 2002 Mission correctly indicated that coffee presents other important differences, related to what they called social capital. We are dealing with a sector that has a great sense of collective work, with deep attachment to family values, land ownership transmitted through generations, and an embedded feeling for social organization. These same coffee characteristics and the availability of *social capital* have largely avoided violence and displacement in the coffee farming areas.[9] Some of these characteristics could be less noticeable now than in the past, in part because of the scarce resources available. Attachment to land could also be lower since large areas previously dedicated to coffee belong today to housing developments and the

[8] See: Junguito, Perfetti y Becerra (2014).

[9] See: Ibáñez, Muñoz y Verwimp (2013) & Dube y Vargas (2012).

youngsters have migrated to other activities in and out of the country.[10] Finally, as shown below, the quality of life in the coffee areas is relatively similar to non-coffee areas.

Coffee has a large multiplier. Cano, Vallejo y Caicedo (2012), for instance show that a 10% increase in labor income in coffee areas will increase GDP 43 base points, similar to the effect produced by a 10% increase in the wages of the *rest of the agriculture sector.* GDP will only increase 4 base points if the same adjustment is applied to workers in the oil sector. As stated by these authors "there is no other product which pulls GDP as strongly as coffee. Coffee production reduces poverty and distributes income among the rural population."

The international participation of differentiated coffee products, the lessons reached by highly decentralized models like Brazil, and the strength shown by the regional coffee institutions in Colombia suggest that coffee in Colombia will be produced by strong regions. The Technical Secretariat proposes to maintain the coffee contribution in six USD cents (US$0.06) per pound, and thus maintain global resources destined to the coffee institutions, but strengthening even more the "regional" component. Resources are clearly insufficient today (see Section VII.B), and strong adjustments shall be required in other fronts, some of which are considered in this document.

It is important to strengthen the regional coffee institutions, re-focusing on competitiveness. A specific recommendation is to increase their autonomy and their participation in the national budget of the Colombian coffee institutions. Executive Directors should report to the regional committee and not to the Central Management in Bogotá. Finally, those regional resources should be concentrated on productivity through the provision of research and technical services to coffee farmers. Research must gather the concerns and specificities of each region and the extension service should largely respond to each Departmental Committee.

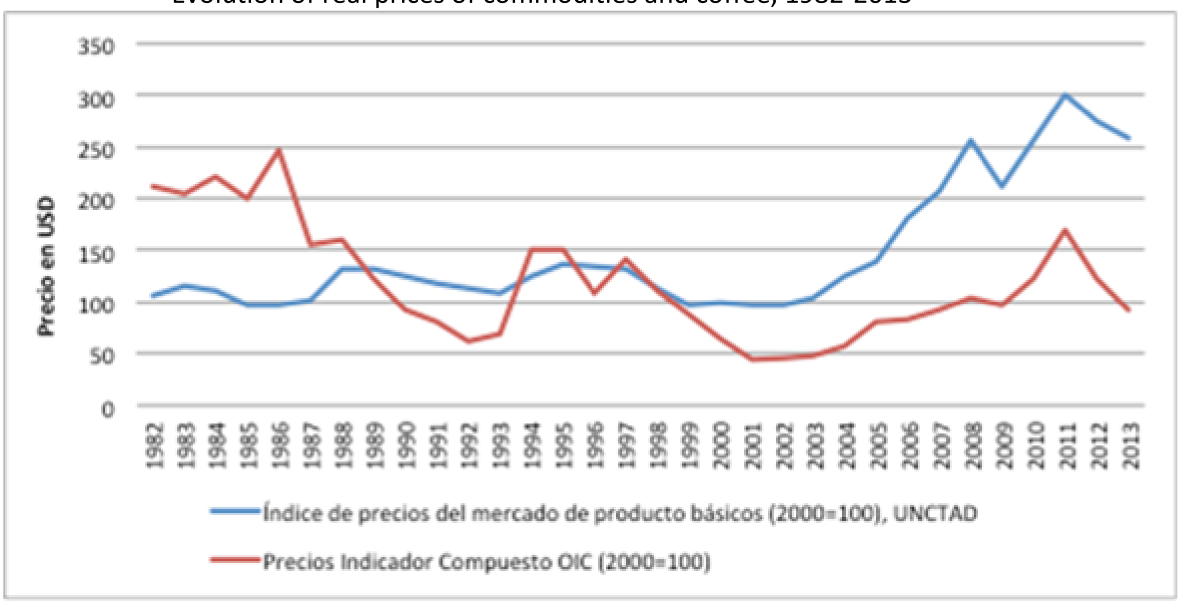
[10] In fact, several studies documented that in cities such as Pereira the population earlier devoted to coffee cultivation migrated massively from the country and the previous coffee families are now make a living out of the remittances received from abroad.

III. THE INTERNATIONAL ENVIRONMENT AND INTERNAL COFFEE CONSUMPTION[11]

We herein present in this chapter the main global market trends of commodities and coffee during the last twenty-five years. In both cases, you may observe strong dynamics and more volatility determined by the accelerated growth of the emerging countries; and, in the case of coffee, this is due to a greater freedom entailed by the dissolution of the Coffee Agreement and due to the surge of new products. It has not been easy for traditional coffee growers to respond to this new international reality. As mentioned, Colombia has been losing market share systematically since the nineties and the internal coffee consumption has remained stagnant in spite of the efforts and resources invested in different campaigns and programs promoting consumption. All this poses questions on the competitive strategy followed by the country in the last decades.

The relative importance of the basic products in the global trade has considerably increased recently going from 24% in 1995 to 33% in 2013. This phenomenon, led by fuels and energy products, has accelerated in recent years, partially due to the high relative price recorded since 2002 (Chart 1). While in 1995 fuel represented 40% of commodities exports and agriculture products 50%, in 2011 these ratios were 52% & 28%, respectively. On the other hand, from 1995 to 2002, the value of commodities exports grew 3% per year, and from 2003 to 2011, it went up to 19%. Expectations are that the downward trend in the general price of commodities, led by oil, will continue in 2014 however, coffee prices have recovered due to market inherent factors. Most analysts forecast high prices for commodities in the long term.

Chart 1
Evolution of real prices of commodities and coffee, 1982-2013



Source: ICO, World Bank, deflated by US GNP.

During the last twenty-five years, the global market coffee conditions have also changed significantly: the level and volatility of prices have increased; consumption of the Robusta variety has grown more than the Arabica; and a market of special coffees has consolidated representing today close to 20% of the global demand.

There is an increase in the level and volatility of the prices –as happening with the majority of commodities– explained by the lack of coordination in responding to supply and demand of this product. In consequence of the increasing demand of emerging countries in recent years, global coffee supply was not able to respond with celerity, inducing price increases. This increase, at the same time has encouraged the

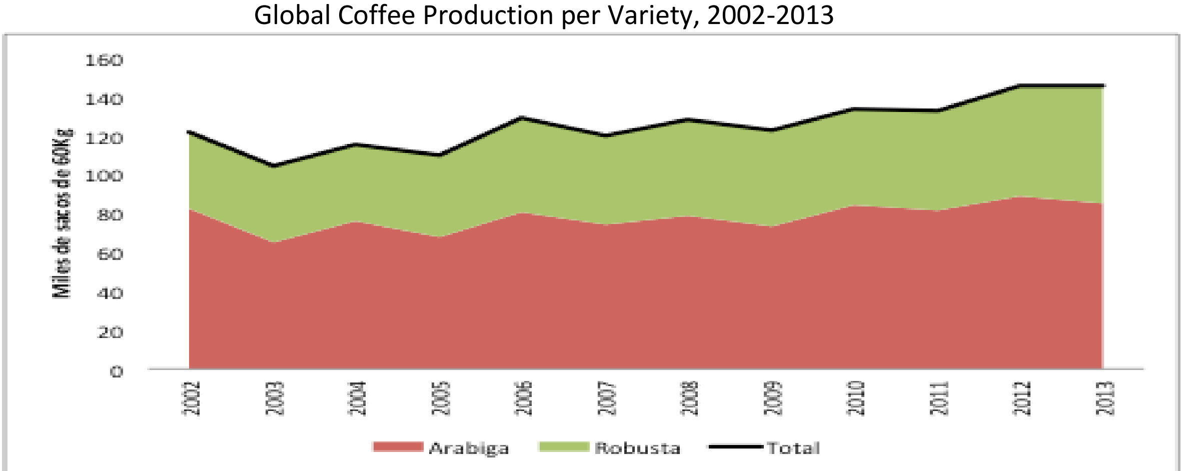
[11] Based on Esguerra y McAllister (2013).

entrance of new producers into the market, especially the low cost ones that again have resulted in price movements (reductions). Delays in production response and higher costs limiting the initial supply expansion are also a consequence resulting from the gradual displacement of coffee cultivation to marginal areas in producing countries and that labor costs have increased in the most traditionally producing countries; furthermore, climate change has been generating extreme climate variations more frequently seen day by day.

Price uncertainty has attracted coffee market speculators, magnifying even more the short-term variation of prices. This volatility also transferred to the price differentials among distinct types of coffee, producing a relative disconnection between the physical market, the *spot* market and the futures market. In consequence of this disconnection, the coffee business is now riskier, demanding the market participants to have a greater equity.

Robusta coffee production exhibited great dynamism during the last two decades and its global market share grew up to 41% in 2012/13 (Chart 2), with especially important increases in the Vietnam and Brazil productions. This is attributed to several factors. On the one hand, to a greater expansion of the emerging economies whose coffee consumption is not very sophisticated and demands lower quality coffee.[12] Secondly, several of these countries prefer consuming soluble coffee whose demand has doubled in the last twenty years. Thirdly, to the fact that the roasting company mixes supplying different markets have privileged the use of Robusta because of its price. Finally, global consumers now drink coffee outside their homes and the recent trend for coffee making is *espresso coffee* that largely uses more Robusta and more and more use of lower quality coffees than Colombian coffee.

Chart 2
Global Coffee Production per Variety, 2002-2013

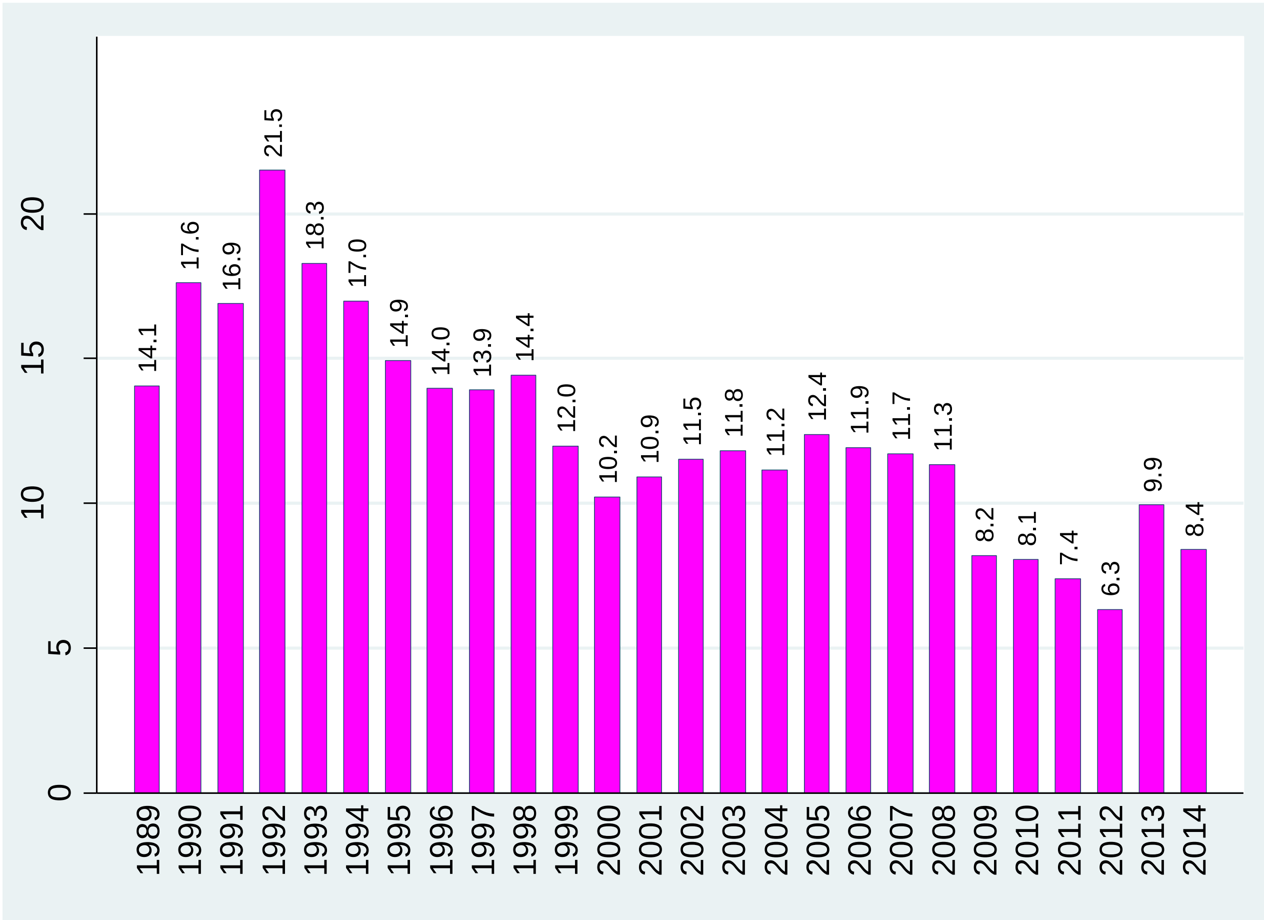


Source: ICO & US Agriculture Department

Chart 3 shows Colombia's share in global coffee exports in 60 kilograms bags. Its share decreased gradually in the nineties, from a maximum level of 21.5% in 1992, up to a mere 10.2% in 2000; it remained in average levels of 11.6% from 2001 to 2008, and decreased again, year by year from 2008 to 2012. The recovery in 2013 is important, but it has a level that is anyway below any year before 2008. Expectations are for a share close to 8.4% by 2014.

[12] In 1990, 63% of the coffee demand existed by the traditional markets and 51% in 2013.

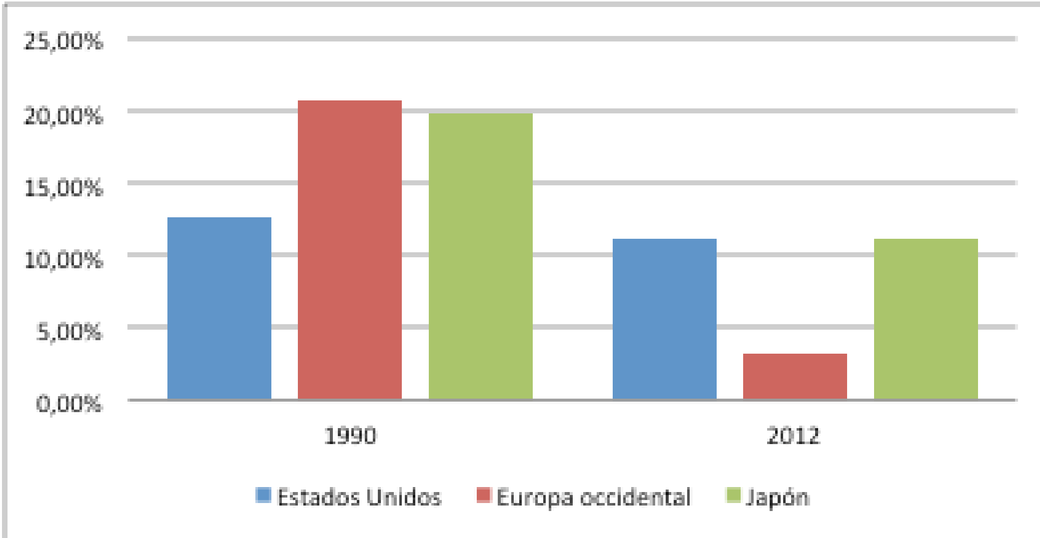
Chart 3
Colombia’s Global Coffee Market Share (%, Kgr)



Source: LMC & estimates by authors

As observed in Chart 4, during the last decades, Colombian mild coffee has been losing market share in the main consuming marketplaces. This has happened significantly in Europe, Japan, and in US also to a lower extent. This makes us ask once more if Colombia has acted with the due diligence and effectiveness that is required to adapt to the international coffee market changes, as done in other coffee producing countries.

Chart 4
Colombia's Market Share in the Value of Coffee Imports from US, Western Europe and Japan



Source: Our own estimates based on COMTRADE & Federación Nacional de Cafeteros

The segment of special coffees has gained more weighting in the global demand, in such a way that current estimates are that it represents 20% of the total consumption. This is simply an estimate because there are no statistics clearly differentiating special coffees from standard coffee. There are several types of special coffees: those based on their flavor and quality; those corresponding to voluntary certification standards (*VCS*); and those that have acquired *origin denominations and geographical indications*.

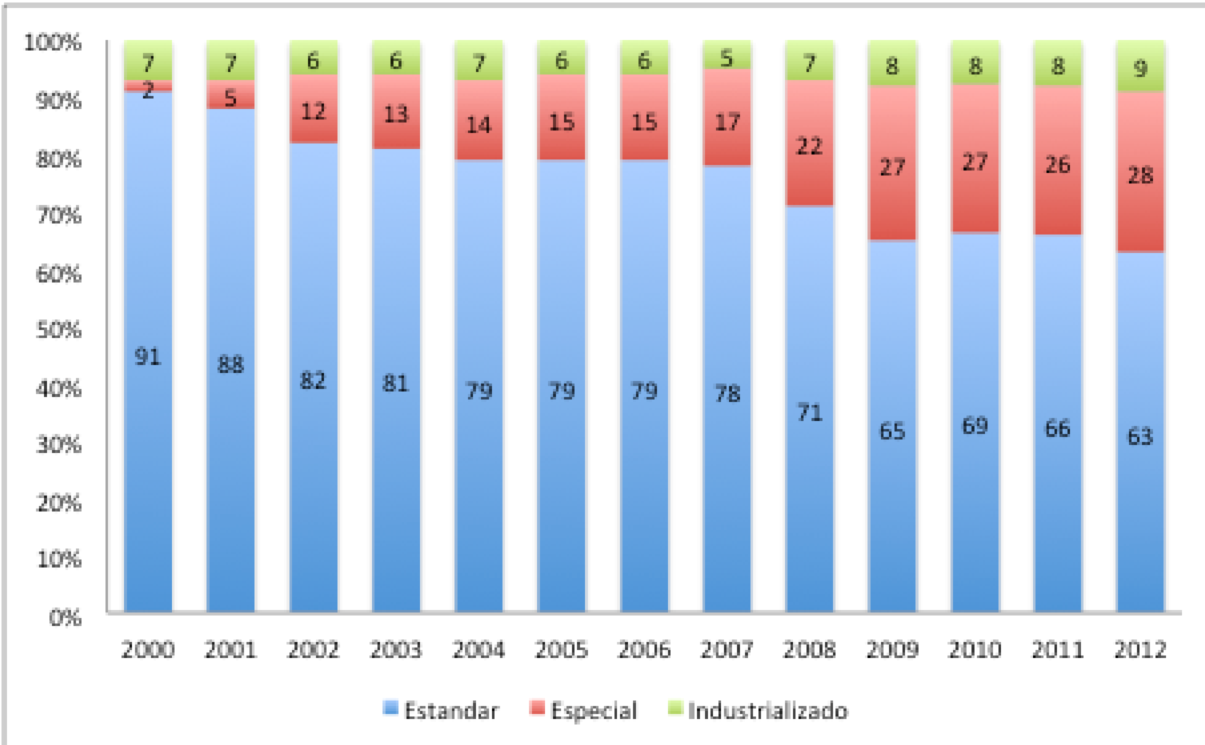
The 2002 Mission (Silva, et al., 2002) considered that Colombia's incursion into special coffees was late, but in the last fourteen years great progress has been made in this field. Special coffee sales represented close to 2% of sales abroad in 2000 today reaching 28% (Chart 5). These coffees can obtain important premiums in the international market over the base price, besides this, its medium-term cultivation has in many cases favorable effects on the environment and on coffee growers' life standards. Although they should not be the only ones, it is in this type of crops where the *Good Agricultural Practices* are largely being adopted; we will refer to such practices further ahead.

However, special coffee crops entail major costs, and therefore from a short-term perspective their production is not always profitable. Besides this, we must consider that many coffee growers have wanted to leverage on the higher prices that such coffees have in the international markets, but price premiums in some of these products have decreased. Although there are several types of seals (voluntary sustainability standards - *VSS*), their offer in Colombia and worldwide exceeds the demand. In consequence, cultivation of special coffees may be an important alternative for Colombia and their promotion should continue but it will not be the generalized model for all coffee cultivators to follow. Colombia will continue producing standard coffee and for many years, it will represent the major part of the country's production. As mentioned in the final section of this document, there is no single solution for coffee. Some producers will excel in special coffee production, while others will have to diversify the production in their farms, and for a large part, it will be necessary to elevate productivity and profitability.

The existing export quality regulation may however be constraining the growth of the special coffee segment. The rules in force -when promoting a homogenous production model- do not favor crops with diverse varieties, types of soils, ways of producing and processing; factors that may contribute to a greater product differentiation. It is not always about better quality coffee, sometimes consumers just want "different" coffees. A well-known example of this is the "Caracol" coffee that today receives a price premium in spite that in the past it was considered a low quality coffee; and, some of the most expensive *Nespresso* capsules are based on Robusta coffee.

On the other hand, Colombian coffee external sales - controlled through a customer registration process that is mandatory to report with FNC represents a barrier for the development of special coffees. Considering that in this type of differentiated coffees is where the information on the customer's characteristics is more valuable, and it needs protection, provided that, potential sales completion depend on this. Therefore, as mentioned repeatedly in this document, to boost the development of special coffees in the country all the standards promoting a single coffee cultivation model in Colombia should be relaxed, including the quality regulations on coffee exports and the elimination of the exporter registration.

Chart 5
Colombian Coffee Exports per Type



Source: Giovannucci (2013).

Many of the described trends could continue in the future, although the uncertainty is high. In the exercises conducted in the workshops with the Comites Departamentales de Cafeteros, together with the Comité Directivo and with private exporters, we considered the following factors, likely to increase production costs and volatility: global warming will remain, water will be scarce and coffee must be produced in higher altitudes above sea level (at least if the current minimum quality standards and regulation on exports are maintained). Greater climate volatility and more uncertainty on the impact of these changes are expected. Real wages will increase in Colombia and in other emerging countries, while labor availability decreases in traditional coffee areas, and international markets demand labor formalizations as a requirement to coffee exports. The price of land may also increase in the future.

Estimates are that in the mid-term, coffee demand shall continue increasing to rates even above the average 2% of the last twenty-five years; coffee experts have stated that the major challenge to be faced by the most important global roasting companies is knowing which countries will be supplying the 30 million additional bags of coffee required globally for the next ten years.[13] Current prices will encourage new players - Indonesia or China, among others – to supply the market more aggressively. At the same time, the demand

[13] It is likely that the recent dynamism of global coffee consumption will slow down somewhat in the next years, due to a slower economic growth of the emerging and developed countries.

for differentiated coffees will continue gaining ground; this is a possible scenario that Colombia will face in coming years, but the enormous uncertainty suggests that countries with relatively flexible policies will obtain better results.

Although that in such scenario it would be ideal to have an internal market as a safety blanket, national consumption has not grown significantly and is at a very low level. After several decades of decreasing[14], just in the last two years a slight recovery of the internal demand took place. From 2011 to 2013, the coffee demand in Colombia went from 1.2 to 1.5 million bags – below the Latin American average (1.8 million bags) and lower than countries like Brazil (20 million bags). Consumption growth from 2001 to 2013 has been lower in Colombia than in all the American countries and the per capita consumption continues being very low: while in our country the rates is 0.8 cups a day, in America it is 2.5 and in Brazil it is 4 cups.

In spite of the efforts exerted to promote this consumption, the role of the export quality regulatory policy was not up to now, incorporated in the analysis of the implemented strategies. The strict control on the quality of coffee leaving the country results in the coffee supply for internal consumption being of a low quality, allowing the local roasting industry to take over ample surpluses owned by producers in a free market. In other words, we have become used to consuming lower quality coffees and that is why it is not surprising that local consumers do not drink more coffee. Such policy has contributed to the consumption being unsophisticated and diversified. Besides this - in recent years, when an important decrease of national production was recorded – the import of Robusta coffees and low quality coffee from Peru and Ecuador substantially increased to supply this internal consumption (Leibovich y Llinás, 2013).

The Coffee Competitiveness Mission's Technical Secretariat considers that promoting internal coffee consumption must constitute one of the highest priorities of the coffee policy. If our country would have a per capita consumption like Brazil, the annual demand for Colombian coffee could increase in no less than 3 million bags.[15] Instead of supplying it with Robusta coffees from neighboring countries or with defective coffees and by-products of the bean selected for exports, a better quality consumption needs promoting. Furthermore, the current regulation impedes exports of certain types of coffees even with an external demand. Prohibition to export by-products has also important consequences in the income of producers because it punishes low quality coffee producers and subsidizes the local roasting industry. Studies completed by the Mission suggest that based on this concept, the loss of income for producers equals 60% of the coffee contribution.

IV.

[14] The level of consumption in the eighties and nineties is unknown because of consumption overstatement.

[15] Apart from increasing the demand for Colombian coffee in a not such a favorable international context, more internal coffee consumption would make the coffee producing sector less vulnerable to exchange rate and international price oscillations. See: González y Mahadeva (2014).

IV. COMPETITIVENESS & COSTS

In this chapter we compare productivity (per hectare coffee production) both in different countries and in the Colombian regions. Our evidence shows that production per hectare in Colombia grew from 1970 to 1990 with the introduction of Caturra, it was stagnant for twenty years from 1990 to 2008, and fell abruptly during the 2008-2010 crisis; the recent recovery has increased the indicator but we just achieved levels similar to those recorded in 2008. We also show that costs of production (in constant pesos) have decreased in the long term, but less than in the successful group of producing countries.

Colombia's poor record in the international markets was not due to the behavior of the real exchange rate - relatively similar to the other "successful" countries, but mainly to a lagging productivity resulting in higher relative production costs. Wage participation in total costs was relatively similar in Colombia and the other "successful" countries, with no observable trend in that variable, but real wages are higher in Latin America than in Asia or Africa, and have increased recently (also in Asia). Finally, we show that the Colombian coffee premium was so high in 2006-2011 that the profitability obtained by our coffee growers was higher than in other 34 coffee producing countries. But production reacted poorly.

We also measured productivity and conducted cost surveys in more than 1000 plots across different Colombian regions (Departamentos). We report productivity and production costs for each Departamento and for the whole country, both inputting and not inputting wages (the case of small farmers). We also reported variable production costs, giving us an indication on the price level needed to maintain cultivation in the short run.

IV.A. INTERNATIONAL EVIDENCE

Chart 6 presents the evolution of production per hectare in Colombia using different sources and measures. For 1970-2014 (value for 2014 is just approximate) we show the relation between the total volume and the total area reported each year by the FNC, based on the Sistema de Información Cafetera (SICA, Coffee information system). The chart also reports, since 2000, the relation between total production and "productive area" (i.e. with coffee plants exceeding two years). Finally, for 1985/86 – 2011/12 we show productivity reported by LMC. We are aware of the level of production so the difference between the two sources most likely relates to the reported area.

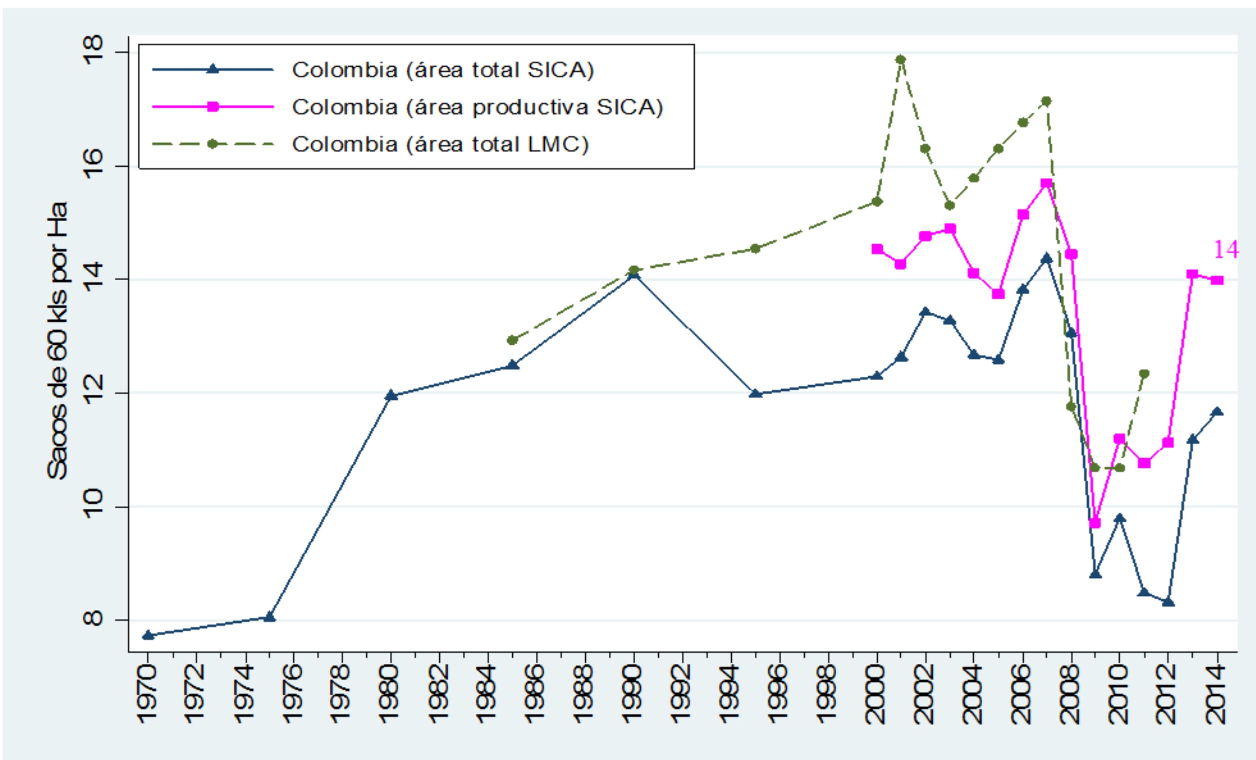
As mentioned before, productivity levels based on SICA area practically doubled in Colombia from 1970 (7.7 bags per hectare) to 1990 (14.1 bags), an exponential annual rate of 3.3%, thanks to the introduction of C*aturra*. But it remained stagnant from 1990 to 2008 and fell dramatically from 2008 to 2012. The recovery in 2013 and 2014 was significant, but productivity levels were still behind those reached in 2007. The trend in the last years is less worrisome when considering "productive" area, which started recovering earlier (since 2009), although the level observed in 2014 does not exceed that of 2007. SICA is in our opinion the best source but the chart also reports productivity reported by LMC (2013). Yields are very similar for both sources in 1985 and 1990, but LMC suggest an important rise between 1990 and 2007; the 17.1 bags per hectare reported for this last year is higher than 12.3 bags (total area) or 14.5 (productive area) reported from SICA. Anyway, we will see below that growth was much less dynamic in Colombia than in the other "successful countries."

Chart 7 shows the evolution of productivity per hectare for 1990/91 - 2011-13 in several "successful" countries and in Colombia. Average exponential growth is reported in each case, based on a semi-logarithmic regression for 1990/91 – 2007/08 and 1990/91 – 2011/13. The left panel shows that during the first period Brazil (arabica) and Vietnam (robusta) increased productivity at an exponential rate of 5% - 6% per year, while productivity barely grew in Colombia. In 1990-2013 productivity fell 13% in Colombia (using the first and last year) while it grew 280% in robusta in Vietnam, 185% in arabica in Brazil, 142% in Nicaragua and 85% in Honduras.[21]

According to the LMC, Colombia produced 14.2 bags per hectare in 1990, more than Vietnam (11.1 bags) or Brazil (7.7 bags), but productivity in 2006/07 - 2007/08 (in average) was 36.6 bags in Vietnam, 20.4 bags in Brazil and just 17 bags in Colombia. Differences were even larger at the end of the period: Vietnam and Brazil increased productivity, but it fell dramatically in Colombia. The average for 2010/11 & 2011/13 was 39.3 bags in Vietnam, 24 bags in Brazil and only 11.5 bags in Colombia. The chart on the right brings information for Peru (since 2007), Honduras & Nicaragua. Nothing similar to Vietnam or Brazil took place in those countries, but they did much better than Colombia anyhow (both in 1990/91 – 1997/98 and in 1990/91 – 2011/13).[22]

Productivity has increased in Colombia recently, due to the impact of high prices in the previous years, and to the influence of PSF (Permanence, Sustainability and Future), a program led by the FNC and by the government, which induced important renovation of more than 182 thousand hectares since 2007. The impact of this program was very positive: it decreased average age of the coffee plants/crops in 5.7 years and increased 40% technified areas, concentrated mainly on small producers (Silva, 2012).

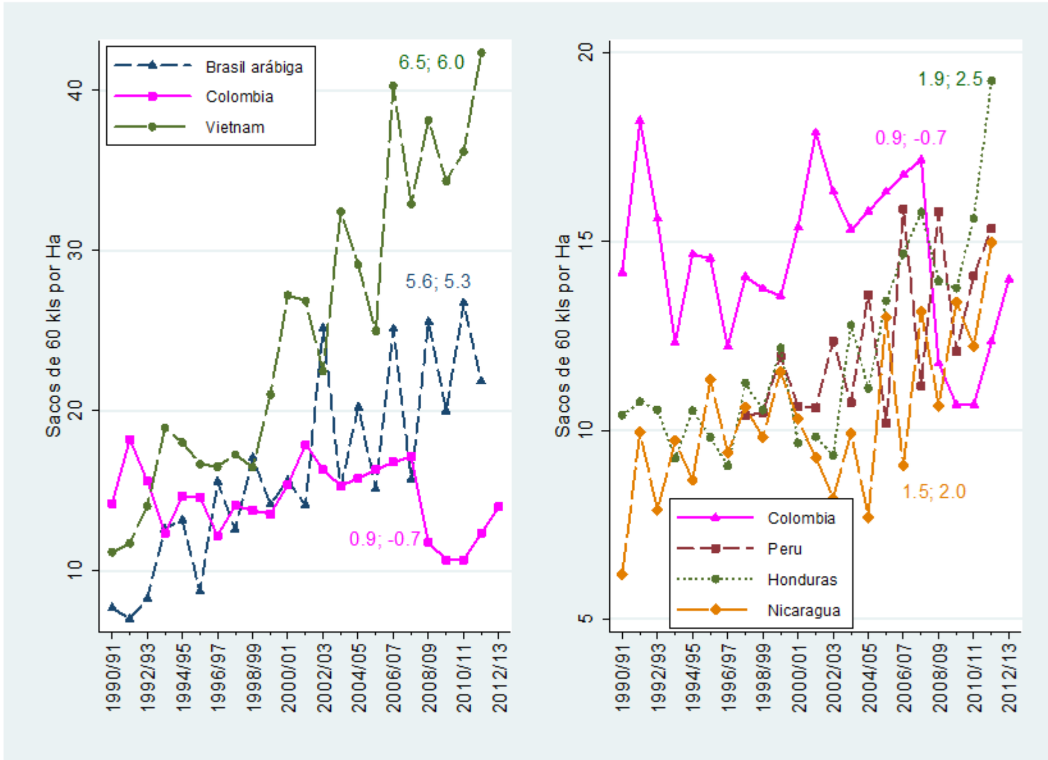
Chart 6
Production per Hectare in Colombia



[21] During 2000-2013 per hectare production fell 20% in Colombia, and grew 99% in Honduras, 56% in Vietnam, and somewhat over 40% in Arabica in Brazil, Nicaragua & Peru.

[22] The yield in 2011/12 was 19 (60kg bags) per hectare in Honduras, 15 bags in Peru & Nicaragua, and 12 bags in Colombia. Although lacking recent information on the productivity for these countries, these productivity levels are above the 14 bags that appeared in 2014 for Colombia from the Federation's source – SICA. In other words, the history extracted from the chart in what refers to hectare production does not change when including 2013/14.

Chart 7
Production per Hectare



Source: LMC (2013) and estimates by authors. Reported numbers correspond to the exponential annual growth rates in these periods: 1990/91 – 2007/08, & 1990/91 – 2012/13.

Chart 8 presents the evolution of production costs per coffee "carga" (125 kg approx.) in different countries, all in constant 2012 Colombian pesos. For Arabica and for Robusta's costs in 1987/88–1992/93 and 2007/08–2011/13. The values shown in the chart correspond to the exponential growth rates for 1987 – 2008 and 1987 – 2013. Costs decreased in all the countries included in the chart (except for arabica in Brazil), decreasing more than in Colombia. Production costs for Colombia in 2011/12 ($585,402 pesos) were much higher than for robusta in Vietnam ($ 232,151) and Brazil ($256,576), and for arabica in Honduras ($420,386), Peru ($451,355), Nicaragua ($472,641) and Brazil ($503,415).

Chart 8

Production Costs in Diffe

rent Countries

Source: LMC (2013) and Echavarría y Montoya (2013). The reported numbers correspond to exponential annual growth rates in the periods: 1990/91 – 2007/08, and 1990/91 – 2012/13.

IV.B. EVIDENCE FROM THE COLOMBIAN REGIONS

Our analysis of productivity, costs and profitability in different Colombian region started with the work carried out annually by FNC in order to get harvest projections. Coffee production is estimated in more than 1000 farms based on the cherry weight methodology suggested by Arcila and Chaves (1992), and costs and prices were calculated based on a survey conducted in those same farms in June 2013.[23] We used the accrual accounting methodology, with cost recognition at the time of accrual, regardless of the date of payment made or received. Our methodology allows a sensitivity analysis with alternative wages and input prices.

Echavarría y Montoya (2013) found a national median of 15.7 (60kg) bags per hectare, with 23 bags in Nariño, the department with the highest productivity in the country. Additionally, we show in Chart 9 a median cost of $ 554,452 per "carga." The six departments with lower production costs are Nariño ($426,500, with rounded figures), Magdalena, Cauca, Valle, Huila and Cesar ($505,000); while these are the six departments with higher cost: Caquetá ($699,000), Boyacá, Norte de Santander, Meta, Risaralda and Caldas ($601,000). The departments with higher production costs are also the most productive, with a range

[23] See Echavarría y Montoya (2013).

correlation coefficient of 0.93; this suggests that in order to increase productivity it is necessary to incur in higher costs per hectare. (Echavarría y Montoya, 2013). Results do not change significantly when using wages and coffee collection prices from the ITEC (Indicadores Técnico-Económicos, “technical-economic indicators” available at the Federación) instead of those available in the poll.

The available information allows responding the question regarding which would be the production costs per department without inputting wages for small farms (i.e. those with less than 2.5 or with 5 hectares) simply because the head of the family does not pay salaries to its members. The resulting median is now $ 446,000 (2.5 hectares) or $ 440,000 (5 hectares) respectively, with a large heterogeneity per department.

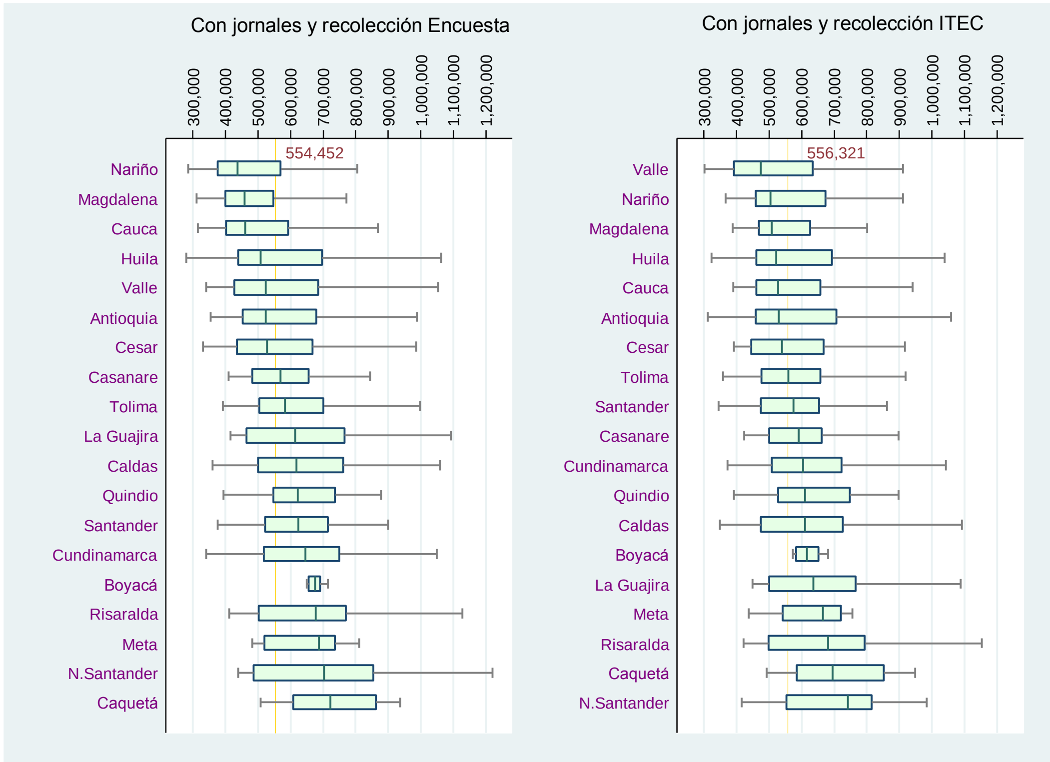
Under the assumption of an exchange rate equal to ColPs2,100 per dollar, the above results indicate that Colombian coffee may compete in the long term if NY price is US$ 1.43/lb. (US$1.13/lb. in Nariño – the most competitive department) when inputting “normal” wages; and, if the NY price is US$1.18 it may compete without inputting “normal” wages for small farms; (US$1.07/lb. in El Valle). Obviously, those US prices will be lower when the exchange rate is higher.[24]

The Technical Secretariat proposes to follow Brazil, creating a minimum price mechanism defined in terms of variable costs (significantly differing from the ‘garantia de compra’ operating in Colombia).[25] The government intervened coffee prices in Brazil when they fell below variable costs, with just few interventions along time. Our calculations suggest that variable costs in Colombia were close to $307,500 per carga in 2013 (equivalent to a NY price of US$ 0.86/lb. if the exchange rate is $ 2,100; and $ 0.75 if it is $ 2,500). The use of variable costs makes sense because they show the level at which the farmer will abandon production in the short run. Obviously, prices must cover total costs in the long run.

[24] For an exchange rate of $ 2,500 per dollar, the above results indicate that Colombia may compete in the long term if the NY Price is US$ 1.22/lb. (US$ 0.98/lb. In Nariño, the most competitive department) when inputting “normal” wages; and if the NY Price is US$ 1.02 it could compete without inputting “normal” wages of small farmers.

[25] Lora (2013) warns however that just a few countries in the world guarantee minimum coffee purchase prices. The author states in addition that these have not precisely been the most successful in the global coffee market.

Chart 9
Total Production Cost per Coffee Load/Carga (Carga = 125 kg) ($)



Source: Echavarría y Montoya (2013)

It is never easy to suggest concrete measures to increase productivity in Colombia, but friendly institutions towards technical change and innovation, competition among regions, and specialization of Cenicafé and the Extension Service (Servicio de Extensión) in the study and implementation of cost reductions and productivity, should help. We should also promote producer associations less focused on trading coffee, more oriented towards efficient, cost reductions and the provision of insurances and derivatives should help as well. The excellent work carried out by Robledo y Von Heimann (2014) also brings some concrete recommendations on how to reduce costs, especially in small farms in medium altitudes. They show that reducing production costs by as much as 50% is possible, by increasing productivity, with greater efficiency in the harvest, and through the development of community bean-processing facilities (beneficiaderos comunes).

Other alternatives are still to be explored. During our visits to the coffee regions, we discussed the possibility of a 5-year experiment where an ample group of producers (i.e. 2000 farms countrywide) voluntarily commit to adopting those practices recommended by Cenicafé and the extension service. Annual results (productivity, costs and profitability) will be published every year. The package would include a production insurance to guarantee the level of income obtained at the beginning of the experiment.

Finally, it is important to develop in Colombia some schemes like Conab and Educampo in Brazil. Conab calculates, discusses with the communities and publishes production costs in all types of agricultural products; Educampo works with user groups that share information and pay the entity for taking the low yield and high cost producers to the frontier (De Lima, 2013).

V. COFFEE SOCIAL ENVIRONMENT

In this chapter, we analyze the evolution of some poverty indicators in the coffee growing areas and among coffee producers; we compare them with those of other areas in the country and other sectors to show the convergence process recorded in the last decades. Our intention is not to state that coffee does not continue representing a way of life for many poor country folk in Colombia, because this continues being true. What we pretend to show is that the coffee population has become more vulnerable in the volatile ambiance in which it must perform, because its members are poor, they have aged, they have few years of education and move around in a predominantly informal labor market.

This is due to several factors, included in which we highlight the loss of coffee profitability due to its price and per hectare deterioration and a lower institutional action both by the FNC and the government. At the same time, the Colombian government has started doing a better job in non-coffee areas. Thanks to this, the differences existing in the past between the coffee growing areas and the rest of the country have practically disappeared.

In this new and more precarious social ambiance of coffee cultivation, the policies to improve the population's quality of life must be an exclusive responsibility of the Government and must approach it from a cross-section perspective of agriculture. The association on the other hand must focus on improving coffee competitiveness and profitability, because this is the only way to ensure sustainability for the country folk making a living out of this crop.

Historically the Colombian coffee regions were a synonymous of prosperity and well-being, and those who were dedicated to growing coffee achieved clearly higher quality of life standards than other areas in the country. Therefore, it was considered that coffee was sort of a social, cultural, institutional and political mesh that was an example for other local economic sectors (Silva, et al., 2002), defining it as a sector with high *social capital.* However, since the International Coffee Agreement rupture the sector's relative social situation seems to have stopped progressing and has even deteriorated in some indicators. Several studies completed in the nineties showed certain deterioration of the social situation in coffee growing areas and mention this convergence with other zones, in indicators such as informality, homelessness and school desertion. In spite of the deterioration, the situation in 2001 seemed to be better anyway than in the rest of the country: 61% of the population was poor in the coffee zones and 83% in the non-coffee areas. Other studies completed during this century's first decade also showed this convergence process. A survey completed by the Centro de Estudios Regionales Cafeteros y Empresariales (CRECE) in 2005[26] found for instance that only four coffee growing departments: Quindío, Valle, Risaralda & Caldas, exceeded the quality of life rate issued by the Departamento Administrativo Nacional de Estadísticas (DANE) (statistics management department) of the rural sector altogether.

Differences between coffee and non-coffee regions have reduced and it is partially because many of the indicators improved significantly in that period in the non-coffee areas, and partially because coffee cultivation moved towards the poorest zones, south of the country. As indicated by Sarmiento (2013): "The traditional attractiveness of the coffee zones due to their access to some social services offered previously by the coffee institutionalism has been matched by the State's offer especially in health care assurance and utilities. The life conditions in the "traditional coffee" zones are due to accrued infrastructure in highways, housing and utilities with support from the coffee institutionalism."

Chart 10 shows the percentage of persons in a poverty situation in the coffee and non-coffee zones, and in other capitals and metropolitan areas. These results that - must be considered preliminary – because they are based on "representative" samples must be validated based on information coming from the new

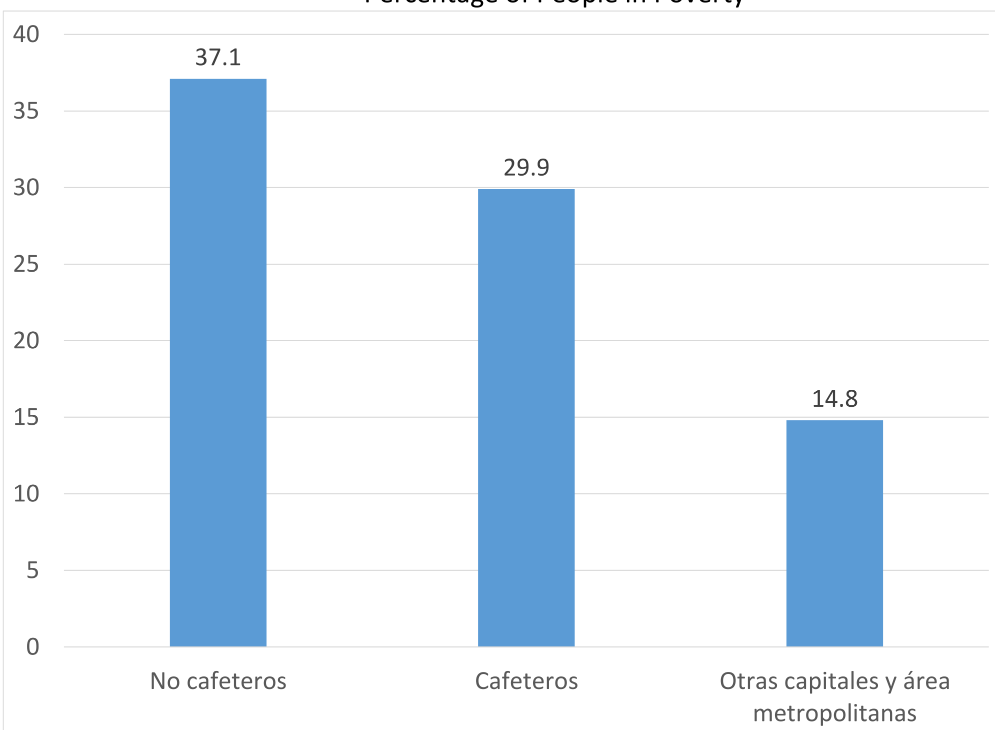
[26] See Crece (2005).

agriculture Census whose results will be known in July 2015. We considered municipalities having a Municipal Committee as the 'coffee municipalities.'[27]

The percentage of people in poverty conditions is much higher in non-coffee agricultural areas (37.1%) than in the coffee areas (29.9%), but it is much higher in both areas than in other capital cities and metropolitan areas (14.8%). However, García y Sandoval (2013) combined, in their work for the Mission, information obtained from the Sistema de Información Cafetera (SICA) with information from the "Sistema de Identificación de Potenciales Beneficiarios de Programas Sociales (Sisbén)": (the ID system for potential social program beneficiaries). They also show that from 2007-2013, 70.2% of the country's coffee farmers could be classified as paupers, defining this category of coffee producers ranking in the Sisbén socio-economic classes 1 and 2.

These percentages are much higher in the southern regions (94% in Tolima, Huila, Nariño & Cauca) and marginal regions (91%, Chart 11).

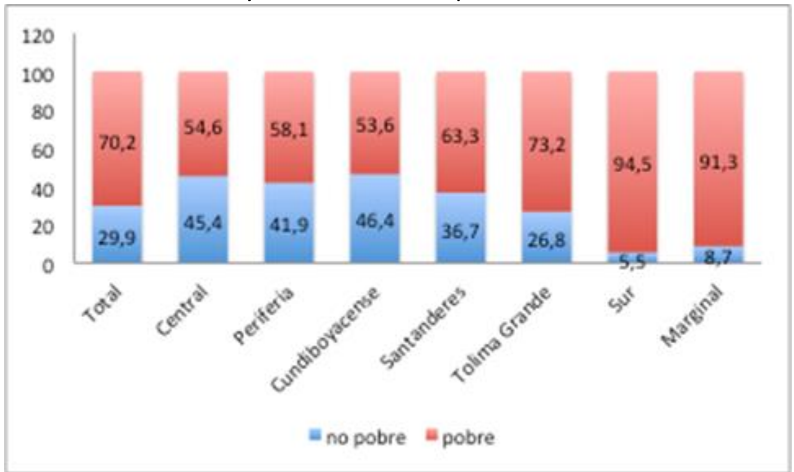
Chart 10
Percentage of People in Poverty



Source: Echavarría, Esguerra, y Perfetti (2014) based on DANE's Quality of Life Survey.

[27] Information for "coffee" is based on the coffee municipalities (i.e. with a Municipal Committee) that appeared in DANE's Quality of Life Poll in 2013, excluding those municipalities with department capitals.

Chart 11
Incidence of Poverty in the Coffee Population 2007-2013



Source: García y Sandoval (2013)

Chart 12 presents the coverage of utilities in the overall coffee and non-coffee areas, and in their components (municipal coffee centers and non-centers). In general, the mentioned convergence process is confirmed in magnitudes very similar for the different utilities to which the communities have access. Coverage of water supply is a bit higher in the total coffee areas than in the non-coffee areas; and somewhat higher in water supply and sewage service in municipal coffee centers than in non-coffee centers. The values for the "rest" - i.e. other than municipal centers – are much lower than in the two former charts, with greater coverage in garbage collection, water supply and sewage system in the rest of the coffee than in the non-coffee areas.

Chart 12
Utilities Coverage in Coffee and Non-Coffee Zones in 2013

Source: Echavarría, Esguerra y Perfetti (2014) based on DANE's Quality of Life Poll.

On the other hand, Sarmiento (2013), based on the 2012 Household Poll shows that the level of schooling is low in the coffee population (4.5 years) and , in average, much lower than in the rest of the economy (6 years). Echavarría, Esguerra y Perfetti (2014) show that the literacy (15+) population percentage in 2013, is 91.9% in the overall coffee zones and 91.3% in the overall non-coffee zones; besides this it is slightly lower in the coffee centers (94.1%) than in the non-coffee centers (94.2%), and higher in the rest of the coffee areas (89.3%) than in the non-coffee areas (87.1%).

With respect to social security, Sarmiento (2013) finds that the coverage in the coffee sector is high in health care and very low in pensions. According to Echavarría, Esguerra y Perfetti (2014) in 2013, 85.8% of the overall coffee population was not affiliated to the social security system in 2013, a lower percentage than in the total non-coffee population (92.8%). At the same time, regarding affiliates: 69% were in the subsidized regime in 2013 in the total coffee growing population (this percentage is slightly lower, 67.4%, in the non-coffee overall). This means that most coffee workers receive health care support due to belonging to Sisbén (government-subsidized system rather than the coffee contribution system). In addition, most workers lack a written labor contract.

On the other hand, only 2% of coffee workers were affiliated to pensions in 2012, the lowest ratio of all the economic sectors because in other agricultural crops this figure was 11.5%, and in the industry and in services it was above 35%. Therefore, we may state that in this sector informality prevails resulting in a low quality of life for the coffee workers and perhaps contributing to an entry barrier into international markets.

Based on another source: Household Poll from 2005 to 2013, Sarmiento (2013) indicates elements of the current coffee labor market situation complementing the description of the mentioned convergence process. Thus, in the group of wage-receiving workers they just receive today around 70% of the minimum wage when in 1995 they received 6% above the minimum.[28] Based on a multi-varied analysis the author finds that coffee growers receive the lowest income in the labor market. After controlling for socio-economic type factors, the coffee workers' income turns out to be 11.9% lower than the income of workers in the service sector, 11.9% lower than industry workers, and 21% lower than agriculture workers. In general, income is much lower in the coffee sectors of: Nariño, Cauca, Boyacá, Huila, Caldas, Tolima, Norte de Santander, Magdalena, Cesar & Guajira.[29]

The convergence process may result from several phenomena, we mention some above. Firstly, lower coffee profitability in consequence of a low productivity and recent price deterioration (at least with respect to 2011); secondly, the displacement of coffee cultivation towards departments located in the southern part of the country characterized by a higher poverty incidence[30]; thirdly, the strong migration of young people to cities increasing the average age of coffee growers and decreasing the number of years in education; and fourthly, the reigning labor informality.

Besides this, coffee is a small producer activity in which those owning less than 1.5 hectares represent 95% of the coffee growers. This percentage has increased recently, among other things, due to the mentioned displacement of coffee cultivation to the south. In the new coffee zones very small producers prevail some of whom recently began this activity. For a large number of these small farmers, coffee represents a way of making a living and, as shown by García y Sandoval (2013), they have found in this crop a productive alternative giving them enough income to survive, although not to overcome poverty. For these producers to become micro-entrepreneurs and to overcome the poverty trap, they need to improve their competitiveness.

Recent evidence also indicates that these producers are those most recently beginning the coffee activity, attracted by price recovery from 2009/2011 and due to the likelihood of accessing subsidies such as the PIC payment. However, without competitive improvements this population is very vulnerable and is in ongoing risk of leaving the coffee activity if not even slightly profitable. For this same reason, their sustainability is at risk. Unfortunately, according to these same authors, productive programs that may help them in this endeavor do not reach them as required. In fact, according to their calculations almost half of the country's coffee producers do not receive any assistance from the FNC programs, through its Extension Service and even less if they are located in the country's southern departments because this assistance is concentrated in the former Coffee Growing area called: Eje Cafetero. Furthermore, many of these producers form part of the more than 150,000 that did not even receive the PIC subsidy.

[28] See Clavijo y Rivera (1995) y Sarmiento (2013).

[29] See: Robledo y Von Heimann (2014). The authors compare annual income of a coffee collector (US$ 2,860/year), an informal agriculture worker (US$ 3,000 – 3,350), a textile worker (US$ 3,600), a truck driver (US$ 4,900), and a bank employee (US$ 6,300). The minimum salary at that time was US$ 3,950.

[30] Perhaps the labor costs in these zones are also lower and that is why the production has migrated to these areas

The above sets forth some questions about FNC-FoNC, regarding its role of distributing coffee contribution resources –and of the PIC subsidy resources– in the way of assistance programs to producers. This contribution resource redistribution is partly achieved through the coffee extension service: Servicio de Extensión Cafetera, a very important program –perhaps unique in Colombia and worldwide–, whose results need to be improved because it does not benefit with sufficient force the poorest producers; those who most require so. It also has clear regional biases against the new producing regions. In addition, these support efforts must mainly focus on improving crop profitability, something that has not occurred as shown by the mentioned indicators of former sections. On the other hand, channeling PIC subsidy through FNC also had clear biases against the poorest producers, as we will show further ahead.

Therefore, the poorest small coffee farmers are now in the worst situation: it does not receive sufficiently the coffee institutionalism support and is not a beneficiary of the other support provided by the Nation that many years ago left this responsibility in the hands of FNC-FoNC. But, these two entities distribute in a biased way and cannot today grant public assets to the coffee growing areas because they have less resources. That is why the lack of a better institutional action both of *FNC-FoNC* and of the Nation has contributed to the poverty situation in the coffee growing areas.

Based on the above, it may be concluded that for the coffee's *Social Capital* not to continue in deterioration, actions are required in several fields. The first and most urgent is the need for more clarity in the distribution of functions between the Government and the association. Eradicating poverty and improving social and welfare indicators in the coffee sector, investing in roads, schools and hospitals must not be one of the association's tasks. Besides this, on account of no longer having the resources to do so, its responsibility must focus on improving productivity and profitability of the crop with emphasis on small coffee farmers. Its role on the quality of life of the coffee growing areas must be an indirect one, resulting from the revenues and prosperity that shall come with a greater competitiveness in coffee zones. On the other hand, the war against poverty and investments in infrastructure and services are tasks under the Government`s obligation and of the public utilities and companies in charge of these aspects.

Of course, challenges are enormous: there is a need to achieve more labor formalization, improving coverage of social protection of a very aged population and advancing in equipping with better infrastructure these zones in the country. Furthermore, given the similarities of social problems in this sector with those of other agriculture and cattle ranching sectors, the solutions must be approached in the context of agriculture overall. As opposed to the past, the Colombian State has conducted important work recently to increase coverage of utilities and expand education and health care.

VI. COFFEE & THE ENVIRONMENT[31]

Competitiveness of Colombian coffee could be endangered if the threshold of the natural ecosystems are trespassed, because they generate the environmental goods and services required for coffee production, such as water supply and soil in sufficient quality and quantity, and other services as pollination and pest control, provided by biodiversity. The greater the degradation of soil, water resources and biodiversity, the greater is the risk of losing soil productivity, lacking hydric supply and reducing environmental services. Degradation of the environment increases crop vulnerability to climate changes.

It is then important to consider sustainability criteria throughout the coffee value chain in order to increase resistance to climate change and maintain coffee competitiveness. It will not be possible to produce coffee in the future without good land, without a proper management of the hydric resource and without a good use of the ecosystem services. In summary, social and economic sustainability of coffee cultivation is directly related to environmental sustainability.

The connecting thread must be the scheme of the *good agricultural practices* (BPA, for its acronym in Spanish) that needs implementation. This concept is recognized internationally because it promotes the integral management of pests and diseases. The rational use of fertilizers and of practices for soil conservation and natural coverage, and the rational use of the hydric resource, among other things, shall guarantee a supply of environmental goods and services, such as soil, water and biodiversity. That way we could maintain production and profitability, and access to markets in the long term, while generating greater crop resistance to climate change.

The concept of BPA incorporates environmental and social sustainability in the entire coffee value chain:

- Production process: election of coffee varieties, soil and water management, use of fertilizers and phytosanitary (plant protection) products.
- Post-harvest gathering and management: reducing and recycling waste to avoid both the impacts on coffee and on workers manipulating waste and the contamination of water sources.
- Health care and labor security: gathering, treating and drying in optimum hygiene and healthy conditions.
- Proper management of the coffee region ecosystems: to achieve better quality and quantity of ecosystem services that may benefit coffee productivity. It may include preservation and reforestation programs; integral water resource and soil management; management of shadowing trees preferably with native species, for erosion control; filter for agro-chemicals and biological control, and the use of renewable energy to decrease the use of wood coming from natural forests for power production.

Investing in decreasing coffee vulnerability in Colombia in the presence of climate change, through schemes such as BPA, may give us a competitive advantage in relation to other players like Nicaragua, Honduras or Peru, also affected by climate change, which could be less prepared in terms of offering ecosystem goods and services in sufficient quality and quantity (soil, water, biodiversity). All this is relevant if we consider that in 2013 only 17.7% of the coffee growing area in the world was in "non-erodible" lands and that 77% of the expansion from 2010 to 2013 is now located in erodible areas; on the other hand, 33% of all the agriculture land in the world is moderately or severely degraded and this figure tends to increase annually according to the UN Food & Agriculture Organization – FAO. Therefore, we may say that countries investing in the reduction of their vulnerability to climate change could be better prepared to face extreme climate events and may even benefit from better prices.

[31] Based on Wildlife Conservation Society (2014).

The great environmental challenge faced by Colombia is, therefore, how to incorporate BPA practices for small, medium and large coffee producers in a timely, efficient and effective way, so they may have a positive impact on the soil, water, crops, coffee-grower health, coffee production costs and competitiveness. For this it is necessary to strengthen Cenicafé and other entities such as the extension service (Servicios de Extensión), so they may guarantee effective implementation of the strategies derived from new knowledge generated.

Cenicafé has been leading important initiatives in topics associated to climate change, biodiversity and availability of land and water. However, available financial resources are scarce when considering the challenges of incorporating a research and development agenda in the BPA scheme overall. In addition, there are major new areas that need examination to generate concrete solutions for the future sustainability of coffee cultivation.

Among the lines requiring more research is the generation of baseline information on the status of the hydric resources and soil in the coffee areas. We need to know the levels of soil erosion, and to understand the conflicts in land use and their variation along time. We also need to know those factors associated to the loss of natural coverage, jointly with other sectors, such as cattle raising. In addition, we propose to strengthen the identification, evaluation and valuation of those benefits offered by biodiversity to different actors involved in coffee. This may help make more evident the connection between biodiversity and coffee cultivation. Furthermore, innovative programs such as Intelligent Water Management or Ecomill need to be escalated and evaluated to measure their effectiveness and make the necessary adjustments. Besides having a pertinent and innovative research and development agenda properly funded and managed, the BPA require a timely and effective extension service, which brings to small coffee growers those products generated by *Cenicafé*. Finally, given the clear benefits that the adoption of schemes such as the BPA could bring, it would be worth assessing the funding needed for the coffee growers (especially those with less than ten hectares), and exploring those funding sources required to support this process.

A strong Cenicafé will not have the desired impact if it doesn't integrate deeply with other agricultural research centers in Colombia. There is currently isolation and duplication of functions due to a lack of coordination, and large-scale economies are not in use. The research agenda of coffee is closely related to that of other agricultural products and should be specific to different regions (particularly in these environmental topics). Cenicafé should be a center of excellence, more integrated within the rest of the agricultural research system in Colombia.

VII. COFFEE INSTITUTIONS

Colombian coffee institutions are unique in the world and were considered exemplary, both nationally and internationally. They partially come from the coffee organization created in 1927, and partially from commitments acquired by the country during the Quota Pacts In 1940-1989. Those institutional settings were useful to ensure coffee quality and a reliable and continuous coffee supply, but also to manage coffee surpluses. Nevertheless, the world has changed and the Colombian institutions seem oversized, insufficiently transparent and inflexible. They represent a barrier for the sector to adapt fast to changing international market conditions, they delay the ongoing differentiation demanded by sophisticated markets, they do not promote efficiency, and are excessively dependent of the Government's budget. Finally, they do not guarantee fair competition with other players in the sector. It is thus necessary to start a deep institutional reform designed to promote a better insertion of the country into the global markets, to increase transparency in the management of instruments and resources, and to neatly separate the public and private roles of the FNC – FoNC. The proposal presented in this chapter has those objectives in mind, without dismantling para-fiscales and keeping the same level of the coffee contribution we have today.[32]

In this chapter, we also analyze FoNC's finances and the allocation of the coffee contribution. It shows that in recent years the contribution has been insufficient to cover the so called "institutional expenses" once you pay the FNC for the administration of the FoNC. In the light of this analysis and aiming at balancing the FoNC finances without resources from the commercial area, we need to reduce administration costs and to allocate funds to those programs that may increase competitiveness.

This means we should only finance the three areas mentioned by the 2002 Mission: research, technical assistance and export promotion, eliminating all the other expenses that, as mentioned, should be the Government's responsibility. We also propose to fully separate and privatize all commercial activities of the FoNC, in order to protect it. It is harmful for a commercial company to have to provide resources to the public sector.

VII.A. COLOMBIAN COFFEE INSTITUTIONS

Although many consider in Colombia that the current institutional settings are essential for the sustainability of the sector, the international experience reveals the opposite (see Box 1). No other country has para-fiscales, and even less transfers to coffee producers. Just a few countries have *garantía de compra*, but those are not the most successful. An institutional model privileging free markets tends to prevail, a model in which the government's responsibilities differ from those of coffee producers. Regional authorities are the main actors in countries like Brazil.

All functions tend to be concentrated in a single institution in Colombia, the FNC, with great sectorial and national power. It is not only a trade association, but also designs national coffee policies with the government inside the Comité Nacional de Cafeteros (national coffee committee). It regulates exports and it completes exports (close to 35% of the national total) at the same time. Finally, it participates in the most diverse support activities: gathering/storing, transporting, certifying and international trade.

[32] Due to the coffee's weighting and the political power of coffee growers, these were able to have their taxes almost all reinvested in their own sector (Kalmanovitz, 2014). This 'parafiscal' figure has tried replication in other agriculture and cattle ranching sectors in the country with not so satisfactory results.

The National Coffee Committee (Comité Nacional de Cafeteros) is the place where policies are agreed and where the allocation of fiscal and parafiscal resources takes place. (Chart 13). The Committee consists of fifteen coffee delegates coming from each *Comité Departamental* and of four ministers: Finance & Public Credit; Agriculture & Rural Development; Trade, Industry & Tourism, and the Director of the National Planning Department. The Ministers of Finance and Agriculture are the only government members who must attend the sessions personally, and the Minister of Finance has as many votes as necessary to balance voting power between government and coffee representatives. Finally, the National Committee must propose a list of three candidates to be submitted to voting election when choosing the FNC manager.

Box 1. *Coffee institutionalism from an international perspective*

Compared with eleven coffee producing countries (representing 72.5% of the global production), the coffee sector's institutional organization in Colombia is *sui generis* in several senses:

- The Colombian coffee sector is the second most intervened sector globally (after Ivory Coast): the government or the Federación Nacional de Cafeteros, as the performer of the Fondo Nacional del Café programs, intervenes in thirteen of the eighteen activities considered by Lora (2013).
- In no other country are so many activities concentrated in a single entity: whether as an association or as a performer of official programs, the FNC participates in twelve of the eighteen activities considered by the author.
- It is the only country where public funds pay for part of coffee internal purchases and exports.
- It is the only country where the association of growers collects and manages the revenue from a tax on the coffee activity (and, together with Cameroon the only where a "parafiscal" scheme exists).
- The association of Colombian coffee growers is also the only one in the world acting as a regulatory entity (in the other countries there is a regulating entity or the government does this directly).

When comparing the intensity of the intervention with the performance variables of the coffee sector, you find that the countries where coffee cultivation is most intervened, are those with *worst* results in the last decade, both in export prices and land productivity, and in the coffee grower revenues (both at current levels and when changing these variables). Due to the consistency of all the results obtained, you may discard with at least a margin of 95% that the coffee cultivation success depends on official intervention either directly or through an entity with delegated intervention functions. These conclusions do not depend on the inclusion of Colombia within the sample; in fact, up to 2012 in Colombia results had been worse than what this analysis predicts, possibly due to transitory factors.

Therefore, we may say that the international evidence does not support the statement that a strong institutionalism able to intervene in the diverse aspects of the coffee business is necessary.

Source: Lora (2013)

Our institutions come directly from the period of the International Quota Pact at the International Coffee Organization, and even from previous quota pacts, always designed to restrict coffee supply. As mentioned by Lora, Melendez y Tommasi (2013): "the mechanism chosen by Colombia to purchase, retain and manage production surpluses was the creation of the National Coffee Fund – FoNC-, a public account managed by the FNC and funded with the sector's para-fiscal resources. The National Committee, designed to manage the Fund and the different instruments for the coffee market intervention required to comply with the Quota Pacts and make an efficient use of the resulting surpluses. This also explains why it was established that the purchases and exports of coffee by the FNC were to be done on behalf of and under the risk of the

National Coffee Fund, i.e. with public resources, a practice that today survives, a quarter of a century after the end of the Pact." In the context of the Pact, promoting and expanding the coffee demand in the main global markets was under the responsibility of the major roasting companies, while coffee countries should provide a regular supply of sufficient quantities of coffee and with a homogenous quality. Colombia enjoyed the privilege of furthermore supplying high quality coffee that resulted in attractive price premiums.

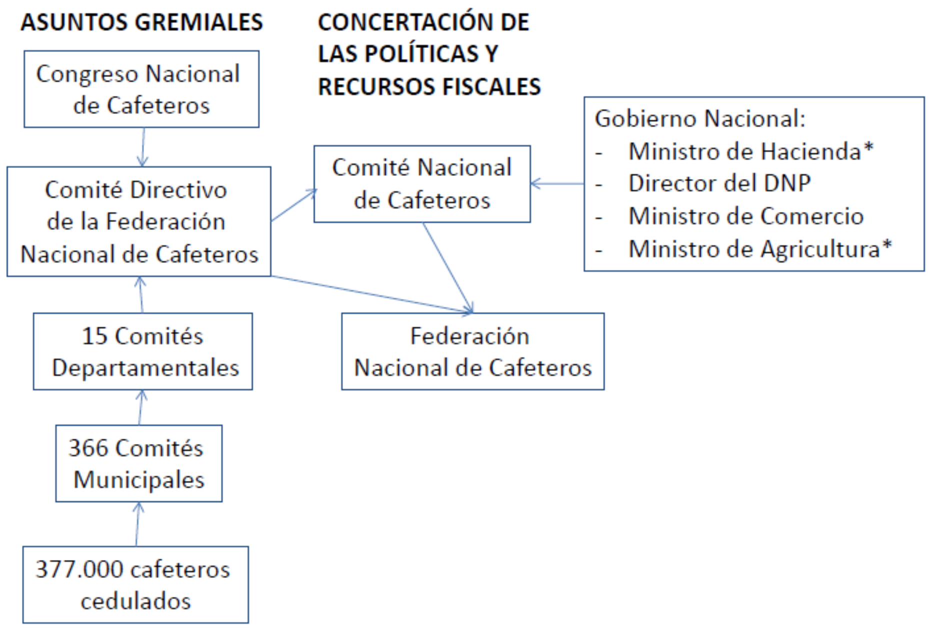
During a good part of the XX century and the XXI century to date, the National Committee (Comité Nacional de Cafeteros) determined the coffee policy. This policy includes:

1) management and distribution of coffee booms and crises while coffee had a dominant importance in Colombian exports; and in general, all those events associated to this product when posing an economy-destabilizing risk;
2) control of Colombian coffee quality: a role that the Nation delegated to the Comité Nacional and to establish the required criteria for coffee exports (and in FNC, the enactment of such controls);
3) price and production policies, credit and international and local trading, even if resources were not coming from the coffee contribution; and
4) the policy for investments and asset purchase or sales related to coffee and non-coffee activities if affecting the finances of the Fondo Nacional del Café.

An important part of the coffee policy is no longer in the hands of the National Committee in recent years, partly because parafiscal resources have decreased as coffee lost preponderance in the economy. Lora, Meléndez y Tommasi (2013) indicate that "The Ministries of Agriculture & Rural Development and of Finance have intervened sporadically in the industry *out of the FNC's institutional framework,* when acting governments decided to link the coffee growers to support programs covering the agriculture sector in general or when they decide to deliver extraordinary support to coffee growers. Examples of these interventions are: Agro Ingreso Seguro (AIS), whereby support was given to coffee growers from 2006 to 2008, and the Program: Apoyo al Ingreso del Caficultor (AIC-PIC), by virtue of which a subsidy of $165,000 pesos per carga of 125 kg was given, provided that the domestic price and subsidy did not exceed the sum of $ 700,000 per carga. The *FNC* has been decisive in materializing the delivery of the support to coffee growers, but institutions external to FNC had imposed the rules of the game."

From the beginning, the coffee growers' association tried to create decentralized institutions with democratic representation of its affiliates. However, coffee democracy is limited, at least in the composition of the Directive Committee and the National Committee. Every four years the department delegations choose one of their members to represent them, but this delegate must be accepted by the FNC manager.

Chart 13
FNC Governance Structure



Source: Taken from Lora, Meléndez y Tommasi (2013)

There is a relative consensus between analysts and economic historians that Colombian coffee institutions played a very positive role for the sector, the coffee regions and the growers. Colombia achieved a predominant and increasing role in the global coffee market, it met its quota commitments, positioned the renowned coffee quality, with a stable supply, and coffee growers invested a large part of their resources in improving coffee farmers' standard of living.

Nevertheless, when the Pact disappeared in 1989, the surplus generated by self-imposed restrictions disappeared as well. Furthermore, to the extent that different international players sought to obtain greater value by differentiating the final product, the Colombian strategy of offering a single quality did not seem the most appropriate. In these new circumstances, those coffee institutions designed for times already gone, appear oversized, inflexible and not transparent; it does not offer a favorable environment for private initiative and innovation, for the development of differentiated coffees or to increase domestic consumption; it does not react fast enough to the changing dynamics of the international market. As discussed below, in consequence, FoNC's finances are considered uncertain and its management expensive. This institutional apparatus has given rise to a cross-subsidy system that burdens exports (and hence the coffee growers' income) to subsidize a diversity of institutional expenses some of which are not linked to coffee cultivation nor report direct benefits to the coffee growing population.

VII.B. THE NATIONAL COFFEE FUND AND COFFEE CONTRIBUTION

A major part of coffee institutions and policy has historically developed around the National Coffee Fund (FoNC), funded by the sector through the so called coffee contribution. However, the analysis conducted by the Technical Secretariat, based on Ricaurte y Zuleta (2013), allows us to conclude that the financial structure of FoNC is today very vulnerable and is at risk of becoming a latent problem for the country's public finances.

This is true because the results of FoNC critically depend on the profit generated by the commercial operation that at the same time depends on extremely uncertain factors such as the level of production, the international price and the exchange rate. Moreover, profits must be returned to the public sector (i.e. funding the institutional deficit of FoNC), which lowers capacity and impedes it from making the necessary investments to grow, compete and continue being profitable. In summary, the future profitability of the FoNC commercial operation cannot be guaranteed even less now that the coffee contribution is now and will be in the future insufficient to fund the sector's institutional expenses.

This situation does not seem sustainable and a responsible evaluation of the coffee sector and of its funding demands restating the FoNC finances. Its limited resources must concentrate on those activities that may contribute to improve competitiveness. It is also necessary to examine the management fees paid to FNC, because they represent almost half of the resources provided by the coffee contribution.

As it is well known FoNC is a para-fiscal account managed by FNC according to a Management Agreement signed by this entity and by the government. Its activity is divided into three functions: 1) the institutional function: in charge of executing the institutional programs such as research, the extension service (Servicio de Extensión), the programs related to competitiveness and productivity, and other programs targeting coffee growers' social well-being; 2) the commercial function, commercialization of green coffee, domestic sales and exports (including the so called "garantía de compra"); and 3) the industrial function: developed by Buencafé Liofilizado de Colombia, transforming green coffee into soluble coffee for end customers.

The main financial source of FoNC is the coffee contribution. This contribution is fixed in US dollars, but must be converted into pesos to meet mostly local expenses. It increases with the amount of dollars paid per pound, the exported volume and the exchange rate. However, due to both the persistent revaluation of our currency and the low level of production in some years, these revenues have been systematically insufficient to cover the FoNC expenses. FoNC's global deficit has resulted in operational losses and when considering the trading operation profits and the results of the *Buencafé* factory, as seen in Table 1, it would be necessary to double the contribution to cover the current deficit as this has not been politically viable or convenient (according to the Technical Secretariat). The increasing deficits have been largely covered through direct government support.

A large part of the deficit originates in the so-called institutional function. In spite of having fallen 6.6% per year from 2010 to 2012, it increased 10.4% from 2012 to 2013, mainly due to the variation of the *FoNC* management fee paid to *FNC* (*item* named Institutional Management & Purchasing guarantee in Chart 14).

Table 1
The Fund's Operational Deficit in US Cents per Exported Pound

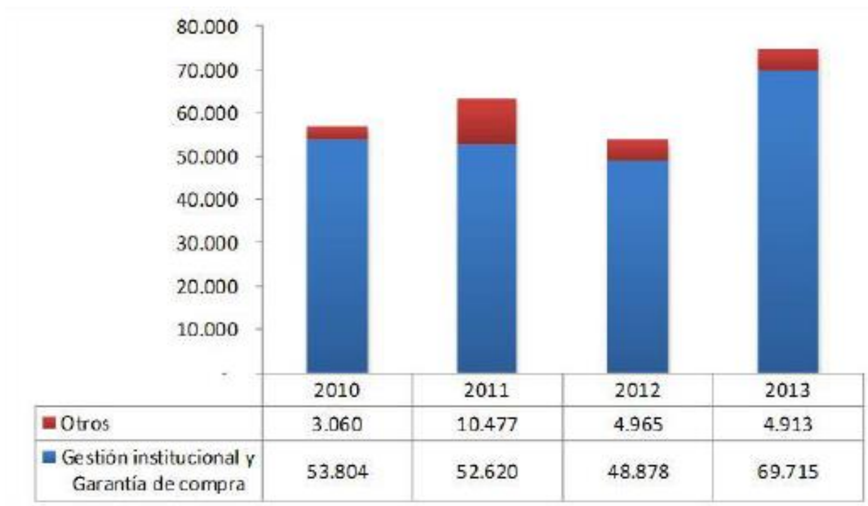
Indicadores por centavo USD/libra exportada	**2010**	**2011**	**2012**	**2013**
Contribución cafetera	5,55	5,53	5,57	5,68
Regalías	0,24	0,29	0,37	0,32
Otros ingresos (Comercial)	0,58	0,58	0,76	0,58
Cobertura	0,28	0,12	0,40	0,00
Total ingresos	**6,65**	**6,52**	**7,11**	**6,58**
Gestión institucional y Garantía de compra (Total)	2,74	2,79	2,87	2,92
Transferencias (16%)	0,89	0,88	0,89	0,91
Total egresos institucionales	**3,02**	**2,85**	**3,35**	**2,75**
Otros egresos (bienes públicos)	9,21	8,68	9,04	6,39
Destinación especial	0,58	0,72	0,68	0,39
Disponible para otros egresos	**(6,77)**	**(6,55)**	**(6,37)**	**(4,03)**
Otros egresos (no parte bienes públicos)	0,34	(0,24)	0,15	0,01
Déficit Operacional	**(7,11)**	**(6,31)**	**(6,53)**	**(4,03)**

Source: Ricaurte y Zuleta 2014

How much shall be paid to FNC for the management of the FoNC? In Accounting terms, the result depends on the definition of the managed resources. There are several ways to measure this sum, but in the opinion of the Technical Secretariat and the Commission, this calculation shall be done on the total value of the coffee contribution excluding the resources managed in the trading operation. This, because the country would not have to spend a single peso exporting coffee if it was in the hands of the private sector. With this definition, we see that the amount paid in the last years is equivalent to 45% - 49% of such resources. It is necessary to reduce those operational expenses and concentrate them on those activities promoting competitiveness and sustainability.

Chart 14

Indirect Expenses in the *FoNC* Institutional Function (2010-2013)



Source: Ricaurte y Zuleta 2014

In a situation where resources are clearly insufficient, and in which the expense must be essentially oriented towards increasing coffee productivity and profitability, it seems clearly inconvenient to use those funds directed to the Department Committees in activities not associated to coffee production. In effect, in 2013 $ 44.8 billion, 91% of the total Committees' expenses and 33% of the coffee contribution were destined to non-coffee activities. As described by Ricaurte y Zuleta (2013), in 2013, 78.3% of the expenses of these regional Committees correspond to *Law 863* (according to which 16% of the coffee contribution must be destined to investments in the regions) and were destined to "non-coffee activities"; furthermore, the total amount of *Gestión de Proyectos de Inversión Regional* (Regional Investment project management) and 88.8% of the expenses corresponding to *Law 9*, were destined to "non-coffee." There is a need, therefore, to re-direct the resources invested in the regions. These resources must be invested in research (a more regionalized agenda by Cenicafé); a larger incidence of regional entities in the management and direction of technical assistance; in the implementation of *good agriculture practices* (chapter VI) and in the promotion of associative mechanisms and other mechanisms to increase productivity and reduce costs.

On the one hand, if we follow the general ideas proposed in chapter II, it is clear that the percentage of resources destined to the Department Committees shall increase and that destined to the central office shall be reduced. This requires modifying several rules and legal standards. Furthermore, once more, and as a general principle these resources must focus on raising coffee competitiveness and sustainability instead of infrastructure or other expenses such as infrastructure or projects just indirectly related to coffee.

On the other hand, the fund's commercial activity interacts with the so-called "garantía de compra"[34] (see section VIII.B), a mechanism that entails a dominant presence of FNC-FoNC in coffee purchases and exports. In the last three years, FoNC-FNC has purchased from 25% to 43% of the coffee produced in the country. This turns the internal coffee market into an oligopsony whose decisions will affect (and will be followed by) other private players in the market.

In this context, when FNC-FoNC decides to generate profits in its commercial function – as it has done since 2010 – it is also deciding to pay a lower price to producers,[35] given that international prices are given and neither Colombia nor coffee authorities have the power to modify them. With the internal market structure and the weighting of FNC-FoNC, the other purchasers will also end up paying less to producers. In synthesis, given the Colombian market structure, the decision to increase profits in the commercial activity will enter into conflict with one of the objectives that coffee policy is supposed to have: maximizing producers' income. Paradoxically, it is the producers who end up funding the commercial activity and the reduction of FoNC's deficit while increasing the profits of private exporters.

Additionally, the commercial activity should be privatized in order to generate value and to keep the knowledge and historical assets of coffee growers. In a very competitive international market it does not seem convenient to assign to the FoNC commercial operation the responsibility to generate surpluses to fund the deficit of the institutional part. This could produce the future disappearance of FNC's commercial operation, and coffee growers could lose accumulated value and experience[36].

VII.C. GOVERNMENT CONTRIBUTIONS TO THE SECTOR

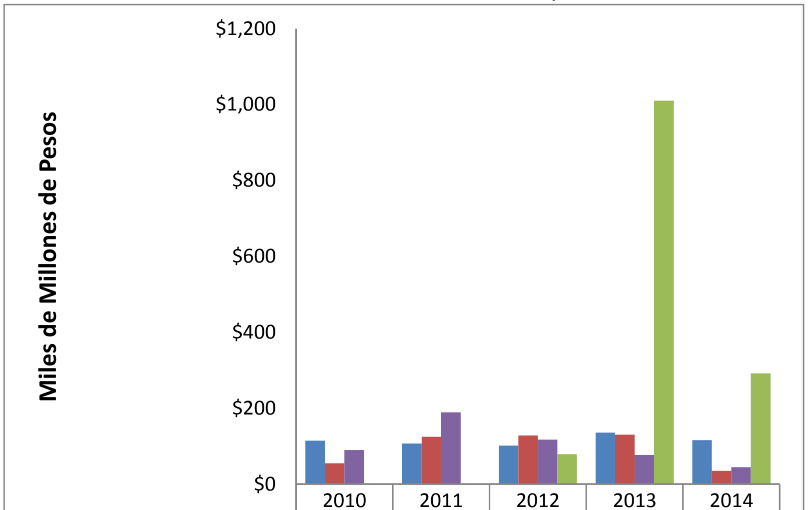
Government contributions to the sector have been increasingly important result from lower parafiscal resources. In 2013, for instance, the coffee contribution was close to $ 136,000 million pesos, while resources transferred by the government, managed by the Federación, were $ 207,000 million pesos, including a sum similar to the one required to pay the pensions of Flota Mercante: $40 billion pesos. To cover all those expenses it is necessary to triple fold the coffee contribution. On the other hand, through Finagro, the government participated with $ 987 billion pesos, in funding coffee renovation and it transferred $1.3 billion pesos via PIC. Chart 15 shows those transfers and compares them with the coffee contribution.

[34] To be able to accomplish these activities, FoNC-FNC is funded through indebtedness that decreases as revenues are obtained from exports. This means that to trade the coffee, FoNC-FNC must use the equity of the FoNC, and hence a private activity is being performed with a public fund collateral (because FoNC is a parafiscal fund).

[35] After major losses in the commercial activity in 2009, the Commercial Management of FNC implemented a new commercial strategy starting in 2010 that has allowed it to obtain a profitability on the assets of 8% in 2012 & 2013, with which the operational deficit on account of the institutional function has been partially covered. To achieve this the calculation method of the internal price published daily by the Federación changed, and in commercialization cost included the cost of opportunity of the employed assets. In practice, this reflects in lower prices paid to producers (Robayo, 2014).

[36] You may argue however that the commercial operation of FNC-FoNC has other advantages to offset this demand that has been imposed on it, such as not paying income tax and that it may use a public resource – the FoNC equity. However, what this proves again is that this business is not transparent as many others conducted by FoNC and without doubt this impedes evaluating its convenience apart from the negative externalities that it has on the ambiance in which private exporters operate.

Chart 15
Coffee Contribution vs Government Expense



	2010	2011	2012	2013	2014
Contibución Cafetera	$115	$107	$102	$136	$116
ICR	$ 55	$ 124	$ 128	$ 130	$35
Otros apoyos directos del Gobierno	$ 90	$ 189	$ 117	$ 77	$ 45
Programa de protección del ingreso cafetero			$79	$1,010	$292

*For 2014 we took data up to September.
Source: Office of Government Counsel on Coffee Cultivation Matters

The previous figures make you reconsider not only the operation of FoNC, but also the role that the government must have in the decision making of the sector and the formulation of coffee policy. If the government transfers increasing amounts and the coffee contribution, is less and less significant, would this not constitute an additional reason for the government to design the coffee policy?[37] In the current institutional arrangement the government is responsible for the decisions taken at the national coffee committee although its influence is limited – it only has half the votes - (Lora, Melendez, y Tommasi, 2013).

VII.D. REFORM PROPOSAL

According to Lora, Meléndez y Tommasi (2013), an institutional reform must meet the following objectives:

1) Opening space for the private sector in production and trade in equal conditions to other agents in the sector.

2) Avoiding actual conflicts. Today the FNC is the regulator, the executor of official policies, the producers' association and the exporter.

3) Eliminating public-private co-management of Fondo Nacional del Caf*é.*

4) Preserving the social capital that the FNC has built in the coffee areas.

5) Supporting the competitiveness of small coffee farmers.

[37] The government is who must determine how and in what are the sector's resources spent given that its contributions are greater than those coming from the contribution.

6) Facilitating conversion of some small coffee farmers towards other activities, allowing them higher living standards.

Regardless of the specific arrangement established, the following reforms are essential to eliminate the conflict of interests and the public-private co-management currently in place:

1. Coffee exports will be deregulated and coffee exporters will only be subjected to general requirements (i.e. phytosanitary permits).
2. FNC commercial and industrial activities shall be subject to the same tax regime as any other private actor.
3. Coffee policy will be the government's responsibility.
4. The government will be responsible for designing social policy in the coffee areas.
5. Cenicafé shall report to a board of directors representing producers, exporters and all the chain agents, with periodic independent impact assessments. Cenicafe must have a greater integration with the other research centers in the country and may find more private sector resources co-funding its activity. Finally, Cenicafé shall develop a pertinent research agenda that give more importance to regional differences, to trends in international demand and to the environment.
6. The Rural extension support shall be provided without cost to small coffee growers (i.e. having ten hectares or less), it will focus on coffee activities, and will provide similar services to those generated by CONAB & Educampo in Brazil. Cenicafé and the Servicio de Extensión shall receive additional resources. As Cenicafé, the Servicio de Extensión shall be subject to regular and independent impact assessments.

Based on one of the two reform proposals mentioned by Lora, Meléndez y Tommasi (2013), we suggest the Federación Nacional de Cafeteros to be divided into two entities: *a commercial Company owned by the coffee growers* - separated in its equity and management from the new FNC and the government operating in commercial operations without subsidies nor special tax treatments. On the other side, create a new FNC as a *trade union organization,* with the current representation mechanisms, funded with the coffee contribution (without additional tax resources). It would maintain the program completion of its current functions for productive transformation (delegated by the government) and other functions such as an NGO-non government organization for the service of coffee growers, funded with its own resources or with private grants.

The new FNC would be forced to make adjustments to the current programs so as to empower: Cenicafé and Servicio de Extensión, and to give freedom to certified coffee growers with public resources (in the past and future) for them to negotiate freely in the market. The coffee contribution resources would be exclusively destined to the operation of such programs, and as discussed further ahead, FoNC shall be transformed but would not disappear. It will be a decision by the commercial Company to maintain the network at points of sale as it currently exists or optimizing it but will not have for these purposes the coffee contribution resources nor other public funds. It will not have the obligation to purchase more coffee than required for its private business. The (few) purchase points not having a commercial justification but public policy in defense of competition may be funded through subsidies paid with coffee contribution resources of FNC as a trade union organization. [38]

This new FNC would continue managing the FoNC*,* whose main source of funding would be the coffee contribution established by Law. This implies maintaining the representation mechanisms demanded by Law from the associations managing parafiscal resources. Under a new management agreement of the Fondo

[38] We propose that points of purchase be maintained only in those municipalities having less than ten purchasers. This represents, according to Echavarría (2014), close to 5% of the total production. The NGO would not purchase coffee it would only grant a subsidy to the commercial Company to help maintain the non-profitable points of purchase that would continue being part of the logistics network.

Nacional del Café, the basic criteria shall be established for the allocation of parafiscal resources, specifying that the parafiscal resources or any other FoNC resource shall be exclusively destined for research and development to the Servicio de Extensión, for the BPAs and for any other program having the objective of improving economic efficiency and environmental sustainability of coffee production. The agreement would foresee an external assessment of the programs in a regular manner.

The internal organization of the new FNC shall be decided autonomously by its affiliates, represented in the Municipal and Departmental Committees, in the Coffee Congress and in the Directive Committee. However, as in any other sector managing parafiscal resources, the single government representative in the *National Committee* would be the Minister of Agriculture or his delegate.

The new FoNC management agreement – to be entered into before July 12, 2016, at current agreement expiration - shall be preceded by a *transition agreement* fully freeing FoNC of the fiscal contingencies that must be assumed by the government; and for it to liquidate assets that are not indispensable for providing the extension, the purchasing guarantee and the certification of small coffee farmers' services. In this transition period, the Fund shall transfer or divest the (lyophilized coffee) Buencafé plant and the coffee brands (to the private sector or to the new commercial company owned by coffee growers).

VIII. POLICY INSTRUMENTS

VIII.A. QUALITY REGULATION

It is difficult to understand the current regulation in quality affairs and even worse is to defend the funding of this regulation with parafiscal resources. The argument that the FNC quality control protects the reputation of Colombian coffee and therefore contributes in maintaining a premium is not yet proven, and even so, it may not be justified without first comparing the costs with the benefits of such intervention. This does not imply that FNC cannot establish quality standards to promote the sales of a given type of coffee in the international market; what must not happen is for these standards to result in limiting private initiative and producer opportunities.

Regarding the argument that the current regulation protects Colombian coffee reputation, the work by Argüello, *et al*. (2014) for the Mission shows that over 90% of the explanation of the differentiated prices is that chemical indicators were established as characteristics of the coffee varieties while the importance of the institutional organization is not conclusive and the potential to exert market power does not seem relevant. The Guatemala case is a good example to understand the behavior of the differentiation factors in the coffee market and it shows how these relate to the quality and not necessarily to the origin. On the other hand, no control of coffee exports exists in Brazil, a country where excellent and low quality coffees coexist. There are international companies that certify the quality of exported coffee (entailing a cost of course) and the *FNC* can compete with these agents in providing this service.

Included in the potential regulation costs are the losses of market share (for instance, due to the relative demand for Robusta or Arabica low quality coffees), loss of innovation and potential investments in the development of new coffees. Furthermore, the de-regulation of the quality would allow a higher price in the internal market and a higher income for the defective bean and low quality not exported coffees. The price of the latter is very low because it is sold in a market with few buyers, dominated by Colcafé, Águila Roja and the FoNC's lyophilized coffee plant. Buencafé achieves its good results partially from a lower price resulting from the quality regulation.

To illustrate some of the losses in which Colombian producers incur due to the existence of the minimum quality standards we calculated the additional revenues that would be generated if it was possible to export the dry defective coffee beans (called 'pasilla') constituting normally close to 10% of the Colombian coffee production[39]: 5% is obtained in the farms (pasilla from farms) and the remaining 5% is obtained as a result of the threshing process (pasilla from machines). To calculate this, we took international prices as a reference of the purchase price for this 'pasilla' in Central American countries. Specifically, we used commercial offers of *second-class* coffees from Guatemala, Nicaragua, Honduras & México, which at the time of the survey were below US$ 0.45. To estimate the value of Colombian 'pasilla' we used the Price offered by FNC in Chinchiná for the purchases by the Buencafé lyophilized coffee plant: COP 4,300 per kg.[40] Furthermore, we made the assumption that pasillas and by-products are equal to 10% of the total coffee produced in Colombia. The result is on Table 2.

According to the analysis, Colombian coffee growers did not receive $108,697 million pesos in 2014 on account of the ban to export 'pasillas' a sum of resources equal to 80% of the coffee contribution received by FoNC in 2013. These benefits are now captured by four national roasting companies (Nestlé, Nutresa, Águila Roja & Buencafé), controlling over 80% of the national market. What is even worse, the rules of the game allow them to import pasillas and low quality coffee when coffee is scarce in the local market. In fact, in 2009 & 2010, Colombia imported over one million bags of inferior qualities from Peru, Ecuador & Brazil.

[39] However, pasillas may currently represent 15% due to the increase in the infestation caused by the Coffee Berry Borer-CBB mainly affecting the production of the Coffee Growing area and Antioquia.

[40] This pasilla is better than the national average sold to other roasters because it demands 50% of usable bean, that is, it is a more expensive pasilla than the rest.

However, producers cannot sell this product in the international market at times when raw materials are abundant.

Table 2
Analysis of the Revenue Loss Caused by the Restriction on Pasilla Exports

National production in millions of 60kg bags.	11.5
Production of Pasillas in millions of 60kg bags. (10% of the production)	1.15
USD/COP Exchange Rate	2,050
Value of Pasilla in the local market	
Delivered to Buen Café plant COP per kg.	4,300
Pasilla in USD cents per lb.	95
Costs of taking Pasilla to FOB USD cents (includes contribution)	15
Cost of Col Pasilla FOB USD cents	110
Difference of Col Pasilla (stock mkt price USD 190 cents)	-80
Value of pasilla in international market	
Difference of second-class (Pasilla) from Central America	-45
Value not received by Colombian producers in US cents	-35
Loss of welfare for Colombian coffee producers COP billions	(108.6)

VIII.B. REGULATION OF EXPORT ACTIVITY & PURCHASING GUARANTEE

The double role of FNC as a market competitor and regulator goes against the simplest regulatory practices and must be eliminated. FNC is the largest coffee exporter in Colombia, with a weighting ranging from 25% to 30% of total exports. Furthermore, it rules the quality and competes in unfair conditions with private exporters. Again, both facts made sense in the world of coffee quotas and agreements, but they currently lack a logic. They constitute a clear example of rigid policies that have not been able to adapt to the new international market dynamics.

As mentioned by Guillermo Perry (Perry, 2014) in a recent article, Colombia has separated the regulation from the commercial function in all other fields. In the nineties, it was done in the oil activity generating a new dynamic in Ecopetrol (that before was judge and defendant); the regulation is today accomplished by the Ministry of Mines and the National Hydrocarbon Agency - ANH). According to the same author, in electric power and gas the public utilities compete with the private ones without subsidies or privileges. The quality and coverage of service improved, and ISA, Empresas Públicas de Medellín, TGI & EEEB have turned into efficient international firms. The full competition in coffee trading would bring similar advantages.

The commercial presence of FNC-FoNC has been justified by the association as a necessary mechanism to counteract the high concentration of the trading firms and the coffee roaster companies in the world, which had allegedly given those firms the possibility to capture juicy olygopsonic revenues – inherent in markets with few buyers. However, Robayo (2013) finds that Colombian exports are less concentrated than those of most commodities and of a major part of industrial products.

The commercial presence has been justified with the argument that to protect small farmers from the abuse of a few buyers, institutionalism must exert the "garantía de compra" throughout the country.[41] However, this protection is not always justified. Based on the analysis of approx. 4.5 million invoices of the Program called PIC to protect Coffee growers' revenues, Echavarría (2014) shows that the coffee market in Colombia is highly competed in most municipalities in the country. This is a very "liquid" and nonperishable product; as opposed to other agriculture products it loses scarce value when its sales are postponed a few weeks.

The author shows that cooperatives sponsored by the FNC pay in average more than private agents, but the difference is only $3,000 on an average price of $470,000 for the coffee carga. Both the cooperatives sponsored by the FNC and the private buyers pay more to traders who have large farms, but again, with reduced differences below $1,000 per load. What was surprising for the author is that it was shown that the price paid for coffee is higher in those municipalities where no FNC purchase point exists, possibly due to quality differences. This must be researched in depth but the results are clearly contrary to those reached by Silva *et al*. (2007), for whom the inexistence of the "garantía de compra" would reduce the prices to producers close to 40%. On the other hand, Lora (2013) indicates that there is no "garantía de compra" in the countries that were successful in coffee in the last decades, and international evidence reveals that the ratio between price to producer and export price is lower than in countries without a "garantía de compra" such as Brazil, Vietnam, Guatemala, India or Mexico.

As in any "intervention", regulation in general and in the "garantía de compra" in particular, it may have additional costs that are important to precise. Among others, Fisher y Gravelet-Blondin (2013) identify three problems for the creation of the market of futures and derivatives in Colombia: coffee market is relatively small; the typical producer is very small; and the coffee is not sold in a free market and cannot have a market of futures when there is such an active intervention by the "government." According to the authors there will be no transactions in the market of futures if the taxes and conditions affecting the market may be altered day by day. This is especially concerning because Steiner, Salazar y Becerra (2013) recommend futures and derivatives as the most proper mechanism to stabilize prices and incomes.

According to Lora, Meléndez y Tommasi (2013), to decide whether in the future the instrument will or not be maintained (that in any case should be reduced in coverage), it would be advisable to: 1) perform an analysis of the local markets allowing to identify the level of competition in which it operates; 2) quantify the cost of maintaining the purchase points in activity that in effect perform an exclusively public policy function (those in local markets with few buyers that would not be maintained active on the basis of a business rational); 3) perform a cost-benefit analysis to determine if it is justified to maintain those purchase points in activity through the delivery of a direct subsidy; and 4) leave the points of purchase that perform a purely commercial function in the hands of FNC, so the activity is exclusively funded with private resources.[42] Meanwhile the Technical Secretariat recommends maintaining the "garantía de compra" just in those municipalities with less than ten buyers, which would lead the FNC-FoNC to export 5% of the total national instead of 25%-35%. FNC-FoNC must export coffee because the association wishes so, paying taxes, regardless of the debate on coverage of the "garantía de compra".

[41] The available literature on the purchasing guarantee more than clarifying the situation causes more confusion. It is not about a floor to the Price nor a mechanism to warrant maximum income for coffee growers, it is not a price stabilization mechanism either. In reality, as mentioned in the text, the purchasing guarantee is a mechanism to protect small coffee farmers from potential power abuses when few buyers exist.

[42] As an alternative, as recommended by the authors, FNC could maintain all the purchase points currently operated by the cooperatives, even those needing some type of subsidy to operate, co-funding their operation with resources from its commercial business, if it considers that this makes sense as a service from the association to its associates.

VIII.C. PRICE STABILIZATION & SUPPORT TO INCOME

According to Steiner, Salazar y Becerra (2013), Colombian coffee policy seems to have been seeking inconsistent objectives among each other, to the extent that it simultaneously has pursued price stabilization and maximization of producer income. This double objective has translated into low or nil saving levels at times of high prices that makes it impossible to offset producer costs at low price times. What has happened in recent years is a high transmission of the external price to the internal price in periods of external increasing prices, and a low transmission and onerous costs for the tax revenues at times when prices are depressed, when juicy subsidies have been extended to coffee growers.

It is not easy to stabilize prices in the real world. For such purpose, it is necessary to know the long term prices in free market conditions. Furthermore, prices must return to the median, a process relatively slow in coffee (over twelve years). That is why when reviewing international experiences you observe that countries like India, Costa Rica, Brazil, Mexico & Vietnam that have tried to implement the stabilization scheme have abandoned it (Steiner, Salazar y Becerra, 2013), and that they have all freed their price policies.

This does not mean that these governments have totally abandoned their interventions in coffee matters. The adopted policies seek as much as possible and even with subsidies to promote market mechanisms (i.e. credit or financial coverage) at a lower fiscal cost. Given that González y Mahadeva (2013) show that the main source of variability in coffee grower income is the climate (more than the exchange rate or salaries), then in the package of policies something to be considered are the insurances for coverage of climate variability (Moya y Boucher, 2013). Finally, as mentioned in section VI, the *good agriculture practices (*BPA) may also contribute in reducing the volatility of coffee grower income.

Instead of subsidies to the market mechanisms (or provision of public assets), in recent years Colombia has decided to grant a direct price subsidy. Hence, according to Steiner, Salazar y Becerra (2013), in 2013 the PIC was paid for $1.3 trillion, a similar amount to a program like: Familias en Acción ($1.7 trillion), and above half the total investment budget of $2.3 trillion of the Ministry of Agriculture (without including PIC). However, while Familias en Acción covers approx. 2.5 million families, PIC merely covered 348,449 coffee farming families; and was not granted to the other 231,551 (to complete the 580,000 producers recorded in the SICA-Coffee Information System), possibly the poorest who most need this assistance. Furthermore, the impact of PIC has been absolutely regressive. 60% of the PIC was given to 10% of the richest coffee growers; and the GINI (a concentration metric) of the PIC was 0.792, much higher than the total national (0.545), in one of the countries with the worst income distribution in the world.[43]

Anyway, as mentioned in section IV.B, the Technical Secretariat proposes following Brazil's example, creating a minimum sustenance price, a concept significantly differing from the purchasing guarantee concept. As in Brazil, the proposal is for this minimum price to match the variable production cost, close to $307,500 in 2013 (under certain assumptions, this equals to a NY price of US$ 0.83/lb.; US$ 0.76/lb. in Valle, the department producing with the less variable cost).

[43] Authors show that a PIC proportional to a production of up to 4 hectares (extension starting from which the subsidy would remain constant) would be neutral with respect to the distribution of income in the country.

IX. CORE MESSAGES AND RECOMMENDATIONS

In the opinion of the Technical Secretariat, the following are the ten core messages of the Mission:

1. Coffee continues to represent an important life option for millions of Colombians

It deals with the product in which our comparative advantages lie by excellence, and the product that drove Colombia's development during most of the XX century. As mentioned by Cano, Vallejo y Caicedo (2012), "there is no other crop that pulls the product through labor as coffee does. There is hence the importance of this activity as a potential driver to reduce poverty and distribute income in the rural population."

Coffee presents other important differences with the rest of the agriculture and thanks to this, an important *social capital* was built for the country. It is a sector with a great sense of collective work, attachment to the family and to the land that for many generations has been owned, and an embedded feeling of social organization; characteristics that to a great extent have avoided violence and displacement in the coffee zones. The global demand for coffee is growing and the level of sophistication of special-different coffees offers new possibilities for a country like Colombia.

2. Just with a profitable coffee cultivation will it be possible to eradicate poverty in the coffee areas?

Historically, the coffee regions in Colombia were synonymous with prosperity and well-being, and those who devoted their time to growing coffee achieved well-being indicators clearly superior than in other zones of the country. However, since the International Coffee Agreement was dissolved the relative social situation of the sector seems to have stopped progressing with the dynamics of the past and has resulted in a marked convergence process between the coffee and non-coffee zones.

Coffee cultivation zones are better than the rest of the country's agricultural zones in housing and some utilities, but worse in education and in access to the social security pensions. Furthermore, close to two thirds of coffee growers in the country may be classified as paupers, defining in this category those coffee producers in Sisben 1 & 2, and over 90% in Tolima, Huila, Nariño & Cauca.

The enormous advantage that social indicators had in coffee zones disappeared compared against other rural areas in the country. This is due to the double reason that the coffee sector no longer has the abundance of its own resources as in the times of the Quota Pact because the resources and capacities of the national and local governments are currently much higher than in the past. The time has come to recognize these changes: social policy in coffee areas – as in any other place in the country – is the responsibility of the national government and of the local governments and cannot and must not be delegated to a private association.

But it is not enough to have the social policy provided by the State, and the poverty in the coffee zones can only be permanently eradicated if it is profitable to produce coffee. This needs to elevate even more the production per hectare and reduce the costs. The production per hectare doubled in Colombia from 1970 to 1990 with the introduction of the Caturra variety, but then remained stagnant during close to twenty years and fell during the recent crisis. As mentioned in section IV.A, starting in 2012 we evidenced a yield improvement, resulting from high prices in the previous years and the impact of the PSF program led by FNC and the government. This program contributed to coffee crop renewal since 2007 and during its term, 182,252 hectares were renewed. According to Silva (2012) this program has had a positive impact because it decreased the average age of coffee bushes in 5.7 years and increased the technified area in 40%, concentrated in small farmers.

However, in spite of recent progress, in Colombia the per hectare production increase and the increase in the real salary have been slow. This has resulted in production costs being today much higher than in Vietnam, Brazil, Honduras, Peru or Nicaragua. Just with a profitable and competitive coffee production will it be possible to warrant high and stable income for coffee producers in Colombia.

3. **There is no single solution in what refers to coffee. Although some will produce excellent special coffees, other producers will have to diversify their crops, and a vast set will have to increase productivity and profitability to continue producing standard coffee**[44]

Special coffees constitute merely one of the three possible strategies for coffee in Colombia. A good part of exported coffee will continue being standard coffee, and as stated above, to compete without differentiation, we just need to increase productivity and reduce costs. Finally, many coffee growers need to diversify their production or move to other zones where they may produce with lower costs.

The segment of special coffees has gained more and more weighting in the global demand and currently represents close to 20% of consumption. Although the current regulation does not incentivize the production of special coffees the country has advanced significantly in this field: sales of special coffees that represented close to 2% of external sales in 2000, have today reached 28%. On the other hand, special coffees may obtain important premiums in the international market on the base price, potentially improving coffee producers' life conditions, although growing these varieties also entails higher costs. Finally, in not a few cases their growing in the medium term results in benefits for environmental protection because of the important potential to adopt *good agricultural practices* (*BPA*).

4. **A profitable and heterogeneous coffee cultivation requires an institutional reform that shall promote competitiveness. For this purpose, it is necessary to orient the reform towards more transparency in the sector's rules of the game; separating the function of the Nation and the association and granting a greater role to the regions. This reform does not imply the disappearance of FNC or FoNC (the proposal is to maintain the current amount of coffee contribution) or the elimination of the parafiscal component.**

Colombia had some years ago a successful institutional model that contributed in gaining space in the global market with a profitable and homogeneous supply and allowing it to manage the surpluses of the quota commitments in the different coffee agreements. The country's performance in these markets has been deficiently dynamic since the rupture of the International Coffee Agreement in 1989, and the institutional structure designed during all of the XX century now seems oversized, scarcely transparent, and excessively dependent of the Nation's resources and it does not promote innovation.

Given the characteristics of the global markets (in particular, due to the importance that differentiated coffees now have), and given the need to interact in a world that is day by day more competed in which Colombia is a high-cost country, Colombia needs to seek the way to promote innovation. At the same time, it must seek a competitive and sustainable coffee cultivation and should not depend on the Nation's resources. It is furthermore urgent to ensure that the FoNC account is financially healthy so it may continue contributing to solve the sector's needs without constituting a risk for public finances.

In the opinion of the *Technical Secretariat* this is impossible without a major institutional reform that at least complies with the following principles:

- (i) Coffee exports shall be de-regulated and exporters shall be subject only to the general requirements demanded from every exporter.
- (ii) FNC's commercial and industrial activities shall be subject to the same tax regime as that of any private actor.
- (iii) Coffee policy shall be the government's responsibility.
- (iv) The government shall be responsible for designing and enforcing the social policy targeting coffee growers.
- (v) A reform of the finances of FoNC shall be performed to ensure its sustainability in the future, concentrating the resources in the most important public assets, such as

[44] See Robledo y Von Heimann (2014).

researching, technical assistance (including the adoption of *good agricultural practices*) and the promotion of coffee in the internal and global markets.

(vi) Cenicafé shall respond to a directive board with representation of all the productive chain agents, and its activity shall be subject to regular and independent impact evaluations. Furthermore, it should be largely integrated with other research centers in the country and could link more private sector resources to co-fund its activity.

(vii) Cenicafé shall develop a pertinent and relevant research agenda that deeply delves into the regional characteristics in coffee production and that takes into account the characteristics of the international demand. Its main research lines shall be the production and the protection of the environment (as currently happening).

(viii) The “Servicio de Extensión Rural” (rural extension service) shall be provided free of cost for the coffee growers owners of ten hectares or less and shall focus on the actual coffee activities and on similar services to those generated by Conab & Educampo in Brazil. Cenicafé and the Servicio de Extensión shall receive additional resources besides those that it currently has.

Apart from the above the teachings contributed by the experience of highly decentralized models like Brazil and due to the enormous institutional strength of the Department and Municipal Coffee Committees, Colombian coffee cultivation in the future shall be day by day a coffee cultivation of “regions.” Major competition among such regions shall contribute in raising the level of competitiveness of Colombian coffees. Therefore, in this document we suggest the convenience of strengthening this regional institutionalism even more, focusing on coffee competitiveness.

A specific recommendation to give the regional aspect more importance (facing the central administration) shall be to increase its weighting in the Colombian coffee institutionalism’s global budget and to accompany this with formulas that may lead to a greater regional autonomy. One could state for instance that the executive directors of the departments depend on the Department Committee and not on the Central Administration. It would furthermore be convenient to focus decentralized resources in improving productivity, making them focus on research and technical services for coffee growers. The research projects must gather the concerns and specificities of each region and that the Servicio de Extensión shall respond even more to each Departmental Committee.

5. **It is important to prevent the *social capital* structured in the coffee regions from continuing its deterioration. To achieve this, the functions of the State and the association shall be clearly separated. The State must finance roads, provide irrigation services and the rest of public goods that are required in the coffee growing zones. In addition, it must continue the poverty eradication work that it has performed with relative success during the last decade and be responsible for designing the coffee policy. On the other hand, the association shall focus on increasing coffee competitiveness.**

The participation of public expenditure in agriculture, with respect to the total expenditure is much lower than the participation of the sector in the GDP. Furthermore, over 90% of the expense is assigned to direct fiscal support and only 10% to public assets. Finally, the expense in science and technology in the sector is much lower than in other Latin American countries. Coffee cultivation will not be viable if these trends continue and if agriculture continues being isolated from the global trends in what refers to technology change, innovation and productivity. The Nation must be responsible for providing public assets that are required by the rural sector and coffee cultivation, and the association shall exert its efforts to increase an environmentally friendly coffee competitiveness.

In the coffee sector, the productive development policy and the social policy have been mixed up but should be separated because they respond to different objectives. The coffee policy is the Government’s responsibility. The association shall interact as any other private actor, with competent government authorities, to take into consideration its petitions and needs. In the current institutional arrangement, the government is engaged in the decisions made by the National coffee committee (Comité Nacional de Cafeteros) although its influencing capacity is limited due to having only half of the votes - (Lora, Melendez, y Tommasi, 2013).

6. **It is necessary to eliminate the conflict of interests in regulation and exports, and the quality regulation of coffee exports shall be made more flexible not only for the purpose of improving the sector's competitive ambiance but also to promote innovation in varieties and ways of producing to meet internal and external market demands.**

As mentioned by Lora, Meléndez y Tommasi (2013) "the design of the policy, the definition and application of the regulation and control of the foreign trade are ongoing sources of conflicts of interest originated by not recognizing that FNC is another player in the market: public policy tasks have been assigned to it as if this were its exclusive role. This gives rise to a situation of unequal competition facing private agents. The absence of a fierce competition goes against the efficiency in the FNC's own commercial operation and is one of the explanations of why the industry has adjusted so slowly to the new global market conditions after the dissolution of the International Coffee Agreement."

In fact, Colombia has separated the regulation and commercial functions in all the other sectors, with very good results. The Ministry of Mines and the ANH are responsible for oil activity regulation, and this resulted in a greater dynamic in Ecopetrol (that before was both judge and defendant). On the other hand, the public and private companies compete with equal conditions in the sector of electric power and gas, and the public utilities have turned into efficient international companies. Full competition in coffee trading will bring similar advantages.

Coffee exports must be deregulated and exporters shall be subject only to the general requirements demanded from any exporter in Colombia. They shall not have to record their transactions before FNC, nor be authorized by FNC to perform them. Quality standards associated with the brand "Colombian Coffee" shall exist or with other brands, but in no case shall these standards constitute a barrier for exports: all Colombian coffee finding a demand in global markets may be exported.

Current regulation builds a barrier to innovation and impedes the development of "different" coffees (not necessarily having a better quality). Therefore "caracol" coffee that at a certain point and time was considered of an inferior quality is today "special." It has not promoted internal consumption that is today one of the lowest in the continent, to the extent that there is scarce diversity in the product's internal supply. Finally, many producers will no longer receive an additional income, equal to 80% of the coffee contribution, when they are unable to sell pasilla and "inferior quality" coffees in the international markets (Robayo, 2014).

7. **To maintain its value, the commercial activity currently performed by FoNC shall operate with incentives similar to those of the private sector. To promote a more competitive environment, all those dedicated to this commercial activity must act in equal conditions, and it is worth saying that they shall pay taxes and not leverage on public resources – para-fiscal resources.**

Since its origins, FNC-FoNC has successfully exported creating value for Colombian coffee. Our proposal aims at consolidating this major asset because since several years ago a demand made to the commercial activity is to generate profit enabling thus the financing of part of FoNC's deficit. This could lead to the disappearance of this valuable commercial activity as it has occurred in other parts of the world with such successful entities like Petróleos de Venezuela (PDVSA) in our neighboring country[45]. As mentioned in proposal 6, Colombia has made important progress in this same direction in the mining and energy sector.

As in any successful business, the activity requires equity flexibility and autonomy, even more so in a global environment that is day by day more competed and volatile. To continue growing it is necessary to

[45] PDVSA had its surpluses extracted for years to fund social programs of the Venezuela government thus decreasing its capacity to compete in the global market – this has resulted in a very precarious situation in which it operates currently.

reinvent the profit in the same business and take decisions as with any private exporter. It is about creating the commercial company owned by coffee growers mentioned in number VII.D.

In addition, the national coffee sector activity is not performing on a flat plane facilitating competition: there is an agent that does not face the same level of risk in its business decisions like its competitors face, because it has the coverage of public resources and enjoys special tax conditions facing its competitors.

The commercial and industrial activities of FNC shall be subject to the same tax regime than that of any private actor. This includes the coffee exporting business, the activities of Almacafé & Buencafé and any other profit seeking activities pursued by FNC.

8. An environmentally sustainable coffee cultivation requires good agricultural practices (BPA).

Colombia's coffee cultivation competitiveness may be at risk if the threshold of the natural ecosystems are trespassed, those generating the necessary environmental goods and services required for the coffee production such as water supply and soil with sufficient quality and quantity, and other services such as the pollination and control of bugs provided by biodiversity. With a greater soil degrading, as well as waste of hydric resource and biodiversity, greater will be the risk of losing earth productivity, reducing the water sources and other environmental services. Degrading the environmental supply also increases the crop's vulnerability to face the climate change. Greater coffee regulation flexibility may contribute to mitigate some undesirable environmental phenomena.

Taking the *good agricultural practices* to all producers in Colombia must be one of the coffee policy's objectives in the medium term. This implies actions in several fields. The research by Cenicafé must have a very important line oriented towards that purpose and coordinated with other research entities in the agriculture and cattle farming sectors. In addition, it is necessary for Cenicafé's recommendations to become more effective, influencing coffee growers through its Servicio de Extensión (extension service). Lastly, it is essential to seek more energetically in Colombia true producer associations that promote these practices jointly in such a way as to have a major impact and result in protecting the environment and improving competitiveness. In other countries, the producer cooperation system fulfills this function, but in Colombia, coffee cooperatives promoted by FNC-FoN*C* are excessively concentrated on coffee trading.

9. The just-for-purchasing guarantee must be maintained in places where there is a clear evidence of "market flaws"

Purchasing guarantee constitutes a mechanism to protect small producers when there are few buyers, as these would be willing to pay less and could do so, given their market power. Nevertheless, the evidence gathered by Echavarría (2014) based on 4.5 million invoices of the PIC, shows a high level of competition largely of the coffee municipalities; conditions do not exist in all the country for buyers to be able to exert that power. Furthermore, coffee exports are less concentrated than chemical product exports, than most of the industrial products and almost all the rest of the commodities. In this same sense, coffee differs from other agricultural products due to being a very "liquid" and nonperishable product, because it loses scarce value when its sales are postponed for a few weeks.

Given all the above, the Mission recommends that this purchasing guarantee just be maintained in municipalities where there are few buyers. This supposes a more rational use of the instrument reducing the high costs associated to the need of maintaining the 513 purchase outlets that currently exist in the country and would result in the new FNC just buying close to 5% of the Colombian coffee.

The Secretariat considers that many myths exist around the topic that need clarification. The purchasing guarantee has been erroneously promoted as a mechanism that benefits producers like a "floor price" or like a substitute for the past price stabilization. When considering the purchasing guarantee as a 'floor' price, it is not taking into account that this is the quote of the NY price placed in Colombia, that is, the price that would result from competing in the market. It is not a stabilization mechanism, because the internal price is equally unstable as the international price in pesos (i.e. multiplied by the exchange rate; Steiner, Salazar y Becerra (2013).

In addition, the purchasing guarantee does not assure that producers will receive the highest price possible, and in fact, the price producers receive with respect to the international price in Colombia, is lower than Brazil, Vietnam, Guatemala, India or Mexico, where there is no purchasing guarantee. This is partially due to that, to increase the export activity's profitability, in recent years FNC-FoNC has paid a lower price than the price that would have been paid in the internal market.

10. The price stabilization mechanisms are not viable in practice and the PIC experience shall not be repeated

There is ample consensus on the failure of the different price stabilizing mechanisms at a global level. For this stabilization to be successful, it is necessary to recognize variables that are not observed in reality such as prices of products in the long term in free market conditions and the time that these will take to return to the median[46]. It is therefore not surprising that most countries that have tried to implement stabilization schemes have eliminated them and have tended instead towards the liberalization of internal prices. This does not mean that the governments have completely abandoned their interventions in coffee matters. But, the adopted policies they have sought – to the extent possible – even with subsidies, are to promote market mechanisms (i.e. credit or financial coverage) at a lower fiscal cost.

Instead of subsidies to the market mechanisms or public assets, in recent years in Colombia the price has been directly subsidized. In 2013, PIC was paid for $ 1.3 trillion to 348,449 coffee growing families, a sum similar to a program such as Familias en Acción ($ 1.7 trillion), and higher than half of the total investment budget of $2.3 trillion that the Ministry of Agriculture has (without including the PIC). In addition, the PIC impact has been absolutely regressive.

The Technical Secretariat proposes, like in Brazil, to implement a minimum price policy that operates in few opportunities, when the internal price is lower than the variable costs. This required a cost information system similar to that existing in Brazil's Conab.

As mentioned in the Introduction of this document, the coffee association faces huge challenges in the future, some of which may be set forth in these terms: how will it be possible for Colombia to win back the share it had in the global markets in the past, producing those volumes in a profitable way even in periods of low international prices, with important premiums for producing high quality coffee in an environmentally and financially sustainable way? This would imply producing today approx. 25 million bags/year (our global market share was 17.4% in 1990-1994), with international prices that could be even below one dollar per pound. The future is very uncertain and this possibility cannot be discarded. In fact, early in the last decade, Silva *et al.* (2002) considered that the coffee price per pound would never be above one dollar.

[46] In the case of coffee there are some estimates that show that this process is especially slow (over twelve years).

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