

coffee

In Colombia The Economic Foundation of Peace

Marcelo Giugale, Lafourcade, and Luff, eds.

The World Bank 2003.

Coffee

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The document, prepared in early to mid 2002, is complemented by two separate World Bank reports—the “Colombia Coffee Sector Study,” by Daniele Giovannucci et al., which is a sector report that provides a more thorough and in-depth analysis of the sector, and “Global Supply and Demand: New Paradigms in the Coffee Markets,” by Bryan Lewin and Daniele Giovannucci, which assesses the larger global situation in terms of both the dominant supplying countries and the evolution of demand. This chapter reviews some of the recent findings and reports on the Colombian coffee sector and also suggests a menu of policy options available to it.

I. Background

a) Anatomy and Evolution of the Sector

Colombia is the third-largest coffee producer in the world, and by far the largest producer of washed arabica coffee. Its share of the international market went from 10.6 percent during the first half of the 1970s, to 15.2 percent in the first half of the 1990s, falling to 11 percent during the last two years (Clavijo, Jaramillo, and Leibovich 1994; Pizano 2001). Since serious commercial production began there in the 1870s, it has slowly developed a sterling reputation for consistency and good business practices. Coffee has long been identified with Colombia; it was instrumental in fostering much of the country's industrial development, and many of its important industries today were funded by coffee earnings. Indeed, for many decades coffee has been the most important sector of the Colombian economy. Through the mid-1980s, coffee policy was synonymous with macroeconomic policy. Since then, coffee's relative macroeconomic importance has declined.¹

Today coffee derives its importance not only from being one of Colombia's main exports, but also because fully 18 percent of Colombia's rural households depend on it for their income. According to the 1997 *Encuesta Nacional Cafetera*, Colombia's coffee zone had 566,230 coffee farms, with 423,368 households living on them. Its non-perishability and cash value make it the most important crop in the highland areas. In some of these regions with proximity to areas of illicit crop harvesting, the labor force that is normally well employed in coffee production has been attracted to this illicit alternative now that coffee prices and farm employment are at the lowest levels in many decades. In 2001 the real value of the coffee harvest was only 40 percent of its average throughout the 1990s.

1. While coffee accounted for 5.6 percent of total GDP and 13.1 percent of agricultural GDP during the 1980s, it fell to 4.4 percent and 11.3 percent, respectively, in the 1990s (Pizano 2001).

Coffee's importance, especially among the rural population, has made the current price crisis particularly difficult for some of the poorer segments of Colombian society. There is urgent concern that a prolonged crisis could seriously destabilize a number of rural areas. Since the mid-1970s, world coffee prices have decreased in real terms. Colombian world coffee prices are the lowest in real terms since 1821. It may be little consolation, but these historic lows are not confined to the coffee market. Like coffee, many commodities have experienced dramatic lows in recent years, and coffee price volatility has quadrupled in the last decade (less so domestically due to costly price supports). Low prices and volatility most severely impact the poorest segments of society. In Colombia, the inability or failure to diversify and/or add value has left commodity production as the primary source of income for many thousands of poor families.

A coffee farmer audit completed in 2001² noted, in order of importance, the main problems mentioned by small coffee farmers:

- Low coffee prices
- Lack of rural credit
- Commercialization problems
- Lack of community organization
- Low coffee productivity.

The inability to earn reasonable returns and reinvest in their farms leads to many well-documented problems, including rural migration, reduced education and healthcare, and unsustainable natural resource use with corresponding environmental problems. How best to manage the negative consequences of fewer coffee commodity market options and volatile coffee markets is a key issue for Colombian farmers and the allied coffee industry. This need is particularly pointed in light of emerging information that global shifts in production and consumption patterns indicate that the depression of prices could be of considerably longer duration than normal.

There is no single solution that applies to all 11 million bags of current annual production in Colombia; rather there is a menu of viable options. Many of these options respond to market demands that have changed markedly in recent years from the commodity-based systems that have traditionally dominated the global coffee trade. Some new paradigms are emerging.

b) Global Context and Trends

The coffee industry is undergoing some fundamental changes in the nature of the business, and it is important to recognize the extent and consequences of the emerging paradigm shift.³ These include:

- Dramatic increases in tree plantings that now practically ensure structural long-term overproduction potential, particularly in unwashed arabicas and robusta.
- The quality of these less-expensive coffees is steadily improving.
- The ability and willingness to substitute traditional coffee origins in most industrial blends.

2. Common Fund for Commodities, Commonwealth Agriculture Bureau International, ICO/02 project as noted in Baker (2001).

3. A considerably more in-depth treatment of this topic occurs in the companion document, "Global Supply and Demand: New Paradigms in the Coffee Market."

- Increased concentration, especially among roasters and traders, which reduces market options.
- Market concentration, inadequate information, and speculation will likely fuel continued high volatility in the absence of an international agreement.
- Lower green beans prices no longer necessarily correlate with lower roaster and retail prices that would usually stimulate increased consumption.

i. Support and Stabilization Schemes

In the past there have been several international attempts to stabilize world coffee prices through the International Coffee Agreement (ICA). The ICA succeeded in keeping coffee prices higher and stable, although price stabilization benefited mostly exporting countries with established higher quotas, and penalized new entrants (Akiyama and Varangis 1990). Since 1989, the ICA has not included economic clauses that would regulate the coffee market, resulting in greater world price volatility and overall lower prices during the 1990s. From 1993 until its recent demise, a producers' organization, the Association of Coffee Producing Countries, tried but failed to regulate the world coffee supply through a retention scheme.

In addition to international efforts, several coffee-producing countries (including Cameroon, Colombia, Cote d'Ivoire, and Papua New Guinea) have used price stabilization funds. Almost all of these stabilization funds ran into serious financial difficulties. In most cases, the funds eventually went bankrupt. While it lasted, Colombia's was certainly the most successful, but its net worth has dramatically decreased and it can no longer perform its stabilization function.

During the 1990s, several coffee-producing countries (Costa Rica, El Salvador, Guatemala) tried to support domestic prices.⁴ Mexico and Nicaragua used funds differently to support the income of small coffee producers by giving a fixed payment per hectare with caps on maximum farm size rather than production quantity. More recently, Guatemala is using a fund to promote diversification, agroprocessing, marketing, and debt restructuring. The various experiences with price support schemes and stabilization funds provide us with the following lessons:

- Most price stabilization schemes aim to support domestic prices when world prices decline. The objective of higher prices rather than stable prices is almost impossible to maintain (Wright and Williams 1990; Deaton 1992; McIntire and Varangis 1999; among many others).
- If support is deemed absolutely necessary, the better approach is to support the income and/or the diversification of coffee farmers instead of supporting prices. Mexico and Nicaragua, for example, have provided a support linked to amount of hectares under coffee so that there is less distortionary incentive to increase production in order to receive more.
- Any price support scheme that maintains a higher price level removes the realistic incentives for necessary adjustments in terms of diversification and reducing production in marginal areas.

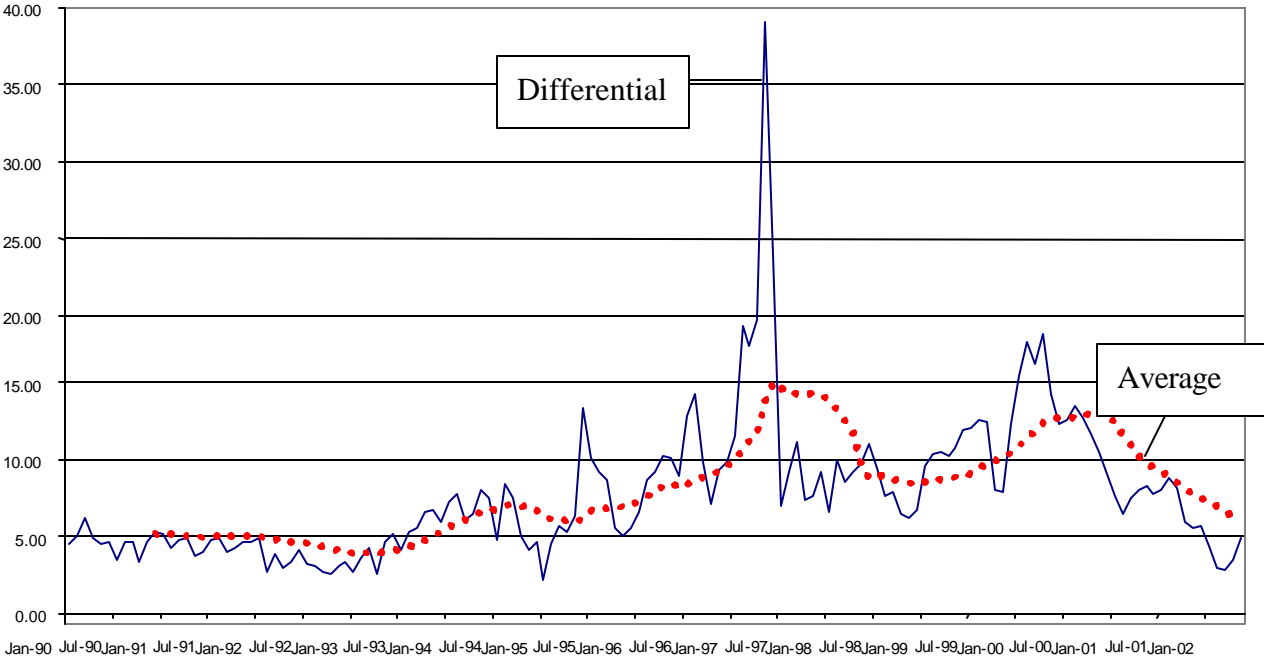
4. Costa Rica's National Fund for Coffee Stabilization (FONECAFE) paid farmers \$6.38 per quintal during 1998-99 and 1999-2000, and \$18.76 per quintal during 2000-01, with the obligation of a repayment by farmers if world prices increase above \$92 per quintal. Similar efforts by El Salvador and Guatemala were all funded through the issuance of bonds.

c) Production and Demand Trends

In the last 20 years, world production has increased from 86 million bags to about 122 million bags today (USDA 2002), giving rise to surpluses on the order of 10 million bags in 2002, and more in 2003. For the near to mid-term, most predict that price recovery will be slow. Production may drop below demand by 2003/04, but significant accumulated stocks will remain a negative influence on prices.

When looking for an answer to coffee’s dismal prices, most fingers point first to Vietnam, whose dramatic 1,400 percent robusta production increase in a decade (1990–2000) appears to have surprised the industry. While Vietnam’s meteoric rise to number 2 producer, with 14.7 million bags in the 2000/2001 year, makes it the most visible contributor to overproduction, it is by no means the only one (see Figure 1). Brazil, for example, has added more to the global supply over the last five years than Vietnam has (Giovannucci 2002), and its production increase in this year alone (about 13 million bags) exceeds Vietnam’s total output for this year. Also of note is that since the 1997 low point for consumer stocks, the stocks of arabicas (particularly Other Milds) have been growing faster than robustas. Consumer stocks of Colombian coffee fell sharply in 1995 to about one month’s supply, where they have remained since. This, along with reduced Colombian stocks, may have contributed to raised differentials in relation to the Other Milds, as can be seen in Figure 1. However, recently that premium has been lost as the prices of other good-quality washed arabicas have risen as production of washed arabicas has fallen.

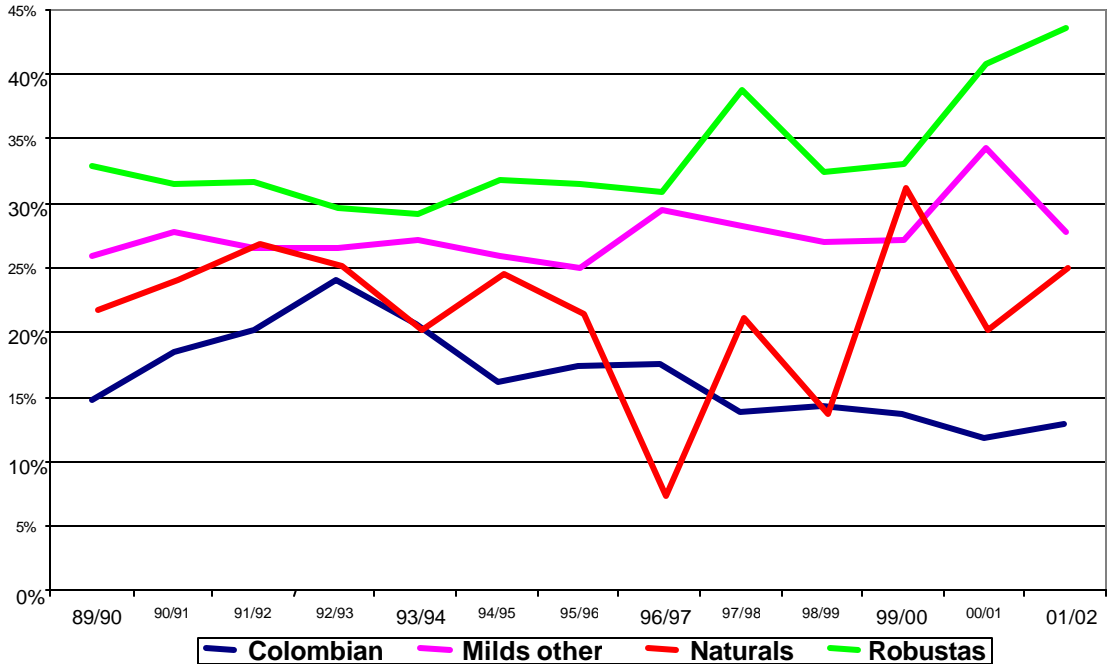
Figure 1. Differentials—Colombia and Other Milds



Brazil produced a bumper crop in 1998/99 of about 38 million bags from about 3.4 billion trees. Recent estimates suggest there are approximately 4.6 billion trees now in production, with about 1.3 billion more still developing. Of these 6 billion trees, many new ones went into northern frost-free zones and the highly productive areas of the Cerrado (Giovannucci 2002). Brazilian

cooperatives in Sol do Minas are now introducing washed coffees, and perceive a production capability of about 2 million bags. The quality of the unwashed and semiwashed coffees has improved, and is now able to take a much larger part of commercial blends than before, displacing other washed coffees and even robustas according to relative prices (see Figure 2).

Figure 2. Importer Demand for Exportable Production



Source: B. P. Lewin, World Bank.

Until the arrival of the 2002/03 Brazil crop, the most notable increase has been in robustas, where Brazil, India, and Vietnam, particularly, have seen substantial increases. Exportable robusta production now accounts for nearly 40 percent of import demand, which historically has not averaged much more than 33 percent. Brazil’s naturals, much improved in recent years, are likely to take an increasing blend share as noted in the Figure 2 trend.

This increased capacity has strong implications for future supply. Historians would note that this boom–bust cycle has plagued the industry for more than a century, including Colombia’s own, although more modest, 50-percent-plus production increases in the 1970s. Indeed, it is not just coffee that suffers this cycle; it is almost an a priori definition of commodities. The availability of these coffees and flexible usage patterns have come following a period in which high volatility and high prices forced coffee roasters in importing countries to make a number of changes in their business, and this is another key part of the paradigm shift.

Through the use of new technologies, industry has been able to lower its necessary working stock levels and has also been able to introduce more flexibility into its blending—by, for example, steaming robustas and some low-grade arabicas to reduce their harsh taste. Analysis of imports from Colombia and other washed arabica producers into countries such as Germany suggests that roasters are finding replacements for the average quality output from Colombia. It is not clear whether they would switch back if Colombian output rebounded above recent levels. This implies that Colombia must be savvy about its strategies in these markets.

Conceptually, the overall market can be perceived as a quality pyramid with inexpensive soluble coffee at the bottom, standard commercial blends in the middle, and progressing toward

high-end differentiated coffee at the top. While the top and bottom are growing at a healthy pace, the vast middle section has been stagnant. Colombia’s general position is primarily in this middle tier, and therefore finding sustainable future growth presents a challenge.

i. Concentration

The fact that technology has led roasters to become more flexible in their approach to blending has increased the requirements of agile just-in-time logistical capabilities of suppliers, which has consequently favored the largest trading companies, leading to concentration of the supply chain in fewer major traders. The shortening of the trade chain and the loss of some market players has also led to a concentration of the marketing margins in the hands of the more powerful players. Today, retailers, with their ability to manage consumer information and prices, are in the driver’s seat. Their ability to develop private labels and otherwise bypass the traditional trading channels is fast emerging as a critical issue. Only the more organized producer groups will have the capacity to deal with them directly.

<p>Table 1. The Increasing Concentration of the International Coffee Business</p> <ul style="list-style-type: none"> • 5 traders dominate 48 percent • 5 importers manage 46 percent • 5 roasters control 55 percent <p><i>Source: Pizano (2001).</i></p>

Globally, the food industry is consolidating at every level. While this trend increases efficiency, it also reduces the leverage of producers and makes it increasingly difficult for smallholders and small and medium-size enterprises to participate in the markets. As the dominant players downstream in the supply chain capture more value and enforce exclusivity on their suppliers in order to maximize profits, increase entry barriers, and mitigate risk (that is, food safety, market risk, financial), they are fast emerging as the dominant form of competition. To be competitive today, producers need to address supply-chain development at every level so that they add value to agricultural products as they require individual participants to coordinate their activities in a continuous improvement process.

A declining share of earnings is further aggravating the dire situation of Colombia and other producer countries. In the 1980s consumers spent approximately \$30 billion per year on coffee, and producing countries earned approximately \$9 billion, or nearly 30 percent of this. Today consumers spend an average of \$55 billion a year on coffee, and producing countries earn approximately \$6 billion, or 11 percent of this (Gemeil 2001).

d) Macro Trends in Established Consumer Markets

If, indeed, consolidation is now a dominant competitive paradigm, other options are fast emerging for smaller producers and enterprises to exploit channels that large supply chains and mega-enterprises find less cost-effective than mass production. One such channel is differentiation, where producers can develop a competitive advantage that is not easily affected by generic competitive factors (price, distribution, and so forth) that dominant actors often command.

Quality and value will continue their emergence as competitive standards with continued, although more modest, prosperity in the European Union (EU) and in the United States, where postwar baby boomers will drive growing demand for “highly targeted and specialized products”

(*Food Distribution Magazine* 2001), and mass market brands are particularly vulnerable to intense competition. This is supported by industry research pointing out that individualized tastes of the percentage of the U.S. population consuming gourmet coffee⁵ has grown considerably in recent years, from 31 percent to 46 percent.

According to the U.S. National Coffee Association, coffee-drinking habits are elastic among consumers under age 35. After age 35, the proportion of people who convert from non-coffee drinkers to regular coffee drinkers is low, suggesting that in relatively mature markets like the United States, the coffee industry will have to capture more young people as they enter adulthood.

Another area of strong growth is the market for soluble coffee. This is growing at the high end for more mature markets and among the most basic quality levels in the emerging markets. Some of the high-end markets such as the United Kingdom use a considerable proportion of arabica beans in their soluble offerings.

Increasing food safety concerns (mycotoxins, bovine spongiform encephalopathy [BSE, or “mad cow” disease], hoof and mouth disease, genetically modified organisms) stimulate strong market responses. This implies a fundamental shift in the role of grades and standards from reducing transaction costs to serving as strategic tools for market penetration, system coordination, quality and safety assurance, and product niche definition. These are being driven by three sets of changes in the global trade regime:

1. A new **regulatory** environment, with the World Trade Organization and its Sanitary and Phytosanitary/Technical Barriers to Trade agreements, regional trade agreements, and even governmental requirements (EU standards for ochratoxin, maximum residue levels, and so forth) make entry into fast-globalizing markets more demanding than ever for products across the agricultural spectrum.
2. A new **business** environment features increased legal liability and requires “due diligence,” such as the international standards organization and hazards analysis at critical control points, that are some of the institutional methods of standardizing. Supply chain concentration also demands ever-increasing levels of standards and performance measured by global rather than local performance standards. Individual firms and chains (supermarket, fast food, and so forth) are increasingly creating their own standards that they impose on the agrifood chains that they dominate in developing countries (the Ethical Trade Initiative and Euro Retailer Produce Working Group).
3. There is a new **consumer** environment that features increased food safety concerns, a focus on health and diet, and increasingly globalized consumer tastes. In more developed markets, experts predict that social and environmental concerns, especially ethical ones will continue to emerge as not only competitive differentiators but as basic rules of the game and prerequisites for participation.

Coffee sales are affected by these concerns even if coffee is not directly. There is great interest in the economic, social, and environmental benefits of differentiated and specialty coffees and their volumes have grown dramatically in recent years. The markets for these products should be approached with caution since they are still limited and can involve considerable farmer effort to adapt to their more stringent requirements. However, their development often provides additional

5. Defined as “premium whole bean or ground varieties” in the 2001 “National Coffee Drinking Trends Study,” The National Coffee Association, New York.

benefits or externalities beyond competitive advantage; that is, improved natural resource management, community or organizational development, and increased rural self-sufficiency.

i. Differentiated Markets

Some leading buyers are either implementing or considering sustainable sourcing guidelines that differentiate them from other sources of supply, and may push the demand for coffees like organics that fit these criteria. The differentiated markets, led by continued strong growth in the United States that is now spilling over into Europe and parts of Asia, offer excellent circumscribed opportunities for higher-quality producers, although volumes in most of these markets are still very modest.

The differentiated markets could be one valuable tool with which to earn higher revenues and a superior market reputation. In the case of Colombia, these can serve as valuable levers to help it benefit from its quality-oriented competitive advantage. These markets can and often do overlap each other. They include:

- Geographic Indications of Origin
- Gourmet and specialty
- Organic
- Fair trade
- Ecofriendly or shade grown.

A brief discussion of their primary characteristics and their current trends is presented in Annex I. The reasons for their importance as part of a strategy include:

- Consistent high growth rates
- Price premiums
- The need to address global social and environmental concerns
- The need to access market niches that are competitively different
- The need to provide positive externalities in the field.

II. Main Sectoral Issues/Diagnostic

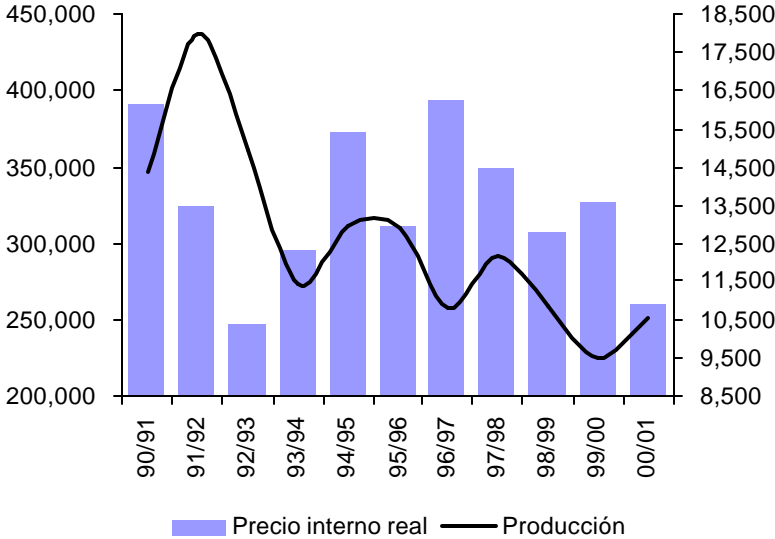
Given the context laid out in Section I, there are several key areas where policy improvements could leverage significant changes in the sector. The first is understanding the nature of the price crisis and recent government efforts to support the sector in terms of the economic and social consequences, particularly how these affect the most vulnerable segments of rural society. This section also looks critically at the entire supply chain, understanding that any lasting improvements must take into account a holistic view since the sector is very much interdependent and changes will not occur in a vacuum. Finally, the institutions that implement policies are reviewed in terms of their relative strengths and weaknesses, especially in terms of their ability to effectively represent their constituents and respond to the changing nature of demand.

a) Domestic Impact of Low Prices Trends and Volatility

As profitability in coffee production decreases, field cultivation practices which demand labor and fertilizers decrease as well, affecting not only physical coffee quality but also its organoleptic (sensory) quality. This decrease in quality is already manifesting itself, and in the future its effect will only grow, given the cyclical and slow-developing nature of coffee trees. Consequently, these current responses in the field to low prices will affect coffee quality several years into the future, and will continue to jeopardize farm incomes even when the crisis passes.

Production levels have declined during the last four years, (see Figure 3), although this appears to be leveling out for 2001/02, at about 11 million bags.

Figure 3. Producer Price (\$1998 = 100) and Production Volume



Source: NFCG.

Producer price volatility, in turn, has increased significantly, as measured by a volatility index, which rose from 10 percent in 1995 to 32 percent in 2000, and is now equal to the world price volatility index (see Table 2).

In the last decade, coffee production area has declined 17 percent, or about 17,000 hectares, according to Food and Agriculture Organization (FAO) data. According to the Encuesta Nacional Cafetera (1997), since 1970 there has been an increase in the number of coffee farms from 297,000 to 668,000, and a reduction in the coffee-growing areas from 1.05 million hectares to 870,000 hectares (see Table 3). This indicates a reduction in the average size of farms the primary crop of which is coffee, from 14.8 hectares to 5 hectares, and in the average size of actual coffee plots, from 3.5 hectares to 1.3 hectares.⁶

6. The current Agricultural Production Unit (APU) definition of the farm differs from the one used in 1970. The argument does not refer to APUs, but to farms alone.

Table 2. Coffee Prices Volatility Index (Standard Deviation %)

Year	World Price	Producer Price
1995	35.52	9.69
1996	39.75	19.76
1997	65.12	40.13
1998	36.56	25.40
1999	55.52	26.83
2000	47.86	32.07

Source: NFCG.

Table 3. Distribution of Coffee Plots (by size)

Size of Coffee Plots (hectares)	Number of Farms	Total Coffee Area (hectares)	Green Coffee Production (60-kilogram bags)	% of Total Production
<1	364,300	167,000	1,811,880	15
>1-5	172,200	373,000	4,857,552	40
> 5-10	20,100	138,000	2,011,632	17
>10-20	6,900	93,500	1,561,140	13
> 20	2,800	98,000	1,757,700	15
Total	566,300	869,500	11,999,904	100

Source: *Encuesta Nacional Cafetera (1997)*.

There is no clear evidence that the coffee crisis has induced a process of illicit crop substitution in the coffee regions, although several news stories and National Federation of Coffee Growers (NFCG) reports indicate the possibility is ominous.⁷ But there are indications that the shortage of employment opportunities and rural diversification options combine with the insecurity in many areas to form a self-feeding circle that serves to limit productive long-term investment and results in greater dependence on illicit crops and low-labor activities like livestock. Cocaine has helped produce a Dutch disease effect, contributing to the appreciation of the peso and to higher real wages in the countryside.

In some coffee departments, such as Cauca, Huila, Nariño, and Tolima, and with proximity to areas of illicit crop harvesting, this has created a source of attraction for the labor force employed in coffee production. Hence, illicit crops have pushed up labor scarcity and costs. To date, the main effect of illicit crops is not coffee crop substitution, but a distortion of the labor markets. In the case of the smaller producer, whose source of labor is his own family, and whose family income is generated not only by agricultural produce but also by wages earned outside the farm, he is likely to benefit from this phenomenon. For the larger coffee producer, who is highly dependent on wage labor, this situation will increase his costs of production. Given the few cash crop alternatives in remote rural areas, coffee is one of the few viable legal options for income, but it cannot compete with higher-value illicit crops.

Today, 18 percent of Colombia's rural households depend directly on coffee production for income, be it through coffee harvesting or wage labor. Many of these employment opportunities

7. For example, *El Tiempo* (5 December 2001 and 17 February 2002) ran a front-page story about the crisis in the coffee zone and accompanying ills of drugs and kidnapping—both precipitators and consequences of a bad situation.

come from the larger coffee producers. Labor employed in the coffee sector during the last decade has represented on average about 34 percent of total agricultural employment.⁸ While at the beginning of the 1990s coffee was responsible for about 750,000 full-time jobs in coffee-growing areas (Junguito and Pizano 1991), in 2000 coffee was responsible for 515,000 full-time jobs.⁹ The NCFG estimates that approximately 100,000 more people may lose jobs in the sector.¹⁰

Even if a few small producers have been partially able to compensate their lower income with some illicit resources, the overall effect of lower international prices on the sector's income has been dramatic. As measured by the real value of the coffee crop, the coffee sector's income has fallen 50 percent during the last decade. As a result, the welfare of coffee producers has been severely affected, and there has been a high human cost. Due to the reduced profitability of the coffee sector, it is estimated that the number of households in coffee-growing areas living under the poverty line rose from 54.2 percent to 61 percent between 1997 and 2000 (DANE 2000).

b) Smallholders and Their Integration with the Process of Rural Development

Smallholders are often marginalized in their attempts to benefit from the growing international trade in the products they grow. Integrating smallholders and especially coffee producers into global markets for their products implies an integrated process of rural development. This involves enhanced information flow and training to assess these markets and the tools (technology, infrastructure, and finance) to access them. Their ability to organize effectively into associations and cooperatives is the key factor for most to be able to take advantage of these benefits.

Building the institutional capacity of these organizations will be critical in order for them to properly manage their affairs, democratically represent their constituents, and use commercial, negotiating, and marketing skills. Government can partner with a number of institutions (international and domestic) that can deliver this training at the grass-roots level. There are obvious crossover benefits of such strategies, including rural finance, input purchase consolidation, marketing, democratic process, and so forth. These spill over beyond any one sector and benefit rural areas as a whole. The NFCGC can continue to provide a macro coordinating role if the organizations choose to use them

Coffee has the distinct potential, as Colombia's leading agricultural sector, to demonstrate the methods and workable options available to farmers in other agricultural subsectors, and in that way to facilitate more advanced and remunerative agricultural development and options for diversification. This is particularly true where one of the necessary requirements will be improved grades and standards that can (a) create a market niche or conversely prevent entry; (b) differentiate products to earn a premium; (c) assure the quality and reputation of products or organization, (certification, seals, brands); (d) communicate product characteristics necessary for efficient transactions (quantity, authenticity, labeling, standard packing); and (e) protect the safety of consumers (labeling, phytosanitary requirements, pesticide standards).

Some of the differentiated markets, such as organics, provide many of the necessary training steps to establish and maintain international-level standards, such as field-to-consumer traceability, farm inputs accounting, and residue-free harvests.

8. Excluding animal husbandry.

9. Office of Advisors in Coffee Matters (2000).

10. Personal communication from Diego Pizano (5 March 2002 email commentary).

c) Policy Initiatives with Stabilization Funds and Subsidies

Past policies in the Colombian coffee sector were aimed at stabilizing coffee prices through a floor price mechanism to farmers from the *Fondo Nacional de Café* (National Coffee Fund, FNC). Throughout most of its existence, the FNC has met its goal as a price stabilization scheme, as evidenced by the fact that the internal price volatility over the past 26 years has been half that of world coffee price volatility as measured by the coffee futures index.

However, coffee price stabilization has come at a cost that at times of low world prices has been very significant. The precarious financial condition of the FNC rapidly deteriorated after 1999,¹¹ in part as a result of low prices that eliminated much of its special coffee tax revenue, and eventually the floor price mechanism was abandoned in January 2001. This meant few resources left for the implementation of coffee policy, so the Colombian government came to the rescue with a support package (see Annex II) and the FNC secured a credit line from the banks in order to continue the FNC's most basic functions.

The support package is based on the assumption that world prices will recover to reasonable levels in around three years. This is a risky assumption. Should the expected price scenario not occur, the sector would be left with an unsustainable supply structure that would have been created with public incentives. Despite the official warning that the subsidy scheme has a limited time horizon, it may turn out to be politically difficult to remove, should market conditions not improve as expected.

d) Institutions and Their Roles

The NFCG implements regulatory policy for what has been called the most regulated sector in Colombia, according to the decisions of the National Coffee Committee, the public-private body that acts as the managing board of the National Coffee Fund. Hence it is the dominant institution by far. Since NFCG has been forced to slash its expenditures, its capacity has suffered and caused a certain vacuum in the delivery of its many public functions (technical assistance, research, publicity for *Café de Colombia*, health and education services, and other special programs).

First, it should be noted that the NFCG has provided excellent social services throughout the coffee-growing regions and helped to stabilize and improve conditions there. It is important that these social services are not lost and that the regional and local organizational capacity is not wasted. Indeed NFCG's expertise in coordinating and executing a variety of social, infrastructure, research and development, and environmental projects is a valuable service that can be sold to various international and domestic agencies, such as the government, and thereby provide a new source of revenue as well.

For decades, the NFCG has guaranteed a "minimum price" for all coffee produced in the country. Although this guarantee may have helped to ensure that producers receive close-to-market prices from all buyers¹² this price smoothing means that the domestic price may not communicate the right signals emanating from the world price.¹³ Given the long-term nature of coffee investment (it takes 3 to 5 years for trees to mature) and volatile or reactionary market signals, short-term smoothing probably does not negatively impact overall sound decisionmaking. Indeed, there may

11. Most of the FNC's accumulated assets, including the bank, financial corporations, and shipping company, were lost.

12. NFCG buys about 35 percent of production.

13. It must be said that Colombia's production has appeared to be more responsive to the crisis than a number of other coffee-producing countries, the output of which did not decline markedly.

have been considerable benefit in having consistent signals and a consistent policy. When this system recently broke down, after functioning for decades, growers were left without the capacity to manage price volatility and hedge their risks. It has been pointed out that other export sectors such as flowers and bananas have faced dramatic price fluctuations and real exchange appreciation, and have shown a significant capacity to respond without government subsidies. While this may be true, those sectors are also more concentrated than coffee. Coffee growers may need support to develop basic risk management capacities.

The recent decision to transfer the full world price to growers is consistent with the assumption that they are mature enough to take the best decisions that maximize their well-being. Of course, this does not preclude the possibility of the *contribución* tax, provided that such a decision is freely taken by the growers themselves and is oriented to the provision of essential public goods, such as research and technical assistance.

Business does not thrive if the tax rate levied on it is subject to constant change. In the case of coffee, its tax has historically changed in a discretionary and untransparent manner. Any tax must be reasonably low and clearly defined so that economic agents (coffee producers, commercial agents, exporters) can define long-term strategies and new investment plans.

It is not clear whether Colombia's highly regulated coffee-marketing scheme is burdensome, but it warrants a review. For example, in principle, the NFCG and private exporters compete for available coffee, but in practice, there is an implicit quota. The mechanism for fixing a premium on Colombian coffee was not transparent, and when fixed above the world market, the competitiveness of exporters was affected. Varying the opening and closing dates for sales can preclude the possibility of fixing long-term contracts. These administrative measures may have inhibited the development of attractive investment possibilities in Colombia's coffee sector.

The NFCG's role as buyer of last resort has been hotly debated for its potential to distort the market. Nevertheless, there is evidence, in the presence of a steadily concentrating market that is characterized by some as oligopsonic,¹⁴ that this has provided a larger share of the market price to producers than might otherwise have occurred. It remains unclear how efficient this service has been. International evidence on this is mixed. The growers in at least two other major Latin American producers (Brazil and Guatemala) receive a similar or even higher percentage of the export price in the absence of institutional price setting, although these are more dominated by larger growers. Colombia has traditionally passed along to its producers a higher percentage of the export price than the majority of other Latin American and world producers. Its 10-year average has been approximately 70 to 75 percent of the export price.

These measures highlight the problematic dual role of an institution that simultaneously serves as a regulatory agency and as a market participant purchasing 35 percent of exports.

The Colombian Coffee Research Center (CENICAFE) is known as one of the world's leading coffee research institutions for its important agronomic achievements. It can leverage this reputation to become even more useful by linking with other international institutions and selling services to all interested buyers, within and outside of Colombia, as a way to finance its research and development programs. Its inventory of basic research and production technology could greatly benefit the coffee sector, especially smallholders, but it has been more focused on the high-tech and

14. A market condition in which buyers are so few that the actions of any one of them can materially affect price and other market factors.

larger-scale developments. Without appropriate evaluation and feedback mechanisms it will be difficult for CENICAFE to be more responsive to its clientele, particularly smallholders.

e) Credit

With the decrease in world coffee prices during the 1990s, most coffee producers had to undergo numerous credit restructurings. This has created a complex set of problems not only for Colombia, but for many other coffee-producing countries as well.

Banks and other rural financial institutions are not willing to extend new credit to the coffee sector as long as prices remain depressed and unless the sector still bears its old and restructured debts. Restructuring may also demoralize good debtors. The formal financial sector does not have an adequate risk model to evaluate creditworthiness in the agricultural sector, including difficulties in forecasting coffee prices, and that, in addition to other sources of market failure, have made it shun the sector. Agricultural producers have turned to informal credit sources such as suppliers of agricultural inputs, with correspondingly higher interest rates.

Recent studies have identified the problem as market failure due mainly to asymmetry in information, lack of adequate guarantees, and perceived low internal rates of return that make agricultural projects financially unattractive (Marulanda Consultores 2000, 2001). Rural security problems are an aggravating issue. It is vital to provide training on the distinct vagaries of agricultural financing (that is, seasonality), and it would be helpful to develop appropriate coverage mechanisms that separate market risks (output, prices, and quality) from financial risks (rates of interest, liquidity, and rate of exchange). Stimulating the financial sector's interest in agricultural projects may also initially require additional incentives.

f) Issues Across the Supply Chain

Although the great modernization effort of the 1970s significantly improved coffee production and productivity, the overall structure of coffee production has remained mostly unchanged except for a clear reduction in planted areas. While land productivity is certainly important from an economic standpoint, other production factors such as labor productivity, differentiation/specialization, and high-quality orientation may be equally valid and worthy of consideration. Colombian coffee growers face a complex scenario nationally and internationally, which nonetheless offers them several profitable alternatives. Some growers will need to become more productive while others will have to depart somewhat from the commodity production mentality and start evaluating the alternatives open to them. However, to aid them in taking appropriate decisions, certain institutional aspects of production need to be addressed and made available to the coffee-producing sector.

i. Production Quality

Quality begins in the field with good agronomic practices and requires well-managed harvest and postharvest processes. As a quality leader, Colombia has initiated a number of such programs over the years. Yet more quality and market-oriented interventions are necessary to maintain and even elevate the market advantage of Colombian coffee because most other producers are also rushing to invest heavily in quality. Among the potential areas of focus are:

- Improving the age, variety, and quality of the tree stock and considering the selective promotion of high-value heirloom varieties in appropriate smallholder growing areas

- Offering options for green production technologies; that is, organic and shade-grown
- Continuing the dissemination of ecofriendly processing technologies
- Introducing more quality promotion techniques; that is, quality-sampling labs in rural areas and quality competitions similar to the Cup of Excellence events.
- Promotion of Geographic Indications of Origin and the regulatory framework associated with them.

i. Fertilizers

For many years the NFCG subsidized the use of fertilizers, perhaps unsustainably since the real beneficiaries in some cases may have been crops other than coffee. A promising soil conservation program that appeared effective and had long-term sustainability was unfortunately stopped because of the FNC's financial crisis. Integrated soil conservation can significantly reduce the need for all externally purchased inputs and therefore reduce farmers' exposure to financial risk incurred when borrowing or spending cash for synthetic agrochemicals.

ii. Productivity

Colombia's physical output productivity increased from an average of 7 bags per hectare a year in 1970 to 12.9 in 1982, and then remained more or less constant until the mid-1990s, when it began to decline. It appears that this decline has been arrested and the NFCG renovation program has been largely responsible for recent increases in these averages since 2000. In 2002, productivity levels reached 13.7 bags per hectare, and 2003 projections are for 14 bags with modest and steady increases over the next few years, due primarily to the number of new trees coming into full production.

The NFCG's assessments indicate that there is room to increase the output considerably in some areas and that a 20 percent further reduction in average costs of production is possible. Increasing output productivity is certainly welcome, but the methods must be well considered given the potential negative environmental externalities of intensified production and that an increase in physical productivity is not necessarily followed by an increase in profitability.

According to data collected and analyzed by the NFCG, the coffee plots belonging to small coffee growers (plots under 5 hectares) have production costs under US\$0.45 per pound, basically because of their use of family labor. Medium-size and large producers (coffee plots bigger than 5 hectares) have production costs of over US\$0.53 per pound; their differential costs are primarily explained by the fact that 95 percent of their labor needs are met by wage labor.

Colombia's cost of rural labor has increased over time, in part due to the ongoing conflict in rural areas causing a shortage of labor supply. This of course affects coffee's costs of production, especially those of the highly productive farms that are intensive in wage labor. Labor costs amount to between 70 percent and 80 percent of final production costs. The rise in labor costs has not been offset by a corresponding increase in labor productivity; hence coffee's higher physical productivities may be producing an adverse effect in its cost structure especially under the present scenario of relatively low world coffee prices.

Proof of this is already appearing as a result of more intensive planting of new stock that has been subsidized by the government at US\$.05 for each tree, representing about 15 percent of the total upgrade costs on a hectare-planting basis.

With international coffee prices below US\$0.70 per pound, profitability in coffee production for medium-size and large producers is too low to be attractive for investment. Intensification and adoption of new technologies in coffee production have been suggested to increase profitability. These may be very useful, especially with the larger technified producers. However, these strategies can have shortcomings because:

- They produce an increased demand for manual labor, thereby potentially narrowing profitability even further for the medium-size and large coffee producers.
- Colombia's topography does not permit mechanization alternatives.
- Care about coffee quality—one of Colombia's comparative advantages—requires a careful process of selection before and during harvesting, which depends on manual labor and adequate infrastructure, and is difficult to control whenever harvests come in great volumes and in short periods of time, as is the case in large-scale, high-volume plantations.
- Production on intensively cultivated farms is cyclic and regular, but as a monocrop is highly sensitive to climatic and environmental conditions.
- Coffee in Colombia is an exotic crop, and as densities increase it is more susceptible to pests that, in the absence of resistant coffee varieties, are more easily controlled under low plant densities.

Decades of promoting higher physical productivities may also have helped to produce environmental stress, in terms of deforestation, water contamination, loss of the soil fertility, and reduction of biodiversity in certain areas. These negative externalities today may be obstacles for the development of certain differentiated and specialty coffee such as organic, and therefore a consistent policy to develop more environmentally friendly types of coffee will be needed to address them. It should be noted, however, that well-managed coffee plantations are often more environmentally friendly than either coca or livestock

iv. Postharvest Infrastructure

According to the 1997 *Encuesta Nacional de Cafetera*, 40 percent of the nation's 566,230 coffee farms have the necessary infrastructure to process ripened coffee berries; 41 percent dry coffee using direct sunlight, and only 2 percent have drying silos. Sun drying makes use of various facilities such as schoolyards, churchyards, patios, roads, and so forth, not all of them suitable for that purpose. A deficient drying process results in a significant increase of *pasillas* (low-quality coffee berries). Due to deficient drying infrastructure, and because of the increasing risk of coffee being stolen from farmers' premises, in some areas of the country wet coffee sales have increased. At present, between 20 and 30 percent of total coffee being purchased is considered inappropriately "wet."

According to the records of the *Almacenes Generales de Depósito de Café S.A.* (ALMACAFE), around 8 percent of the total purchase during 1990–2000 had quality problems; in 2001 this figure reached 8.4 percent of total purchased production (522,763 bags), 40 percent of which were rejections due to "off" aromas and flavors picked up due to poor drying and storage, and most of the quality problems have arisen in a deficient drying infrastructure.

Coffee-cherry processing causes very significant amounts of water pollution, yet many farmers do not have adequate access to ecologically friendly methods. Both high-tech and low-tech methods already exist in Colombia's repertoire but have not reached enough farmers. Today, there

are no economic incentives to rationalize water usage because processors do not pay for their contamination and excessive usage during coffee postharvesting. On the other hand, increasing social pressure has turned it into a priority. In the future, water contamination will be an additional cost facing coffee producers once the already sanctioned water contamination tax begins to be enforced.

v. Marketing

The NFCG has generally done a good job of creating stable and reasonably efficient markets at the domestic level. It holds among its responsibilities transferring a fair market price to coffee growers and guaranteeing the purchase of all coffees offered which comply with predetermined and nationally known quality requirements. Transferring a fair price means transferring to the coffee growers as much of the sales price as possible, only deducting from it the costs of marketing. The general average received by growers over the last 10 years has been between 70 and 75 percent. This percentage may vary significantly, depending on the exporter and whether intermediaries are used.

Colombia's publicity campaign is undoubtedly the world's best known. Indeed its trademark and logos are as widely recognized as many highly valued consumer brands. This is certainly no small feat and merits recognition. Coffee producers have invested approximately US\$500 million in Colombian coffee's promotional strategy since 1959. While no one questions the phenomenal success of Colombia's publicity campaign, its considerable expense inevitably raises the question of cost-benefit. Although such analysis would not be easy, despite several studies that conclude it was beneficial, none has ever fully calculated whether it was cost-effective.

Colombia's brand development and unified marketing are positive byproducts of a centrally controlled coffee industry and set it apart from most other coffee-producing countries. There is concern that it may have lost touch with the market's direction in recent years when it did not generate new strategic commercialization initiatives to address the erosion of its leadership position in the quality arena. Given its loss of share in major blends to lower-quality competitors the quality arena is probably where it has its best competitive advantage. After heavy investments in its consumer branding that have resulted in unparalleled awareness, it has only recently begun to explore new opportunities for its brand to directly capture value in downstream activities, and this should be further stimulated and encouraged.

For decades, Colombia developed a quality niche as producer and supplier of green beans in world coffee markets. Meanwhile, on the demand side of the market, roasters have shown a remarkable capacity to add value to raw material (green beans). In doing so, these actors have been able to create and develop a number of brands and capture value by targeting segmented and fragmented consumer markets. While Colombian producers have obtained a respectable decade average of a US\$.10 premium over comparable mild coffees, firms in consuming nations have captured large downstream margins. Several firms have captured these margins with the help of Colombian trademarks such as "Juan Valdez" or "100% Colombian Coffee." Although these were likely win-win relationships, Colombia can also probably leverage these assets for its own greater benefit.

On the local scale, farmer groups are hindered by the breakdown of information flows because these do not reach the majority of coffee producers with necessary knowledge about a range of production and marketing options that they could use to improve quality, seek alternate buyers, manage risk, and so forth.

Another of the marketing options that Colombia's quality producers could be quicker to take up is Internet sales. This small but growing tool has also facilitated some other forms of direct marketing and has also resulted in a number of highly publicized auctions throughout Latin America. The NFCG also offers excellent websites for consumers and domestic and international clients.¹⁵ Despite early forays into Internet sales auctions it has not elected to aggressively pursue B2B (business-to-business) e-commerce as an option.

g) The Changing Nature of Demand and Adapting to Differentiated Markets

There is great interest in the economic, social, and environmental benefits of differentiated coffees and they have grown dramatically in recent years. In 2002 projected exports of these differentiated coffees from Colombia are expected to increase approximately 20 percent, according to the NFCG. It should nevertheless be cautioned that the markets for these products are still in the early stages of development, and therefore are limited. In the mid-term perhaps 15 percent of Colombia's production could participate. Most of this would come from the half-million smallholders who are more likely to engage with these coffees, and since they represent only about half of Colombia's production, this would therefore represent almost 30 percent of their total production. At current prices this percentage of their production (30 percent) would earn more than 14 percent more. On average these Colombian coffees were sold at around US\$.90 per pound in 2001. This represents an approximate 14 percent average increase over the average coffee export price of US\$.79 per pound in 2001 that includes higher value of quality exports such as the "La Vereda" and Emerald Mountain coffees.

The NFCG has had commercialization projects for specialty coffees since 1995. Although these efforts began later than in some other producing countries, the NFCG program has nevertheless already help to register 54 brands and launch 72 production projects of specialty coffees with an annual export potential of 500,000, 60-kilogram bags. Many private exporters also promote these coffees, and the total mid-term potential is estimated at 1.5 million bags (Micolta 2002) of single estate, fair trade, organic, and so forth. This is in addition to the current exports of approximately 2.5 million bags distributed in the "100% Colombian" segment in consuming countries.

Full participation can also involve considerable farmer effort to adapt to their more stringent requirements. Currently, in Colombia there is a distinct shortage of accurate and up-to-date information for farmers on the requirements of these developing markets and how to access them. CENICAFE and the extension service have an important role to verify and potentially adapt these methods and help ensure widespread dissemination.

Differentiated products and markets demand ever-increasing grades and standards. There is a shift from standards being neutral market lubricants to their emergence as tools of product differentiation. These are increasingly being driven by three sets of changes in the global trade regime: (a) a new international regulatory environment, (b) a new business environment and requirements, and (c) a new consumer environment and demands.

Competing in today's globalized food economy requires the ability to adapt to these emerging demands. While Colombia's coffee producers may have the agility to understand and respond, they may not have the necessary information, technical skills, and market linkages to do so. Associations at the local and regional level often depend on apex organizations to provide the

15. www.juanvaldez.com, www.buendia.com, and www.cafedecolombia.com.

necessary international flows of information, skills, and linkages. This could be one of the benefits provided by NFCG, although its bureaucratic and political constraints possibly reduce its capacity to do so. Nevertheless, these skills and linkages are too important to be exclusively controlled by any one organization, and indeed their very nature precludes any single channel of information.

It will be vital for the development of not just the coffee subsector, but the entire rural sector, to encourage the development of representative organizations (that is, trade associations, cooperatives, supply chains) that can fulfill these emerging needs and thereby help Colombia to better participate in the differentiated markets that are quickly developing.

III. Policy Recommendations

Because of its organization and experience, Colombia's coffee sector will survive the current crisis by relying on its unique ability to adapt and blaze new trails in the coffee world. A vision of a sustainable coffee sector in Colombia involves an expanded approach to quality, increased focus on emerging environmental issues, greater attention to smallholders, and adding value by improving processes and capturing more of the downstream margins in the supply chain. To do so its institutions will evolve toward more agile and more transparent forms. These institutions are a critical fulcrum in the sector. They will know that the answer is not just about quality or about specialty markets or about productivity or about better promotional campaigns. It is about managing, like a business rather than a bureaucracy, all of their considerable factors of competitiveness and doing so in an equitable manner that benefits everyone in the sector. The following policy recommendations offer alternatives that focus on both improving competitiveness and reducing poverty among coffee growers. As a general caveat, policies should be consistent with the reasonable assumption that world prices will recover only modestly in the near or medium term.

Figure 4 illustrates the set of key policy recommendations for the coffee sector.

a) *Smallholders and the Rural Poor*

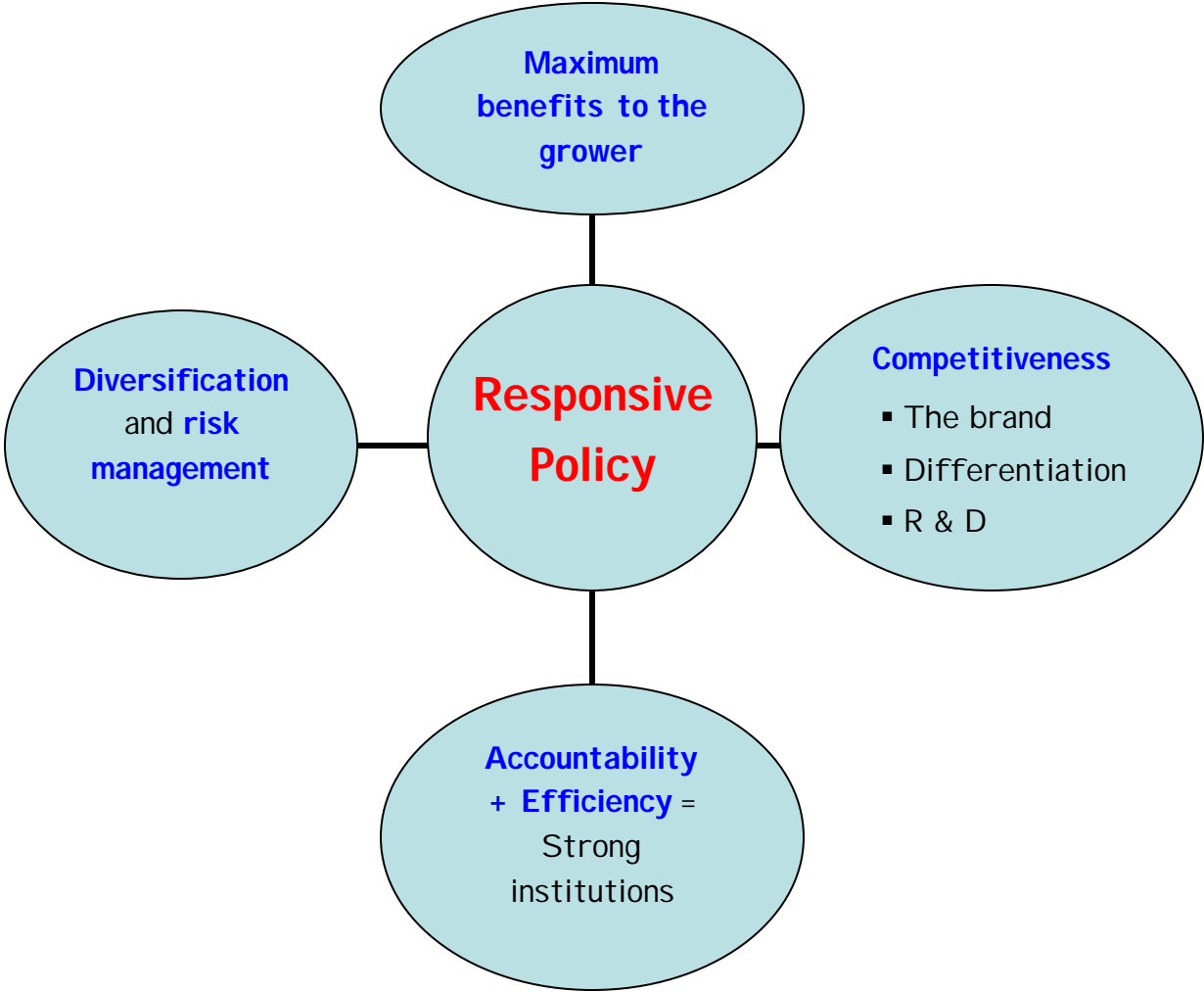
One of the difficulties in establishing policy is its distinct impacts on producers of different sizes. Although it appears that large producers have a higher proportionate output,¹⁶ in many cases smallholders are known to be more viable¹⁷ and productive when measured in terms of a diversified product output.¹⁸ Directing policy and infrastructure investments more toward so-called marginal areas may be justified by growing evidence that the marginal returns to investment there are higher on average than in the more advantaged areas (Altieri and Uphoff 1999), provided that the investments are not too scattered and sporadic (Hazell and Fan 2000). Nevertheless, the needs of larger producers must also be addressed since these producers can be very competitive and provide valuable employment opportunities, especially in rural areas. Medium-size producers appear to be the least competitive.

16. Coffee plots over 5 hectares represent 38 percent of total coffee area and contribute 45 percent of total production (*Encuesta Nacional Cafetera* 1997).

17. CERES (2001) studies show that with Colombia's high labor costs, and especially in a low-price market, smaller production units have lower costs of production and as a consequence can be more profitable per hectare, especially when coffee prices are low.

18. Total factor productivity rather than monocrop (coffee) productivity.

Figure 4. Key Policy Recommendations for the Coffee Sector



Integrating smallholder coffee producers so that they can benefit more directly from international trade implies an integrated policy and process of rural development that features enhanced information flow and training to assess these markets, along with the tools (technology, infrastructure, and finance) to access these markets. Farmers are hindered by the breakdown of information flows because information does not reach the majority of coffee producers about a range of production and marketing options that they could use to improve quality, seek alternate buyers, manage risk, and so forth. High unit costs of reaching farmers and the need for them to share risk and benefit from product and financial agglomeration dictates that they must organize.

Their ability to organize effectively into associations and cooperatives is the key factor for most to be able to take advantage of domestic marketing opportunities¹⁹ and global trade benefits. Institutional capacity building is critical for organizations to (a) properly manage their affairs, (b) democratically represent their constituents, and (c) develop commercial skills like negotiating and marketing. Government can partner with a number of institutions (international and domestic) that can deliver this training at the grass-roots level. There are obvious crossover benefits for such strategies that offer benefits beyond just the coffee sector, including rural finance, input purchase consolidation, and marketing.

a) Managing Transition: Options for Diversification

Maintaining subsidies for a long period is not a viable option. Given production costs and opportunities, it appears that small and large producers are deemed to remain most viable, while medium producers—some of them absentees—will be more likely to leave the business. By some estimates, 100,000 farmers could transition out of coffee in the coming years, as profits remain thin. Support or incentives to move to other alternatives will be costly. Ironically, coffee has been one of the most popular diversification options for many years. Now any government diversification plan must look beyond coffee growers to other rural production systems as part of a more integrated strategy.

How much coffee should be phased out will be determined by growers themselves responding to the market's messages and the government's incentives. Unprofitable producers or inefficient production areas should not be subsidized. Furthermore, new niches with premium prices do not necessarily imply the phasing out of a part of the current production segments. Each coffee type (depending on quality, origin, organic or not, and so forth) would have its own price, and the most appreciated coffees would get the highest premiums. It has been estimated that in the medium term it is possible to develop from current volumes of a half-million bags to about 1.5 million bags of niche market coffees (single estate, fair trade, organic). Colombia already exports 2.5 million bags of high-quality coffee in the "100% Colombian coffee" segment in world markets.

Options to escape from the bourse-based tyranny of commodity production fall into two main categories: (a) differentiated production, and (b) diversification.

A sharp decrease in annual crops²⁰ (rice, maize, potatoes, cotton, and beans) and only modest increases in the hectares sown to permanent crops (bananas, palm oil, sugarcane, fruits but not coffee, which declined) are part of a disturbing trend that includes increased imports and the switch to livestock, which is typically characterized by low productivity and high environmental costs. This trend also implies that the present incentive structure fails to allocate resources efficiently. Without appropriate policies, low-labor-intensity farming such as livestock will continue to reduce the opportunities for both farm and nonfarm employment in rural areas.

Much of the expansion or shift noted above has not included smallholders, and occurred primarily on larger landholdings, suggesting difficulties for smallholders to diversify. Favoring extensive, large-scale agriculture "...continues the disturbing trend of the past fifty years where the use of land and labor in Colombia has been driven in highly inefficient directions by a variety of

19. NFCG data indicate that in areas lacking cooperatives to purchase smallholder coffee output, producer revenues tend to be significantly lower (see Giovannucci and others 2002).

20. "Políticas y desempeño del Sector Agropecuario," Contraloría General de la República.

agriculture sector, land and rural financial policies and sector programs...”²¹ Although many crops that are exclusively associated with food security and smallholder agriculture have remained stable according to FAO data, there has been little diversification into cash crops that could help balance the dependence on coffee.

A diversification program for coffee-growing areas must start by addressing particular farmer objectives defined according to local needs (that is, income diversification, improved food security, promoting planting of other more profitable heirloom coffee varieties, or any combination). It must then help farmers assess these specific issues:

- Potential markets for different possible crops
- Risk
- Barriers to entry (investment costs, infrastructure requirements, market access)
- Necessary skills and resources (information, technical capacity, financing)
- Environmental and economic advantages for production
- Challenges pertaining to commercialization (logistics, quality, quantity).

In the past, many diversification initiatives have faced critical and sometimes insurmountable bottlenecks in these aspects. Farmer-centered research and extension is perhaps even more important for the adoption by small farmers of appropriate sustainable farming methods than the correct macro policies, according to extensive case studies of agroecological farming in different countries (Altieri and Uphoff 1999). One review of diversification initiatives noted that the most successful diversification enterprises were those initiated by the farmers themselves, as opposed to institutional programs. Most institutional efforts faced market and commercialization difficulties. However it is approached, diversification is not easy, especially from a popular nonperishable cash crop like coffee, and past experiences should be studied well. There is already a useful body of knowledge that could be used, including a diversification program financed by the World Bank in 1980 and the NFCG diversification program that lasted until about 1991.

It is difficult to have the farmer assume all risks involved in the new crops. Incentives should exist for collaborative farmer-oriented research and analysis, technical and marketing assistance, and financing of the setting up of production, but not for production itself.

What can the government do to help?

- **MARKET RESEARCH.** The government can help conduct market research, preferably through specialized organizations, to help identify markets and study supply–demand options for agricultural products in short supply, for both domestic and external markets, through for example, the *Corporación Colombia Internacional* (CCI), the *Instituto Centroamericano de Administración de Empresas’ new Centro de Inteligencia Sobre Mercados Sostenibles*, and *Proexport*.
- **TECHNICAL ASSISTANCE.** The government can provide technical assistance by designing appropriate integrated technical packages for products deemed promising (dealing with agronomic, environmental, and quality requirements farmers may face, all in one package). This could be carried out via privatized extension services

21. Drawing from Heath and Binswanger (1996). Conveyed in personal communication from M. McMahon.

managed and cofunded by local authorities (the Uganda model), thus ensuring their active participation or through the existing NFCG extension service.

- **COMMERCIALIZATION AND LOGISTICS.** The government can help identify bottlenecks (such as transport costs) and solutions in order to drive investments that develop the necessary channels and appropriate facilities for the efficient commercialization of agricultural products.
- **CREDIT SUPPORT.** The government can provide temporary subsidized credit that might be needed to finance the initial investments necessary for setting up different types of production and some modest scheme to temporarily support individual producers' income during the unproductive phase, but these should be minimized and not unduly distort the necessary market-oriented rationale for diversifying.
- **COMMUNITY ORGANIZATIONS.** The government can support producer and trade organizations that could gradually take over the above processes and provide the necessary economies of scale and linkages to markets.

Existing plantations should be integrated into the new diversification scheme but with modest support, such as market research and technical assistance, but not necessarily transitional income support. In general, the scheme should feature (a) demand orientation, (b) voluntary participation, (c) some risks assumed by producers, and (d) free information and technology access to interested producers.

Resource allocation, in turn, should be based on (a) assessment of regional diversification potential, (b) ensuring that those most in need and with greater potential would have greater access to resources, and (c) promoting the local economy and supporting household income.

A form of diversification that recognizes that there is a limit to the income-earning capacity of small plots of land is nonfarm rural enterprise. Many useful services from machine repair to accounting to equipment rental can provide valuable services that support farm communities and make them more productive, while reducing the inherent risk associated with farming.

The present support package (Documento CONPES [*Consejo Nacional de Política Económica y Social*] and Annex II) which has been negotiated between the NFCG and the central government has been defined mainly as a coffee support package intended to subsidize price and tree renewal. Because many coffee producers will surely migrate to other agricultural activities due to the crisis, the package could be redesigned to include the diversification program mentioned above.

Diversification systems tend to wane in popularity when coffee prices are high, but this does not mean that they can be disregarded at those times since they have long-term requirements and cannot be easily started and stopped. This points out the government's role in maintaining a longer-term perspective and helping stimulate increased diversification despite short-term price fluctuations in one or another of the commodities.

b) Risk Management and Safety Nets

With the elimination of the floor price mechanism offered by the FNC in January 2001, small coffee farmers in Colombia have no access to formal instruments to deal with price risks. There are, however, several informal instruments that farmers can use to deal with risks. They can (a) diversify to include other crops in addition to coffee, (b) diversify their labor by working outside their farm or pursue nonfarm rural enterprise, and (c) adapt their technology (using fewer inputs). Well-crafted

policies that support such efforts with technology, knowledge, and direct skills through training in the field can facilitate these options.

In many coffee-growing areas coffee's dominance means that price risk has a systemic effect on the overall rural economy and that many economic activities slow down. Thus, many people see migration to urban areas or even abroad as a solution. Social protection programs would need to target the vulnerable groups within rural communities that may include not only small, poor, farmers, but also landless workers who because of low coffee prices cannot find employment on coffee farms.

To support producers in periods of very low prices it is preferable to rely more on income-transfer payments, such as those used in Mexico and Nicaragua, instead of price support. Income transfers have the advantage of being less distortionary in terms of incentives, compared to price support programs. Price support prevents necessary adjustments in production patterns. Price support programs may also prove to be costlier compared to income support, but income support programs may be more difficult to administer because they require information about the individual farmers (plot size, location, and so forth). If prices rise, another option envisions that FNC could be replenished and provide a modified form of price stabilization using the markets—a sort of premium farmers pay for insurance—so long as it allows market-price signals to reach the producers.

The FNC, now no longer able to provide stability claims that it provides a fair price and maintains a purchasing guarantee. This is true, although an information system might also provide a reasonable “fair price” assurance at a much lower cost as in Guatemala, and there appears to already be an ample and well-contested market to sell quality Colombian coffee. Of course, the FNC's role would be much harder to replace in remote, less-contested markets where cooperatives and associations would have to intervene. A reasonable investigation or pilot study could test these alternatives.

Private exporters, now accounting for 65 percent of coffee exports, and the NFCG are very familiar with the types of financial instruments to hedge their price exposure. Currently, use of risk-management instruments is primarily limited to their own short-term price exposure—from the moment they buy coffee from farmers to the moment they sell it—and benefits farmers very little. It may be useful to facilitate both the understanding and access of farmers including sound smallholder organizations and associations to risk-management instruments, such as options traded at the New York Board of Trade, which may at times offer an attractive solution to reduce their exposure.

Farmers also need to reduce their price uncertainty when they make short-term investments and receive working capital loans. Because of their relatively small production size in general, coffee farmers need appropriate institutions that would aggregate enough volume of production and hedge it in the international market. Farmer cooperatives and producer associations are among some of the institutional structures that farmers can use to access price-risk-management instruments. It would be valuable to support the Risk Management Department of the NCFG or other agencies such as the International Task Force on Price Risk Management that, in partnership with other international organizations and the private sector, has initiated projects to enable groups of farmers to access price-risk-management instruments.

While debt restructuring in the credit arena will be important in settling old debt, there are certain things to bear in mind. Debt forgiveness and write-offs provide disincentives for prudent risk management, and thus need to be discouraged. New credits can be accompanied by appropriate

risk-management instruments, much like the requirement of U.S. bank loans to farmers. The NFCG can also intermediate to help manage risks. The provision of loan guarantees by the public sector could be problematic. Public guarantees are a poor bandage since they might encourage less due diligence by private financial institutions, and they may become a financial burden for the government. Public guarantees without appropriate systems to screen loans and ensure that appropriate risk-management systems are in place probably will not work.

Finally, the farmer's natural resources are often his most valuable assets. It is wholly appropriate for government policy to help minimize some of the risks associated with these resources, especially since watershed management is a public good that is affected by agrarian land uses. It is advisable to reactivate the soil conservation program, which was canceled due to the FNC's financial crisis. Integrated soil conservation can significantly reduce the need for all externally purchased inputs and therefore reduce the exposure of farmers to financial risk incurred when borrowing or spending cash for synthetic agrochemicals. Coffee soil in Colombia, with its high volcanic ash content, is very fragile and easily erodible. A comprehensive soil conservation program should include policies aimed at stimulating appropriate densities in coffee plantations, reducing the age of trees, stimulating suitable use of shade trees and wind barriers, introducing leguminous soil coverings, planting of associated crops, and avoiding the indiscriminate use of insecticides and fungicides. To preserve and increase the soil's natural microorganisms, policies should encourage the substitution of some synthetic fertilizers with organic material such as compost, coffee pulp, and other green fertilizers.

d) Policies of Subsidy and Support

Currently, two major subsidies affect coffee production: a subsidy for the renovation of coffee plantations and a price subsidy for coffee guaranteeing the farmer a minimum price support for his coffee production. The policy instruments of price and renovation subsidies have the potential to work against coffee growers' initiative to procure more sustainable and realistic productive structures on their farms, that is, diversification initiatives within coffee or out of it that might secure better overall profitability for their farms.

If public subsidies are to be utilized, they should be focused on developing future competitiveness rather than merely supporting the current price. It is the government's responsibility to ensure that the smaller and disadvantaged producers have prioritized access to such public subsidies. However, although direct subsidy may be inappropriate for large producers, their efforts to be more competitive should be supported since they are particularly important for their ability to disseminate technology and provide employment in rural areas.

Price-oriented subsidies such as the one in place tend to isolate producer's decisions from actual market conditions, thus distorting production signals. Its most pernicious aspect is the political difficulty encountered when trying to stop or modify it that can result in making it a quasi-permanent subsidy.

Renovation is a necessary component of a competitive coffee sector and must be part of any long-term strategy. Since coffee tree renovation is a customary production practice that larger producers typically carry out in order to remain profitable, regardless of subsidies, the fact that they are as eligible for the subsidy as every one else makes it a regressive instrument and blunts a desired effect of supporting the poorest small producers who might otherwise be less able to maintain their production capacity.

Alternative policies would not focus on higher production levels but rather on more sustainable forms of production. In some areas this may be more realistic than complete tree stock replacement. CENICAFE has already conducted some research on organic and environmentally friendly production. Some of these alternatives although less productive in terms of output volume, might be less risky due to fewer labor and input costs, and therefore potentially more profitable, and environmentally more advantageous.

Research institutions such as CENICAFE provide a broad public good and are worthy of government support but they must align themselves clearly with the majority of farmers (most of whom are small) and directly address their needs. Research organizations must be transparent and responsive to their constituents.

d) Institutional Leadership

Any sustainable policy improvement must revolve around revitalized institutions. These must be agile, accountable, and more transparent. A set of private-sector-led and market-responsive policies are necessary to revitalize the market position of Colombian coffee. Appropriate policies and strategically targeted incentives can help stimulate the necessary shifts toward a more competitive and market-oriented development that integrates smallholders, and also can have significant potential externalities (improved standards, environmentally friendly production practices, and so forth) and crossover effects in other rural subsectors.

It has been noted that the government's role and participation in setting internal prices and the coffee tax were occasionally influenced by macroeconomic policy goals and political priorities rather than the direct benefit of the coffee growers. Naturally, this raises the question of what is the appropriate level of government intervention. The sector's social, economic, and cultural importance in rural areas argues for the government's close participation. However, when compared to other sectors, the current level of direct influence could be considered excessive.

Detractors have accused the leading coffee institutions of being inefficient, feudal fiefdoms and even of being mismanaged. While they may not be perfect, they have nonetheless fulfilled some very valuable roles. Indeed, many analysts would agree that despite its shortcomings the NFCG is the most successful coffee sector institution in the world, and that much of Colombia's coffee success is due to its implementation of a coordinated and cohesive policy and its marketing investments. Doing away with the Federation altogether—as some have suggested—is an unwise step akin to “throwing out the baby with the bath water.”

The NFCG of the future will undoubtedly be smaller and more agile. It will be operated more like a business. It will be redesigned to facilitate its periodic evaluation and to be more transparent for its stakeholders. It may not conduct much social work despite its well-regarded record in this area. In order to be effective with fewer funds it should focus on its three primary advantages: extension services, research, and international promotion of Colombian coffee. Regardless of the roles that the NFCG evolves toward, it should be evaluated in a number of ways, among which should be its capability to:

- Transmit the maximum economic value to the producer
- Distribute the value equitably
- Improve productivity and reduce transaction costs

- Transparently and legitimately represent its constituents
- Strategically improve the sector's competitiveness
- Establish credible accountability
- Create and capture downstream value.

The resources for most of these activities will be provided by the tax levied when coffee prices are above an agreed upon level in the world market. Others could be self-financed. The coffee tax ought to be consistent, rather than variable, and sufficient to cover only the necessary and agreed upon public goods while passing on the maximum amount to the farmers. For consistency during lean years, a contingency fund should be established to ensure that operations are not halted as the sector weathers price cycles. This could come from tax and other earnings rather than public funds.

The NFCG's dual role as regulator and market participant should be carefully considered. Some functions could potentially be transferred to other agents, such as cooperatives, associations, or private firms, wherever appropriate, without sacrificing Colombia's ability to negotiate in an ever-concentrating market. Whatever functions it retains must be clearly delineated with transparent independent monitoring and evaluation.

The NFCG's decades of coffee program implementation and its social and infrastructure programs (school building, road building and maintenance, health facilities) have been crucial factors in Colombia's rural development that are now diminishing. The new resource-constrained realities facing the departmental and local branches of the NFCG mean that they may have to function more independently. In order not to lose their skills and experience, government should consider supporting their transition to nonprofit organization models.

Government and NFCG policy should also more broadly promote localized organizations of producers and other sectoral trade associations. Once these are recognized as legal entities and can be held responsible by their constituents, they can have a positive effect by empowering local communities and trade associations to better handle their own development issues to participate more fully in determining sectoral strategy and policy. Providing support for institutional capacity building is critical in order for these organizations to manage their affairs, democratically represent their constituents, and develop adequate commercial and representational skills. The government should be open to the participation of other sector actors in setting policy and determining strategy. One option is to broaden the representation in the FNC to more accurately represent the sector's composition.

e) Competitive Foci

i. Adding Value by Improving Processes and Differentiation

Quality-oriented approaches will be critical to future competitiveness and the changing nature of demand. Quality begins in the field with good agronomic practices and requires well-managed harvest and postharvest processes. It is imperative that private sector, performance-oriented extension services, especially for smallholders, be supported by government, although not be fully subsidized. Colombia has initiated programs over the years that, for example, facilitate information flows via rural telecenters. However more quality and market-oriented interventions are necessary

to gain a market advantage for Colombian coffee, especially in light of evidence that even some simple quality improvements are not being fully adopted by a number of producers (Gerente Comercial 2002).

Supporting necessary extension training and certification of organic or ecofriendly coffee not only provides producers with potential added value (price premiums and currently strong market demand), but also provides significant externalities such as improved environmental management, participation in a system of improving agricultural standards, and community-level organizational support. The government can develop favorable policies for ecofriendly market development,²² and help increase the availability of “green” production technologies (organic and shade-grown) through credits that can encourage more environmentally beneficial use of water resources or through promotional campaigns and information dissemination based on pilot programs in key growing areas. This will facilitate and leverage the efforts of development agencies and nongovernmental organizations, ranging from United States Agency for International Development to Conservation International, that are keen to play a vital supporting role.

Although the NFCCG began supporting production and commercialization projects for specialty and differentiated coffees in recent years, Colombia is still relatively new to this field. Consideration should be given to adapting more of its coffee supply to the growing demand for differentiated coffees in consuming markets. This implies creating conditions and incentives for differentiation so that growers capture the value added in differentiated coffee sales. The minimum export standards are important for Colombia's reputation and should be maintained, while at the same time more actively expanding the production of differentiated coffees, including appellation coffees (see Annex I), single-estate varieties, and ecofriendly coffees.

Colombia can take a leadership role in a number of quality-oriented approaches with appropriately designed policies that encourage some diversification and risk by:

- Funding farmer-led research for improving the quality of the tree stock and considering the selective promotion of high-value heirloom varieties in appropriate smallholder growing areas.
- Stimulating external support (that is, donors and trade associations like the Specialty Coffee Association of America) for introducing more quality-promotion techniques, such as quality-sampling labs in rural areas, and quality competitions similar to Cup of Excellence events.
- Furthering the legal and regulatory framework for Geographic Indications of Origin and promoting it.
- Encouraging CENICAFE notable excellence and helping it to be more private sector and market oriented. It can sell or exchange (and thereby enhance) its considerable nonproprietary information for the benefit of Colombian coffee growers. It can also provide a useful verification service the Geographic Indications of Origin coffees.

As Colombia's leading agricultural sector, coffee has the distinct potential to demonstrate the methods and workable options available to farmers in other agricultural subsectors, and in that way facilitate more advanced and remunerative agricultural development and options for diversification. One of the requirements to participate in more developed and more lucrative markets will be improved grades and standards. Indeed, it could be a future liability not to instill this general mindset in the productive rural sector since standards for many agricultural products are fast

22. There is currently a World Bank-supported initiative (through a grant), with the Ministry of Agriculture.

becoming barriers to market entry for those that are not prepared (Giovannucci and Reardon 1999; Giovannucci 2000).

ii. Options to Capture More Value

There is concern that Colombia has not moved quickly and decisively enough to take advantage of its unprecedented earlier quality image, an image that has somewhat faded in market importance over the last decade as other more differentiated products capture the quality consumer. Colombian coffee may have lost the "human face" that it so effectively developed in its early marketing. Colombia has strong advantages for producing and commercializing coffee in the world. Its institutions and its brand reputation are among its most important assets. Colombia has a brand with valuable consumer or downstream value, and while it helps ensure an approximate US\$10 per pound premium, it could capture even more margins downstream. Colombia is in a uniquely strong position to take advantage of options such as selling its own brands in the processed mainstream retail markets in coffee-consuming countries or developing private-label business. Its ideal synergy would be to combine its consumer visibility with partners that have the capability for multichannel distribution. In changing world markets, it must not only address competition from other producers, but also from other actors along the supply chain. One of the suggestions for the NFCG is to conduct an independent evaluation of its brand strategies to optimize its value to its owners.

An analysis of the NFCG's considerable marketing experience would be a wise first step since entering consumer markets is not easy. However, the advantages of leveraging the enormous investment in this brand appear to outweigh the risks. There are risks of damaging historically good relations with roasters and food multinationals, and the difficulty of positioning Colombian brands, given the oligopsonic power of giant distributors and food brokers.

Caution should be exercised in any consideration of vertically integrating the value chain, because the resulting learning curve could cause considerable inefficiencies, thereby reducing investment returns and risking reputation if markets are poorly served. If entering the markets were considered, then a partnership with a major participant (a roaster or a food multinational) to finance and execute it would be ideal, using Juan Valdez or the logo as contributing capital.

Apart from mainstream branding strategies, for some of its production Colombia could also follow the example of Jamaica and other countries by investing more in a different sort of branding in its Geographic Indications of Origin, much as Blue Mountain and Antigua have done to develop exclusive competitive advantages. To do so it will have to clarify the definitions of these regions and legally protect them with adequate judicial recourse that can even be supported by trade associations in the United States and EU that are willing to help develop these systems and help monitor and protect their use in the market. The basic promotional investment and legal adaptations could yield potentially high proprietary benefits.

One of the opportunities in such a low price market is the development of domestic markets that have not grown in recent years.²³ Historically, Colombia's price subsidies served as clumsy stimuli that did little to promote long-term consumption growth. With an adequate stimulus the results could be considerable. A similar social profile in Brazil has responded to initiatives in recent years that have dramatically grown its domestic market to become the world's second-largest consumer of coffee. Achieving a similar growth rate in Colombia could add more than 1 million bags of coffee and nearly double its domestic consumption in just a few years.

23. According to the *Federación Nacional de Cafeteros* (1999), consumption went to 2.09 kilograms green coffee per capita and a reduction from 2.0 cups per day in 1997 to 1.8 cups per day in 1999.

Annex I

The Nature and Characteristics of Differentiated Coffee Markets²⁴

Despite the impressive growth rates of differentiated coffee markets, they are still relatively small and can accommodate only a limited number of new entrants. Thus, their value may be greater for their externalities—that is, benefits to the producer such as improved natural resource management, lower risks, and so forth—than for their price premiums. They can therefore be a valuable part of a competitive strategy, though not necessarily the entire strategy, for a country with considerable production volume like Colombia.

Coffees from areas that are specifically demarcated and acknowledged as having distinct physical characteristics such as microclimate, soil composition, and plant varieties have successfully been marketed with their specific Geographic Indications of Origin (GIO). Development of such programs, sometimes called appellations, creates the mechanisms for permanent structural change built on a new agronomic model, similar to the wine industry. Much like the wine industry, this permits a unique competitive advantage and, if properly marketed, can result in stronger demand and higher prices that may be somewhat more immune to market fluctuations than commodity products. Despite recent setbacks in seeking legal protection for GIO in the United States, this differentiation strategy has been successful for many regions, among the most notable being Jamaican Blue Mountain, Hawaiian Kona, and Guatemala Antigua, the popularity of which have spurred reports of global sales far greater than their actual production volumes. This implies that such initiatives on the part of producing countries will also require investment in monitoring and enforcement.

Specialty coffee, sometimes used interchangeably with “gourmet” coffee, although the former more commonly refers to a larger set of coffees including flavored, espresso-based, sustainable coffees (see below), and cold preparations. Gourmet used to refer strictly to higher-quality coffees sold, often as whole beans, in dedicated coffee stores or cafés. Although this term still suggests a degree of exclusivity, such coffees have actually penetrated most marketing channels and are now available even through mass merchants and supermarkets. Market trends suggest that there is room for such expansion given that there is increasing differentiation, especially in price, and considerable growth in sales and profits. The market expansion for specialty coffees, led by high-visibility brands like Starbucks, has been significant in the U.S. markets and is now spreading back to Europe, where the café concept originated and specialty coffees have long held a considerable market share.

In the United States, where coffee imports account for one quarter of global totals, the specialty coffee industry accounts for approximately 17 percent of the total volume, yet its \$7.8 billion in sales represents approximately 40 percent of the \$18.5 billion U.S. coffee market’s total revenue, and an even greater percentage of its profits. It is the only segment of the coffee industry that has shown consistent and notable growth. According to the International Coffee Organization (ICO) and the Specialty Coffee Association of America (SCAA), most potential specialty coffee markets are far from saturated, and sales continue to expand by 5 to 10 percent per year according to the most conservative estimates.

24. The information in this annex is extracted from “How Markets Influence Poverty and the Environment: The Transformative Power of Coffee,” D. Giovannucci, ed., forthcoming.

27. February 2002 exchange rate: US\$1 = COP2,300.

The sustainable coffees: organic, fair trade, and shade grown, are predominantly produced by small farmers and characterized as paying farmers reasonable prices, providing incentives for organic production and rewarding farmers for practicing good natural resource stewardship. They tend to promote water conservation and protection, energy conservation, recycling, and even community/cooperative development. Until recently their scarce presence in the marketplace caused some confusion about what they each actually represent. Now with both clear definitions (see below) and international certification standards it is incumbent upon the coffee industry and regulatory bodies to help educate consumers and ensure that coffees using these labels are indeed certified by an independent third party. Failure to do so will cost the industry a valuable means of differentiation, and the resulting erosion of consumer confidence will render the terms meaningless and therefore remove a valuable tool from the repertoire of the small coffee producer, who can least afford such a loss.

Organic coffees incorporate management practices to conserve or enhance soil structure, resilience, and fertility by using cultivation practices and only nonsynthetic nutrients and plant protection methods. Organic certification is also required of the processor and roaster in order to be sold as such. Organic coffees have been on the market for several decades but broad appeal and volume sales have only occurred since the late 1980s. In the United States, the average annual growth rates of approximately 12 percent for organic coffee have been strong over the last five years and are expected to continue solid growth, although less strongly. North American consumption (predominantly U.S.) is estimated at approximately 6 million kilograms but growing, with 13 percent of the consumers who are regular drinkers of specialty or gourmet coffee—that is, 8 million people—purchasing organic coffee at least once. The EU consumes even more than the United States, led by Sweden, Germany, the Netherlands, and Denmark. Premiums paid to the producers average US\$.33 per kilogram and are often higher, based on quality.

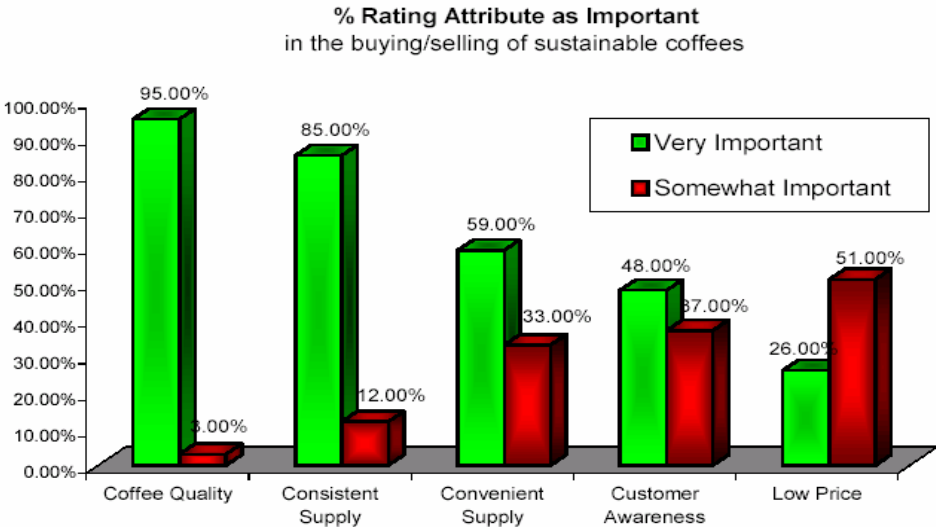
Fair-trade coffee is purchased directly from internationally registered and certified cooperatives of small farmers that are guaranteed a minimum and consistent contract price and access to some credit from the purchaser if necessary. Fair trade encourages community-driven investment in public goods like education, healthcare, and infrastructure. The fair-trade market sets a minimum price, currently US\$1.26 for washed arabica and US\$1.41 if organic. The price benefit is particularly noticeable during low price markets. Fair-trade arabica farmers averaged superior prices of US\$.64 per kilogram in 1999 and US\$.95 per kilogram in 2000, based on the differential between average annual market prices (ICO) and fair-trade contract prices. In 2001, more than 17 million kilograms certified fair-trade coffee was imported from 22 producer countries led by (in volume order) Mexico, Peru, Colombia, Nicaragua, and Guatemala. Nearly 40 percent of this coffee is also certified organic. Approximately 3 million kilograms went to North America and most of the rest to the EU. The Netherlands, Germany, the United Kingdom, and Switzerland are the largest consumers. This category has shown steady but erratic growth with the European markets being more mature and the U.S. growing dramatically in the last three years.

Shade or ecofriendly coffee-production systems maintain and enhance wildlife habitat and biological diversity, particularly through effective management of the forest canopy on the farm and protection or restoration of surrounding natural environments. Globally more than 3 million kilograms of ecofriendly coffee were certified in 2000–2001, the bulk of which is in Guatemala and El Salvador. This nascent market has yet to prove itself but has already seen success in select markets, mostly in the North America. Estimates for year 2000 sales of certified shade-grown coffee are approximately a half-million kilograms, although much more was sold uncertified.

Premiums paid to producers vary and have ranged from US\$.04 per kilogram to US\$.22 per kilogram.

Although there is certainly room for growth in all of these differentiated markets, as competition builds evidence clearly indicates that cup quality will be critical (see Figure A.I.1). Here, Colombia has a distinct advantage due to its historic focus on quality and the mechanisms to foster it.

Figure A.I.1.



Source: Giovannucci (2001); Sustainable Coffee Survey.

Annex II

Colombia's Coffee Subsector Public Supports

As world coffee prices have continued to decrease, the tax take, both in relative and absolute terms, has decreased as well. In part as a result of this, but also due to poor management, most of the National Coffee Fund's accumulated assets—the bank, financial corporations, and others—were lost.

This meant that there were no resources left for the implementation of coffee policy. As a result, the Colombian government came to the rescue with an aid package, financed from the national budget. For the first time, the government began to pay a direct subsidy to coffee growers. The package of subsidies includes support to the internal coffee price, stimulating the renewals of coffee trees, and refinancing credits. A summary follows.

1. A constant subsidy of COP30,000 per carga.^{27,28} This means that the growers receive a price equivalent to the world price plus that subsidy net of processing and transportation costs. The government announced that it will maintain the subsidy for three years, with the expectation that world prices will recover. The budget to finance the subsidy was COP31,300 million in 2001, and will be COP94,800 million in 2002 and 2003.
2. A subsidy of COP12,000 million in 2001 and COP44,100 million in 2002, to finance a program to renew coffee trees in 140,000 hectares. This program is a follow-up to the one implemented by the NFCG during the last three years, when 210,000 coffee hectares were renewed with its own resources.
3. A subsidy of COP44,000 million during 2002 to finance technical assistance. In the past, programs of this nature were financed with own resources.
4. A refinancing credit program of COP60,000 million.
5. Participation of the NFCG in Plan Colombia. This amounts to COP60,000 million in social and economic investment programs.
6. COP7,500 million to finance joint research projects between CENICAFE (the research center of the NFCG) and other research centers on the exploitation of the biodiversity resource in coffee-growing regions.
7. Other complementary programs on rural education and housing, the main objective of which is to increase enrollment and generate employment opportunities in coffee-growing zones.

28. Carga = 125 kilograms. If the international coffee price goes up higher than US\$0.80 per pound parchment, the subsidy disappears.

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