CHAPTER 9
Summary, Conclusions and Recommendations¹

Between 1989 and 1993, Cameroon privatized its domestic arabica coffee markets. The reform process sought to introduce a competitive and market-oriented structure into a subsector that had previously been administratively organized and structured. A package of reforms sought to fundamentally restructure marketing relationships and institutions within the North West Cooperative Association, Ltd. (NWCA), a federation of coffee marketing cooperatives in North West (NW) Province. The premise underlying cooperative restructuring was that economic performance could be significantly improved by introducing new marketing institutions within the vertically integrated cooperative organizational structure that were better adapted to the arabica situation of high quality information costs.

Previous chapters described the arabica coffee situation, the institutional features of the administered and reformed marketing structures, and analyzed how interactions between situation (product characteristics) and structure (institutions) affected performance in the Cameroonian arabica subsector between 1978/79 and 1994/95, with emphasis on NW Province. The key institutional features of structure were categorized as

¹ The organization of this chapter is somewhat unusual. It was written as a stand-alone work and provides a detailed summary of the entire dissertation before presenting recommendations.
rules governing market competition, price determination, cost (or margin) determination, the establishment and enforcement of quality standards, and the distribution of residual earning. National cooperative law also influenced performance by structuring the relationships and marketing activities of coffee marketing cooperatives, which were the primary coffee marketing organizations in the arabica subsector. The key dimensions of performance examined in this study were coffee prices, marketing costs, the distribution of residual earnings (or income), production, and quality.

9.1 Situation

Washed arabica coffee has multiple quality attributes and dimensions. It is valued by buyers for its distinctive, but subtly different, mild tastes in the cup. Buyers’ preferences for specific quality attributes are often subjective and individualistic. However, quality is highly variable. Arabica undergoes a series of transformations as it moves through the marketing chain, each of which influences quality. The manner in which farmers grow, harvest and initially process (or wash) coffee profoundly influences its quality in the cup, as well as its market value. Downstream secondary processing (hulling, grading and sorting) and marketing activities are important in controlling and maintaining quality. If coffee is poorly sorted and graded, or shipped unreliably, its quality and value are lowered. Thus, participants in the marketing system are interdependent. The actions of processors and marketing agents affect the incomes of producers, and vice versa.

Although final cup quality plays a key role in determining sales value, it is inherently difficult to measure quality at intermediate stages in the marketing process. The full spectrum of coffee’s taste, flavor and aroma attributes is revealed only in the cup. Buyers
and roasters employ professional cup tasters, who possess highly specialized and individualistic cup-tasting skills, to evaluate the cup quality of samples of coffee lots that are available for sale. Buyers determine the prices they are willing to pay for different lots of coffee based on their quality evaluations.

The arabica coffee situation is characterized by high information costs related to quality measurement difficulties, particularly at the point of initial handling. Although on-farm production, harvesting and initial processing (washing) activities at the beginning of the marketing chain are key determinants of cup quality, the cup test occurs at the end of the marketing chain after all processing and marketing activities have been completed. But it is inherently difficult to measure quality reliably at the point of initial handling when farmers deliver their parchment coffee to the market for subsequent processing. Easily measured parchment attributes such as appearance color, odor and moisture content provide only crude measures of farmers’ production and washing practices. Although inspection may identify some serious quality problems, the undesirable and tainted cup tastes associated with poor harvesting and washing are often a matter of degree and can only be detected in the cup. Thus, available measures of parchment quality are only imperfectly correlated with its eventual cup quality. Secondary processing activities also affect cup quality. The number of available quality measures increases significantly after the parchment skin has been removed from beans through hulling, which makes it easier to identify and separate poor quality beans. Proper grading and sorting should control many farm-level quality failures. But it is impossible to predict how secondary processing will affect quality at the point of initial handling.

There are opportunity costs to producing good quality coffee. A producer will not
invest in quality unless rewarded for doing so. But high information costs create a
dilemma in pricing coffee. How can individual producers be rewarded for investments in
quality, if neither the quality nor market value of their parchment are known during initial
acceptance? If quality cannot be distinguished, certified and rewarded, producers have
little incentive to invest in quality. As a result, supply may be of poor quality and
discounted in price, further eroding producers’ incentive to invest in quality. Because of
high information costs associated with quality measurement problems, competitive
markets and prices may produce a low-level equilibrium and deteriorating performance.
Effective vertical coordination within the marketing system depends on the effectiveness
of alternative marketing institutions (quality standards, pricing conventions) to distinguish,
certify and reward quality.

Progressively greater economies of scale in transportation, secondary processing and
marketing compound farm-level measurement and information problems. To achieve
economies of scale, the small quantities of coffee produced by individual farmers must be
pooled before secondary processing. This implies that coffee’s eventual sales price
reflects the average quality produced by the large numbers of producers who contributed
to the pool. To realize a price benefit from improved quality, farmers must act collectively
to improve the overall quality of the pool. But high information costs make it extremely
difficult to distinguish and reward the quality produced by individual producers.
Moreover, economies of scale imply that any quality premium contained in sales prices has
high exclusion cost characteristics. This creates opportunities for some individuals to
shirk and be opportunistic free-riders on the quality contributions of others in the pool.
But the actions of a few individuals can lower the quality produced by the pool.
A defining characteristic of the Cameroonian arabica situation is that washing is
exclusively an on-farm activity. In contrast, the coffee produced by many countries is
washed in a central location. Washing coffee under one roof in a washing factory enables
the first buyer in the hierarchy of an integrated firm to monitor and control washing. The
washing process is easier to monitor than the output. Central washing also permits
production on a scale sufficiently large that the parchment of a single washing factory can
be subsequently processed as a single lot, and tracked to the market. This enables the
quality premium to be communicated directly to the factory. But coffee is highly
perishable and bulky when it is in its cherry state prior to washing. The scale requirements
of washing stations and inherent characteristics of cherries make it necessary to locate
washing stations in areas of intensive coffee production, in close proximity to producers.
These conditions exist in Kenya, and washing stations have helped to establish the
reputation of Kenyan coffee. However, these conditions are not met in North West
Province, Cameroon, and the consensus is that establishing a network of farm-level
washing stations is not feasible. Since washing is an activity performed by 35,000
dispersed producers, it is prohibitively expensive for a marketing organization such as a
cooperative to monitor individual producers’ washing practices. However, costs are
relatively low for an individual farmer to monitor the behavior of his neighbors.

Finally, although there are economies of scale in transportation, secondary processing
and exporting arabica, whether or not they are achieved depends on the institutional
structure. Alternative institutional arrangements (or rules) may contain very different
incentives to economize, since they determine how cost economies (if any) are distributed
among the participants in the marketing system.
9.2. The Administered Marketing Structure

Although most key institutional features of the administered market structure applied to West and North West Province alike, there were also important institutional differences between Provinces. Common institutional features included rules governing market competition, price and cost determination, and the establishment and enforcement of quality standards. In addition, coffee cooperatives in both West and North West were the subjects of a common governance regime. The key institutional differences between Provinces concerned the right to export coffee abroad and retain the residual earnings from sales. These differences had important impacts on performance, and particularly the ability of cooperatives to finance coffee purchases from farmers.

9.2.1 Degree of Competition

Between 1977/78 and 1988/89, Cameroon, through the parastatal National Produce Marketing Board, limited competition in domestic arabica markets. Marketing channels were administratively determined. Two marketing cooperatives were granted a legal monopsony in their respective provinces. Private traders were officially excluded from the market.

The North West Cooperative Association, Limited (NWCA) was the sole licensed buyer of arabica coffee in North West Province. Farmers were required to join and market their parchment through a network of 40 local cooperatives called primary societies. After acceptance, each society was required to deliver parchment to one of eleven cooperative unions (mills) for secondary processing. In turn, each cooperative union was required to deliver bagged green coffee to the Marketing Board’s warehouses
in the provincial capital, Bamenda. The NWCA apex, or central office, intermediated relationships between the Marketing Board and other cooperatives. The jurisdictional boundaries and areas of operation of each primary society and union were administratively determined. Marketing coffee outside the designated cooperative structure was illegal.

The *Union Centrale des Coopératives Agricoles de l'Ouest* (UCCAO) was the sole licensed buyer of coffee in West Province. Marketing channels within the UCCAO cooperative structure were also administratively defined. However, the organizational structure of UCCAO differed from that of NWCA. UCCAO was a two-tier structure consisting of an apex organization and six cooperative unions that operated in each of the six administrative divisions of West Province. Farmers in West Province delivered parchment to sections managed by each union.

### 9.2.2 Price Determination

The government had sole discretion in determining coffee prices. Initial producer prices were established by Presidential and ministerial decree and announced with the official opening of each coffee marketing campaign. The government pursued a uniform, pan-territorial strategy in pricing coffee. Coffee cooperatives were required to pay producers the official per-kilo price. The objective of administered pricing was to balance rural incomes across Cameroon and to stabilize farm incomes by insulating arabica producers from volatile world prices. In theory, the price stabilization policy envisaged that producers would be paid bonus payments that reflected actual sales prices, as well as marketing performance. In practice, the bonuses that were fixed by the Marketing Board became institutionalized second payments to farmers, and were sometimes paid even when
actual export prices were less than export parity prices.

The national price schedule distinguished between washed and unwashed arabica, and
good and bad beans. Thus, quality-related price differentials were determined according
to administrative criteria. Cameroon is relatively unique in that it produces both robusta
and arabica coffee, and their production areas overlap. Thus, robusta and arabica are
competing crops in some areas. The government also fixed robusta coffee prices and
determined robusta and arabica price differentials. Unwashed arabica and robusta were
equivalently priced.

9.2.3 Cost Determination

As part of its price stabilization policy, the government established per-kilo cost
allowances to reimburse cooperatives’ marketing costs. Separate costs schedules were
established for UCCAO and NWCA. For example, the Marketing Board derived
NWCA’s cost allowance (margin) by estimating the average costs of specific marketing
functions, plus a government determined margin. All cooperatives performing like market
received a uniform cost allowance for every kilo of coffee they handled. Thus, the shares
of NWCA’s total cost allowance received by each society and union, as well as the apex
share, were also determined by the Marketing Board. Cost allowances were linked to
volume only, and made no distinctions for quality or differences in operating efficiency.

9.2.4 Determination and Enforcement of Coffee Quality Standards

The Marketing Board determined and enforced quality standards. At the farm level,
coffee quality was evaluated during acceptance by weighing delegates employed by
primary societies. Weighing delegates drew and hand-hulled a 100 gram sample of a farmer’s parchment, tested the moisture content of beans, and separated foreign matter and defective beans from good beans. The Marketing Board established good and bad bean criteria. Each farmer’s parchment was assigned a good bean percentage was equivalent to the weight of remaining good beans from the 100 gram sample. Farmers were paid the “good bean” price for the percentage of coffee accepted as good, and the “bad bean” price for percentage of coffee accepted as bad\(^2\). However, visible bean defects reveal only some quality characteristics.

The Marketing Board also established grading and quality standards for secondary processing. Inspectors employed by the Marketing Board evaluated the quality unions’ processed green coffee. After unions had assembled lots for export, inspectors assigned a quality grade to each lot according to the moisture content and number of visible bean defects found in small lot samples. A second quality inspection took place at the Board’s warehouses prior to shipment.

Despite the fact that it evaluated the quality produced by each union, the Marketing Board made no attempt to penalize unions for processing coffee poorly. Unions were paid the same per-kilo cost allowance whether or not they processed coffee well. As a result they had little incentive to control quality. Moreover, the Board made no attempt to apply or enforce quality standards when unions accepted parchment from societies, despite the importance of farm-level production, harvesting, and washing practices in determining cup

\(^2\) Prior to payment the total weight of parchment accepted from farmers was reduced by 20 percent, to derive its green bean equivalent weight. This conversion figure was also determined by the Marketing Board.
quality. Since parchment acceptance rules and quality standards were not enforced, they could not counter potential incentives for society weighing delegates to overvalue the quality of farmers’ coffee.

9.2.5 Right to Export and Own Residual Income

The Marketing Board had exclusive rights to export all arabica produced in North West Province. As a result, cooperatives functioned as agents of the Marketing Board, who collected and processed coffee on its behalf. Coffee ownership was effectively transferred from farmers to the Marketing Board during acceptance. The Marketing Board also had exclusive rights to claim and retain the residual income from its arabica sales. The Marketing Board assessed a tax on exported arabica from North West Province equal to the difference between the realized export price and fixed producer prices and cooperative cost allowances. After deducting its own costs, the Marketing Board deposited net profits into a price stabilization fund. Although the fund was nominally intended to support domestic producer prices in periods of low world prices, rules entitled the Marketing Board and state treasury to govern its use.

In West Province, UCCAO had rights to market arabica abroad independently. The government continued determine UCCAO’s cost allowance and tax UCCAO’s export earnings. However, in reimbursing UCCAO’s marketing costs, most of the residual earnings the government had taxed away were returned. This gave UCCAO effective rights to claim the residual earnings from its sales. But it was obligated to contribute to

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3 The fund was intended to distribute subsidized inputs to producers, and provide investment capital for the development of the arabica subsector.
the arabica price stabilization fund by paying a fixed per-kilo fee that the Marketing Board levied on its exports.

The institutional differences concerning the right to export coffee and claim the residual income from sales had very different implications for cooperatives in West and North West Province. NWCA was dependent on the Marketing Board to reimburse its operating costs, and grant it physical capital. This severely constrained NWCA’s ability to provide marketing and supporting services to its members. In contrast, UCCAO accumulated financial reserves which it could use to self-finance investments in physical capital and provide services for its members.

NWCA was also dependent upon the Board to finance its crop purchases. Prior to 1983, the Marketing Board estimated the total amount it would need to finance crop purchases and advanced these funds to NWCA before each marketing campaign. But, in 1983 the Marketing Board began to release funds to NWCA in partial disbursements during the course of the marketing season. The Board was concerned that cooperatives might mismanage or fail to return unused funds. The amount and timing of these disbursements often resulted in cash shortages and delayed payments to farmers, and created friction in NWCA’s relationship with the Board.

In West Province, UCCAO operated an internal price stabilization fund using the residual earnings from its sales, and member unions maintained a variety of reserve funds. As a result, UCCAO was able to self-finance most its crop purchases from farmers. In addition, rights as residual claimant meant that UCCAO could use the arabica crop as collateral in procuring loans from commercial sources. The right to independently export coffee and claim residual income enabled UCCAO to be significantly less dependent on the
Marketing Board than was NWCA.

9.2.6 Cooperative Governance

Supporting the administered marketing structure was a national cooperative governance regime that gave the government broad regulatory and supervisory authority over cooperative affairs. Included within government discretion was the right to organize cooperatives according to administrative rather than economic criteria and appoint civil servants as general managers. Elected cooperative officials had to be members of the ruling political party. Cooperative management and decision-making discretion was structured according to hierarchy, along a top-to-bottom chain of command. Coordination was achieved by command. Cooperatives, and particularly unions and the apex, were subjected to the discipline of the government and were insulated from the scrutiny of membership. Cooperatives functioned as quasi-governmental collection and processing agents of the Marketing Board.

9.3 Impacts of the Administered Market Structure on Economic Performance

9.3.1 Producer Prices

Between the 1977/78 and 1985/86, the government increased the fixed national arabica producer price from 325 to 520 CFA per kilo (including announced bonuses). Nominal producer prices increased at an average annual rate of 6 percent, and varied within a range of 19 percent. Over the same period, the average annual export price rose from 681 and 1,412 CFA per kilo. Export prices increased at an average annual rate of 12 percent, but varied within a range of 56 percent. World arabica prices entered a period of
sustained increase between 1980/81 and 1985/86. Although the Marketing Board sold the 1985/86 arabica crop from North West Province at an average export price that was nearly 150 percent higher than in 1980/81, the fixed arabica producer prices in for the 1985/86 season was only 41 percent higher than in 1980/81. Although the Marketing Board’s fixed pricing policies may have been relatively successful in stabilizing producers prices, producer prices were fixed at consistently low levels relative to export prices. But after world coffee prices fell by 50 percent in 1986/87 and entered a prolonged slump, the government was unable or unwilling to revise producer prices downward, despite incurring large marketing losses. The results clearly show that producer prices were fixed independently of export prices.

The government’s price policies failed to stabilize farm incomes. Real producer prices declined steadily under administered pricing arrangements, decreasing by 44 percent between 1978/79 and 1988/89. Compounding matters, payments to North West farmers were often delayed due to the Marketing Board’s uncertain and irregular cash disbursements to coffee cooperatives for crop purchases. Despite record high export prices in 1984/85 and 1985/86, the Marketing Board was unable to pay announced bonuses in full. Payment difficulties intensified after the fall in world arabica prices in 1986/97.

Administered producer price differentials between higher-value washed arabica and lower-value robusta and unwashed arabica bore little relationship to price differentials in the world market. Over the ten year period between 1979/80 and 1988/89, the world arabica-robusta price differential averaged 139 CFA per kilo. However, the domestic arabica-robusta producer price differential averaged only 40 CFA per kilo. Although the
costs of producing washing arabica were estimated to be 80 CFA per kilo higher than producing unwashed arabica, domestic washed and unwashed good bean prices differed by only 35 CFA per kilo between 1984/85 and 1988/89\(^4\). Consequently, producers invested little effort in washing. Domestic pricing policies implicitly favored the production of robusta coffee and inferior quality unwashed arabica over washed arabica.

The government fixed producer prices according to administrative and not market criteria. Producer prices were not linked to world prices, and communicated little market information to producers. Returns to washed arabica steadily eroded over time. Administered prices provided farmers with poor incentives to produce, much less invest in quality. The government’s apparent pricing strategy was to maximize its own revenues by taxing and expropriating profits from producers.

**9.3.2 Marketing Costs**

Marketing costs within the administered marketing system were excessively high, and increased markedly over time. The large marketing surpluses that accumulated within the stabilization during periods of high world prices helped fuel bureaucratic expansion within the Marketing Board. The number of Board employees increased by 80 percent between 1982 and 1987, and the number of high-salaried senior and supervisory staff more than doubled. The Marketing Board also invested in new warehouses, office buildings and

\(^{4}\) To produce washed arabica, cherries must be harvested as they ripen and initial processing (washing) must begin immediately. Considerable care and effort is required to wash coffee, and it may take more than two weeks for the process to be completed. In contrast, the production of unwashed arabica (or robusta) omits the washing process entirely. Cherries are simply left on the tree to dry, and are collected in a single harvest.
other physical capital. The Board’s total operating costs quadrupled between 1982 and 1987, while coffee production stagnated.

NWCA’s total fixed cost allowance more than tripled from 40 to 132 CFA per kilo between 1977/78 and 1982/83. Despite this increase, NWCA claimed that the its cost allowance failed to cover its actual per kilo operating costs. The fixed allowance remained constant through the 1988/89 season, thus declining in real terms. The system of fixed cost allowances contained few incentives for cooperatives to economize or control costs. A cooperative that was managed and operated efficiently was rewarded at the same per-kilo rate as a poorly managed and inefficient cooperative. Because NWCA and its affiliated cooperatives were the sole licensed arabica buying agents of the Marketing Board in North West Province, cost overruns were either routinely subsidized by the government or used by cooperatives to justify increases in the cost allowance during negotiations with the Board.

Farmers had little incentive or ability either to monitor cooperative activities or to demand cost accountability and better operating performance from cooperatives, since their producer prices were determined and paid independently of cooperative costs. Furthermore, supervisory control of cooperatives was in government hands. Local “big men” tended to dominate cooperatives. These individuals often used cooperatives as a source of economic rent to reward clients or to promote their self-interests. Cooperatives were overstaffed, costly, and operated well below processing capacity. Instead of providing cooperative managers with incentives to economize and realize economies of scale, administrative cost determination procedures contained incentives to increase costs. Steadily declining coffee production during the administered marketing era further fueled
large increases in cooperatives’ per-kilo marketing costs.

9.3.3. Distribution of Residual Earnings

Between 1978/79 and 1981/82, world coffee prices were relatively stable at moderate levels. During this period, the average producer share of export earnings was 52 percent, the cooperative share was 12 percent, and the Marketing Board’s share was 36 percent. But when world prices increased dramatically between 1982/83 and 1985/86, the average producer share of export earnings fell to 37 percent, the cooperative share remained more or less constant at 11 percent, and the Marketing Board’s share rose to 52 percent. The proportion of earnings returned to Cameroonian farmers was low relative to successful coffee African producing countries such as Kenya, where producers on average received more than 70 percent of export earnings.

Administered marketing institutions that gave the Marketing Board rights to determine producer prices and cooperative cost allowances, and to claim and retain residual earnings from coffee sales of arabica, enabled the government to extract substantial earnings from the arabica subsector between 1977/78 and 1981/82 and to appropriate the profits associated with spiking world prices between 1982/83 and 1985/86.

But after world prices fell by half and remained at low levels between 1986/87 and 1988/89, the Marketing Board was unable to lower producer prices or cooperative cost allowances. The producer and cooperative share of arabica earnings increased to 63 and 18 percent respectively, and the Marketing Board’s share decreased to 19 percent. However, the underlying cause for this was the fall in export prices, and the Marketing Board could not support the high costs of its policies and began to incur heavy marketing
losses.

The government’s apparent strategy in fixing producer payments and cooperative allowances before 1986/87 was to extract as much revenue as possible from the arabica subsector by maximizing payments to the price stabilization fund, which it never had to use. Rules which gave the Marketing Board discretion over the fund’s use and permitted the state treasury to tap the funds when needed, gave the government the effective ability to use the fund for its own purposes and to reward its own retainers.

However, UCCAO, in West Province, had rights to retain the earnings from its coffee sales. As a result, the same forces that generated large profits for the Marketing Board’s sales of North West arabica, generated large profits for UCCAO also. Although UCCAO reinvested much of its residual earnings in providing marketing services to its members, cooperative officials (“big men”) also used profits to reward their own clients and expand the UCCAO bureaucracy. As a result, UCCAO supported a more expensive cost structure than did NWCA.

9.3.4 Coffee Production

Arabica production exhibited a long term decline during the administered marketing era. Expressed in terms of four-year moving averages, national arabica production fell from its peak of 28,925 metric tons in 1974/75, to 24,600 tons in 1981/82 (which represents the first four years in which the national Marketing Board price coffee), to only 19,650 tons in 1988/89. Fixed pricing arrangements were in place during this entire period. Provincial arabica production mirrored the national trend. For example, production in North West Province fell from a peak of 10,500 tons in 1978/79 to only
5,000 tons in 1987/88. If expressed in terms of a four-year moving average to account for inter-annual variation, North West production fell by 35 percent between 1981/82 and 1988/89. Cameroonian arabica production fell despite a general trend of rising world prices and expanding global production.

In contrast, the production of lower valued unwashed arabica and robusta coffee increased over time. Although annual data were unavailable, the reported share of unwashed arabica as a percentage of total arabica purchases in North West Province was only 0.7 percent in 1970/71, but rose to 13.5 percent by 1985/86. However, these figures are likely understated since a failure by cooperatives to control quality resulted in large amounts of unwashed beans being mixed with washed beans in bags marked for export. Expressed in terms of a four-year moving average, Cameroonian robusta production increased from 79,800 metric tons in 1981/82 to 105,925 tons in 1988/89. The expansion of robusta production was particularly dramatic in North West Province. Although NWCA handled no robusta in 1977/78, it handled 1,020 tons in 1988/89. Despite the greater market value of washed arabica in world markets, administered pricing arrangements favored the production of lower value unwashed arabica and robusta.

Administered prices clearly provided poor production incentives for washed arabica producers. In response to low and declining returns, producers devoted less effort and fewer resources to washed production and yields fell. Many producers decided to produce unwashed coffee instead of washed coffee because of its lower production costs. Producers also expanded production of robusta coffee in areas where arabica and robusta production zones overlapped. However, a more general response was for arabica farmers to reallocate resources to the production of more profitable food crops.
9.3.5 Coffee Quality

Coffee quality deteriorated during the administered marketing era. Despite having the potential to produce superior quality coffee, Cameroonian arabica was routinely discounted in price by international buyers. Quality problems were most pronounced in North West Province. In 1988/89, the Marketing Board’s sales of North West arabica were discounted in price by an average of 11¢ per pound (equivalent to 60 CFA per kilo) relative to the world (New York “C”) coffee price. This represented a discount of about 15 percent. There were quality failures at each stage of the marketing chain. Farm-level production, harvesting and washing practices were generally poor. Cooperatives failed to handle, grade or sort coffee well, and made little effort to control quality. The Marketing Board had a reputation among buyers as an unreliable trading partner.

Because of arabica’s high information cost characteristics, the quality outcome depends on the relative success of institutional arrangements in distinguishing, certifying and rewarding quality, particularly at the farm-level. Administered marketing institutions were ineffective in resolving high information cost problems. Rudimentary good bean-bad bean distinctions, although perhaps controlling for some types of serious quality problems, failed to provide producers with sufficient incentives or information to wash coffee carefully. Any coffee that achieved the minimum good bean standard during acceptance was paid the good bean price. Administered prices did not distinguish between average and superior quality coffee, much less shades of difference in between. Since the Marketing Board had sole rights to claim the residual earnings from arabica sales, it also had the right to appropriate any premium associated with improvements in quality and bore the cost of price discounts. Residual payments were paid to farmers whether they
invested in quality or not. Moreover, the Board’s quality control efforts centered on processed green coffee, and it made no attempt to enforce quality control during farm-level acceptance.

Declining returns to washed arabica discouraged farmers from investing in quality\textsuperscript{5}. Fixed domestic prices contained little information about demand or buyers’ assessment of quality. Because they were paid uniform fixed prices, producers had a poor awareness that their production and washing techniques affected arabica’s cup quality and export prices. As a result, the quality characteristics of the coffee they produced were poorly coordinated with the preferences of buyers and consumers.

Specific cooperative-level problems included a large proportion of unwashed beans mixed with washed beans in export bags, and a failure to meet international coffee grading standards. The poor handling, quality control and processing by coffee cooperatives was attributable to fixed cost allowances that made no distinctions for quality. Cooperative unions were paid the same fixed allowance whether or not they graded and sorted coffee properly. As a result, the Marketing Board’s quality evaluations had little effect on cooperative behavior. Finally, cooperative mills were in generally poor condition and prone to breakdown.

Coffee produced in West Province and marketed by UCCAO was also price discounted by buyers, but at a lesser rate than coffee from North West. In 1988/89, UCCAO’s arabica was discounted in price by 5 to 8 cents a pound (28 to 44 CFA per

\textsuperscript{5} A shortage of initial processing equipment such as hand-pulpers and appropriate drying surfaces further contributed to farm-level quality problems in NW Province.
kilo) relative to the NY "C", or world price, representing a discount of between 7 and 11 percent. Once again, the reasons for UCCAO's better quality and price performance related to its rights to export coffee and retain the residual earnings from its sales. UCCAO used part its earnings to procure inputs and equipment which were distributed to farmers at subsidized prices, invest in state-of-the-art secondary processing equipment, and provide farm-level extension services. As a result, cooperatives and producers in West Province were better endowed and had access to better information than cooperatives and producers in North West.

9.3.6 Collapse of the Administered Marketing System

Although the government could maintain the administered marketing system structure as long as high world price offset cumulative cost increases and generated net profits, the system quickly unraveled after the fall in world arabica prices in 1986/87. Although it could not breakeven at this lower price level, the government did not lower fixed producer prices or cooperative cost allowances. Losses mounted within the Marketing Board, and its financial situation deteriorated. During its final years, the Board was unable to reliably pay its clients and arrears accumulated. The Board's payments to arabica producers and cooperatives in North West Province became increasingly unreliable, and culminated in their non-payment during the 1988/89 season.

In theory, the government should have been able to use the surpluses that had

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6 The prices of Cameroon's other principal export commodities (oil, cocoa, and robusta coffee) also fell markedly in 1986/87. Sharp decreases in the governments export revenues led to a growing fiscal and economic crisis in Cameroon.
accumulated in the price stabilization fund to support producer prices and cooperative
cost allowance after the fall in world prices. But the monies in the fund had been diverted
by the government for other uses and were quickly exhausted. In 1988, it was estimated
that the Marketing Board’s price stabilization fund should have contained reserves totaling
83 billion CFA (US$ 193 million). Instead it contained a deficit of 30 billion CFA (US$
100 million), of which arrears owed North West arabica farmers stood at 3.9 billion CFA
(US$ 13 million). The administered arabica marketing system in North West Province had
collapsed under the cumulative weight increasing marketing costs, declining production
and deteriorating quality.

Although UCCAO in West Province also experienced serious financial difficulties after
the fall in world prices in 1986/87, the reserves it had accumulated through its rights to
export arabica independently retain residual earnings made it less dependent upon the
Marketing Board, and helped cushion the blow. UCCAO was able to continue to pay its
members reliably and cover its operating costs from its own financial reserves as well as
commercial loans it procured by using the arabica crop as collateral.

It only after the government agreed to structural adjustment program prior to the
1989/90 season that the Marketing Board, under heavy pressure from the IMF and World
Bank, cut arabica producer prices by 47 percent to deal with its financial crisis. But
marketing losses continued unabated due to an offsetting fall in world prices. At the lower
producer price, arabica was at best a break-even activity for some farmers, and unprofitable
for many. Cameroonian arabica production plummeted. Unable to earn income from
coffee, farmers accelerated their diversification out of washed arabica production into
more profitable food crops. Poor returns to arabica at lower prices further undermined
farm level incentives to invest in quality.

9.4 The Reformed Market Structure

National policy reforms were intended to privatize arabica markets throughout in Cameroon, and affected both NWCA and UCCAO. A subset of reforms targeted North West Province specifically, and sought to restructure fundamentally marketing institutions and relationships within the vertically integrated NWCA cooperative structure. These cooperative restructuring reforms were the focus of the dissertation.

The central premise underlying the design of the reformed marketing institutions was that the long-term deterioration of performance (and eventual crisis) in the arabica subsector witnessed during the administered marketing era was directly attributable to poorly functioning institutions. By introducing new institutions and incentive structures that specifically targeted arabica’s high information cost and economies of scale characteristics, reform anticipated a significant improvement in performance. The twin objectives of the reform effort were quality improvement and cost control. To accomplish these objectives, reform sought to redistribute power and decision-making authority to farmers at the base of the cooperative structure in North West Province, change principal-agent relationships between farmers and cooperatives, and to empower farmers to act collectively to improve quality and demand cost control.

The reforms included a transitional period of cooperative strengthening and reform targeting NWCA which included the payment of arrears owed producers and cooperatives, assistance to restore cooperatives’ financial health, cost reduction, improving NWCA’s technical and marketing capacity, and modifying internal cooperative
rules and accounting procedures to enable the implementation of the new institutional
design. The implementation of national-level privatization reforms and key cooperative
restructuring reforms was deferred until the 1993/94 season. The goal of the transitional
period was to give NWCA the opportunity to compete in the privatized market. UCCAO
in West Province, which had a head start in international marketing, was required to
compete and adapt to the privatized domestic arabica market without donor assistance.

Implementing the reforms proved to be a very difficult and contentious process. The
reform period between 1989 and 1993 was marked the continuous economic crisis, as well
as political unrest. After Cameroon haltingly began democratizing, North West Province
became the center of opposition political activity, which the government opposed.
Between 1991 and 1993, there were outbreaks of violence in the provincial capital of
Bamenda which resulted in some deaths and general strikes ("ghost towns") called by
opposition leaders that virtually shut down economic activity for weeks at a time. Events
culminated in the bitterly disputed presidential election that took place in October, 1992,
shortly after which the government declared a two-month state of emergency in the
Province.

The implementation of cooperative restructuring reforms was dependent upon the
prior enactment of key national-level policy reforms. However, elements within the
government resisted privatizing arabica market. It was only by intensively monitoring the
entire reform process, intervening when necessary to head off opposition, engaging in
dialogue and compromising, that USAID/Cameroon was eventually to secure government
commitment to privatize prior to the 1993/94 season, a year behind schedule. But, this
delayed the implementation of key institutional reforms within NWCA. Reform also met
resistance within the NWCA board of directors, most of whom were members of the ruling political party. USAID/Cameroon was eventually able to overcome this resistance, in part by using its leverage over project assistance funds. Inclusive dialogue between USAID, reform designers and officials from all levels of the cooperative structure was also important in breaking the implementation deadlock. But, although USAID/Cameroon insisted that NWCA implement the core features of the reformed institutional design, it compromised on its details to keep the reform process moving. As a result, the original institutional reform design was never implemented in full. The key elements of the reformed market structure as implemented are the focus of the rest of this chapter.

9.4.1 Degree of Market Competition

The structural adjustment agreement called for a major restructuring of the Marketing Board, which led to its eventual abolition in 1991. However, the Board effectively withdrew from arabica marketing during the 1989/90 season, and the NWCA apex assumed its marketing functions. The Board’s withdrawal fundamentally altered the distribution of power within the arabica subsector, and eliminated a very costly tier of its administrative hierarchy.

Through national-level policy reform, arabica markets were privatized prior to the 1993/94 season. The government was restricted from playing a direct role in arabica marketing. Barriers to market entry were lowered by abolishing the practice of licensing official arabica buyer. In the privatized market, competitive forces would determine who could buy and sell coffee. Territorial restrictions on coffee movements were also removed through reform. In losing their legal monopsony, marketing cooperatives in both North
West and West Province faced potential competition from private traders, as well as each other.

9.4.2 Determination of Cooperative Costs and Initial Producer Prices

During the transitional period of reform, the government continued to establish official, pan-territorial arabica producer prices. However, it did so after consulting with NWCA and UCCAO. Policy reforms which allowed all arabica buyers to price coffee autonomously were enacted prior to the 1993/94 season, a year behind schedule.

New arabica pricing and cost determination procedures that directly linked producer prices to export prices and cooperative costs were the core feature of the institutional reforms introduced in North West Province. Under these arrangements, initial producer prices were determined by primary societies, the level of the cooperative structure where farmers directly interact with cooperatives and participate in governance. Prior to the beginning of each marketing season, each society estimated the amount of coffee it expected to handle during the season. Based on these tonnage estimates, each cooperative (primary societies, unions and the apex) determined its per-kilo marketing costs for the upcoming marketing season in budgeting exercises. The producer price offered by a given society was calculated as the difference between NWCA’s forecast export price and total budgeted marketing costs, which included port and export charges, the NWCA apex’s estimated costs and the unique budgeted costs of the society and the union to which it was affiliated. All prices and costs were expressed in per-kilo terms. Any net profits realized during a marketing campaign were distributed to producers in residual payment to producers after marketing results were known (see below).
Costs were determined by the management and governing bodies of each cooperative in annual budgeting exercises. Budgets were not formally adopted until farmers (or their elected representatives at the union and apex levels) gave their final approval in general assembly meetings. Budgeting procedures were designed to give farmers a strong voice in determining cooperative costs and the types and levels of service they wished cooperatives to provide. By requiring managers and elected boards of directors to justify and defend their budgets before general assemblies, budgeting exercises were intended to introduce greater transparency and accountability into the cost determination process. It was anticipated that farmers would have powerful incentives to demand that cooperatives economize since their costs were reflected in producer prices.

Society-level pricing arrangements required cooperatives to be financially self-supporting and to provide marketing services at cost. Once budgets were formally approved, cooperatives were entitled to receive only their budgeted per-kilo costs. A cooperative that failed to keep its costs within prescribed limits was required to recover its in budgets prepared for the following season, at the expense of lower producer prices.

Society-level pricing arrangements anticipated that producer prices in North West Province would vary significantly as a result of differences in the costs structure, operating efficiency and volume between primary societies, and especially, cooperative unions. Price competition between cooperatives, and potentially private traders, would create additional pressures on management to control costs. If successful, incentives to economize would enable cooperatives to realize economies of scale in processing and exporting. Cost-economies would be distributed to producers in the form of higher coffee prices. In effect, cooperatives would have to compete for farmers’ loyalty on a cost
and performance basis. Over time, costly and inefficient cooperatives would be forced to either improve performance or go out of business as producers sought lower cost cooperatives that offered higher prices.

9.4.2 Rights to Export and Own Residual Income

NWCA obtained rights to independently export arabica and retain the residual profits from sales early in the reform period, and beginning with the 1989/90 crop. The reform design originally proposed vesting primary societies with rights to claim and distribute residual profits. Since they participated directly in society governance, this would mean farmers would decide the share (if any) of the residual earnings received by cooperatives. This would reinforce the pressure on cooperatives to control costs.

Residual payments to growers would reflect the average quality of pooled coffee produced by all members of a society. Since residual payments would capture any quality premium or discount, farmers would have incentives to improve their measurable parchment quality and to monitor the quality produced by others in the society pool. Incentives would also be created for farmers to pressure cooperatives to control quality during processing and handling, since their quality performance would affect farmers’ incomes.

However, economies of scale in processing meant that it was impossible to devise contingent pricing arrangements that backwardly communicated the quality premium directly to the society-level, since this would require that coffee be tracked from society to the market. Society tracking would require that unions hull, grade and bag the coffee produced by each society separately. This would negate economies of scale and greatly
increase marketing costs. Thus, society-level pricing arrangements could not fully resolve arabica's high information cost problems.

However, it was possible to track coffee from the union level. But this meant that residual payments (or quality premium) would reflect the average quality of coffee produced by the union pool, which encompassed a much larger number of farmers. To realize a quality premium, individual farmers would have to act collectively to improve the average quality of the all-union pool. But the quality premium would not distinguish and reward the quality produced by individual farmers, and would be shared equally by all members of the pool. The high exclusion cost characteristics of the quality result would create an opportunity for some individuals (or societies) to shirk and be opportunistic free-riders on the quality contributions of others in the union pool. If this type of behavior could not be controlled, the actions of a few individuals could undermine the efforts of others to improve quality. The individual farmers in the union pool would have to monitor the behavior their neighbors and pressure them to harvest and wash coffee carefully. Nevertheless, residual payments would communicate some information about how a union sorted and graded coffee, creating possible incentives for farmers to demand that the process coffee well. But it is relatively difficult for farmers to monitor union activities since they interact with them only indirectly through their societies.

Modifications that NWCA made to rules governing the distribution of residual earnings further compromised the ability of reformed pricing institutions in resolving high information cost problems. As originally proposed, the reform design recommended that NWCA should market each union's coffee to buyers separately. If it was found that this was not feasible, the reforms recommended that NWCA internally track each union's
coffee and distribute residual payments based on union-by-union the price. Either arrangement would ensure that residual payments would reflect the quality produced by each union. However, NWCA decided to market all its coffee under one name and calculate residual payments from the average price it received for all its sales. NWCA believed this arrangement would pool unions’ risk in dealing with the market. Otherwise, inefficient and poorly performing unions might be unfairly rewarded if world price rose during the course of a marketing season, and efficient unions that processed coffee quickly might be unfairly penalized (and vice versa). NWCA was also concerned that a union that defaulted on a promises to deliver coffee might damage the market reputation of NWCA as a whole.

But by calculating residual payments on an average sales price basis, residual payments to producers communicated information about the overall quality of coffee by all producers and cooperatives in North West Province. Perceptible benefits from quality improvement would require an even greater collective response by North West producers and cooperatives. But average-price residual payments magnified the high cost characteristics of the quality premium, as well as its accompanying incentives for individuals and cooperatives to shirk and be opportunistic free-riders on the quality result produced by others in the provincial pool. produced by the entire cooperative structure in NW Province. Moreover, unions now had the opportunity to shirk and free-ride, which lessened the pressure on them to sort and grade coffee well. In 1993/94, NWCA decided that any indemnities resulting from buyers’ quality claims would be the responsibility of the union responsible for the quality problems. However, this was the only quality penalty that was assessed on poorly performing unions.
NWCA also modified rules governing the distribution of residual earnings to enable apex and union governing bodies to retain at least part of the residual before distributing the remainder to societies and producers. Thus, residual payments to producers reflected the average quality and price of coffee produced in NW Province, less that claimed by cooperatives. This further weakened the effectiveness of reformed pricing arrangements in resolving high information cost problems, and also reduced the institutional pressure on cooperatives to keep costs within budgeted limits.

9.4.4 Determination and Enforcement of Quality Standards

To compensate for the inability of society-level pricing arrangements to resolve fully arabica's high information cost problems, new coffee acceptance procedures were introduced at the society level that established parchment quality standards. Institutional arrangements that made some distinction for quality might improve quality control during farm-level acceptance and inspire some farmers to harvest and wash their coffee better.

The procedures identified observable attributes in parchment (number of defects in a hulled sample, appearance/color, and odor) to classify parchment quality as good (Class I), average (Class II) or poor (Class III). Although these measures of parchment quality were crude indicators of how farmers harvested and washed coffee, they could nevertheless identify some (if not all) serious quality problems. Furthermore, they provided a means, albeit far from perfect, to institutionally distinguish, and potentially reward, producers' investments in quality. Improvements in observable parchment quality might contribute to some cup quality improvement, even if parchment and cup quality measures are poorly correlated.
However, the acceptance procedures would have to be evenly applied and strictly enforced by society weighing delegates to have any effect on overall quality. Parallel parchment acceptance procedures were introduced at the union level to ensure that societies were applying and enforcing acceptance procedures.

However, social pressures and sanctions were the primary means of countering potential incentives for individuals to shirk from investing in quality, as well as for society weighing delegates to over-classify the quality of some farmers’ coffee during acceptance. Reform anticipated that farmers would re-organize into smaller, village-oriented societies. This would give them a better ability to monitor society activities. If farmers in a village realized that their returns to investments in quality were dependent on the actions of a few individuals or weighing delegates, they might have incentive to influence their behavior. If society officials gave a friend or influential person a break, it would cost everyone.

The parchment quality distinctions of the reformed acceptance procedures also represented a means to differentially price farmers coffee. Institutional arrangements could mimic market prices and provide a method of distinguishing and rewarding producers for investments in quality. However, NWCA failed to devise a way to pay different prices to each class of coffee. Beginning with the 1993/94 season, NWCA decided that parchment accepted as poor quality Class III would be processed separately from better quality Class I and II coffee, and sold as triage. Class III prices were not determined (or paid) until after all stocks had been sold, and payment was received from by buyers. But, NWCA continued to price Class I and II parchment equivalently, and processed and sold the two classes together. Per-kilo payments to producers of Class I and II coffee differed only by the percentage of beans accepted as good and bad, one of
the criteria used to classify coffee. Although the parchment acceptance procedures as implemented distinguished between bad and average quality coffee, they failed to distinguish and reward adequately average (Class II) and good (Class I) quality parchment. This created the opportunity for Class II producers to free-ride on the efforts of Class I producers.

In summary, society-level pricing arrangements (including residual payment rules) and acceptance procedures failed to resolve fully the coordination problems inherent in the arabica situation of high information costs and economies of scale in processing and exporting. NWCA’s inability to use available parchment quality measures to pay different prices for different qualities of coffee weakened farm level incentives to invest in quality. Treated together, society-level pricing arrangements and acceptance procedures provided incentives to produce average coffee quality, but failed to reward producers of superior quality. However, farm-level quality and marketing education campaigns in 1993/94 accompanied the implementation of reform. This contributed to increasing farmers’ awareness of the relationship between quality and prices, and the need to improve production and washing techniques. But in retrospect, most of NWCA’s quality improvement efforts during reform centered on union level quality control, including better handling and grading performance. But by basing residual payments on the average sales price of all coffee that it sold, NWCA also failed to use available measures of union quality to reward quality differentially.
9.4.5 Remaining High Information Cost Quality Problems: The Role of Social Capital

Even if reformed acceptance procedures for primary societies were fully successful, they could only achieve the quality improvements associated with measurable and observable parchment characteristics. This would improve the quality of NWCA's coffee and the prices received by farmers. But there would still be room for additional quality improvement associated with unobservable bean characteristics. Production and washing practices affect taste, but this is only evident in the cup, not at acceptance. Although some evidence of careful washing can be seen by acceptance officials, the full consequence of care is only evident in the cup. Only the producer and his neighbors know fully whether they have grown and washed coffee properly. But their careful behavior can only be achieved by internalization into the habits of producers since external reinforcement from acceptance officials is not fully possible. If a producer cared about the welfare of other producers in the village (or primary society), he would not want to reduce their income through his own opportunistic behavior.

Social capital factors could provide strong countervailing incentives for individuals to shirk from investing in quality--behavior that can't be detected by acceptance officials at primary societies. Social capital factors include a sense of community and obligation to other members in a group, as well as the perceived threat of social sanctions from peers in village-level societies. But for social capital factors to be effective in controlling opportunistic behavior, producers must first be aware of their interdependence with other producers (and cooperatives). The actions of a few individuals in a group can adversely affect individual's incomes. Although NWCA sought to educate producers about proper
production and washing practices, education by itself is not enough to alter individual behavior unless producers internalize the quality aspects of production and washing.

9.4.6. Cooperative Governance

A key premise of the reform effort was that cooperatives that had evolved in the context of the administered market structure, under the strict supervision of the government and Marketing Board, were inappropriately organized to compete in a privatized market. Cooperative restructuring accompanied the reform of marketing institutions. The intent was to return coffee cooperatives to farmers by redistributing power and decision-making authority to primary societies. To accomplish this and enable the implementation of new marketing rules, cooperative governance rules at both the national level and within NWCA were reformed. The goal was to counter the "big man" tendencies of senior managers and elected officials by empowering farmers to act collectively at the union and apex levels to control costs and hold management accountable.

Cooperative governance reform gave farmers the right to reorganize based on principles of voluntary association and democratic self-governance. Reformed price and cost determination rules were important in decentralizing decision-making within the cooperative structure and enabling farmers to act collectively. Rights for farmers to exit existing societies, or form new ones, for societies to affiliate with unions of their choice, and for unions to exit NWCA, were a critical element in introducing competition within the cooperative structure. The threat of exit was intended to increase pressure on cooperative managers to be responsive to the demands of membership. Since any group
could opt out of the cooperative structure entirely, cooperative governance reform also
reduced barriers to market entry for private traders. Cooperatives would have to compete
on a service, cost or quality basis or risk going out of business.

Cooperative governance reform sought to introduce bottom-up governance
arrangements within the hierarchical cooperative structure (with members and societies at
the base). Reform sought to change the character of principal-agent relationships within
the cooperative structure so that societies were agents and providers of services to
farmers, unions were agents and providers of secondary processing services to member
societies, and the Apex was an agent of unions and societies providing marketing services
for the entire cooperative structure.

9.5 Impacts of Reform on Economic Performance

The full impacts of the reformed marketing structure on economic performance may
only be perceived over the long term. The interactions between situation and structure, as
well as structure, behavior and performance are complex processes. A learning process
accompanies institutional change. Institutional change will affect behavior and thus
performance only to the degree that new rules are internalized by market participants.
Thus, it is inherently difficult to measure the impacts of institutional change from the
vantage point of only two marketing seasons. The impact analysis sought to identify the
direction in which behavior and performance changed after reform more than it sought to
predict future performance.
9.5.1 Cooperative Restructuring

When farmers were given the opportunity to reorganize cooperatives, they responded rapidly. The number of primary societies grew from 40 to 73 in 1993. Farmers expressed a preference to reorganize into smaller, village-level societies, facilitating face-to-face control. The number of new societies would likely have been greater if some unions hadn’t impeded society-level restructuring. There was a large turnover of elected officials at all levels of the cooperative structure during elections in 1993. By all accounts, reform was successful in restoring farmers’ confidence in cooperatives and promoting increased member participation in cooperative affairs, particularly at the society level.

But despite a strong sentiment among farmers for future society restructuring, the number of societies remained constant at 73 through the end of 1994/95. In many areas, union officials successfully resisted farmers’ efforts to form new societies. Since neither the degree of member representation nor relative influence of different societies in the internal affairs of these unions changed, the balance of power between societies and the union that had existed prior to reform remained largely intact. This weakened the ability of farmers and their elected society representatives to hold union management accountable. The ability of individual farmers to monitor and influence the quality produced by other members of a society that did not reorganize was also weakened because of their larger group size.

Reform clearly changed the principal-agent relationships that had existed between the government and cooperatives during the administered marketing era. The Marketing Board, which had authority to determine and enforce marketing rules, was abolished during the reform process. The government agency that had supervisory control over
cooperatives was stripped of its authority and abolished under the new cooperative law. Farmers assumed its supervisory functions. However, the success of reform in promoting bottom-up governance, and changing the direction of principal-agent relationships between primary societies, unions and the apex was more ambiguous. The overall impression was that there was significant change in the direction of principal-agent relationships towards the farm level, but the change was uneven and far from complete.

Although some unions adopted a strong service orientation towards societies and farmers and encouraged society level restructuring, others did not. In acquiring experience in international marketing, the NWCA apex began to promote actively quality improvement at the cooperative and farm levels to better sales prices. Payments to producers became more reliable during reform. The vertical coordination of the collection activities of societies, secondary processing activities of unions, and marketing activities of the Apex improved noticeably during and after reform.

However, cooperative governance arrangements are such that unions and the apex are insulated from direct farmer control. Information flows within the cooperative structure and to farmers improved during and after reform, but remained weak. Opportunities remained for officials at the union and the Apex levels to conduct their affairs outside the scrutiny of membership and to manipulate and impede the flow of information to farmers. Reform may have changed the overall character of principal-agent relationships within the cooperative structure, but significant agency problems remained.
9.5.2 Marketing Costs

During the transitional period of reform between 1989/90 and 1992/93, the NWCA apex determined uniform fixed cost allowances for the entire cooperative structure. In 1989/90 and 1990/91, NWCA calculated per-kilo cooperative cost allowances based on severely overestimated tonnage. NWCA sustained heavy marketing losses since its true per-kilo costs exceeded per-kilo allowances. Although NWCA more or less accurately predicted tonnage and cost levels in 1991/92, cooperatives continued to lose money since world coffee prices fell and historical low. NWCA’s marketing losses between 1989/90 and 1991/92 were eventually covered by USAID and European donors. The analysis strongly suggested that coffee cooperatives in North West Province would likely have failed it had either received no donor support, or arabica markets were suddenly privatized.

During the transitional period of reform, cooperative costs were reduced significantly. NWCA reduced its total fixed cost allowance from 197 to 150 CFA per kilo between 1989/90 and 1992/93. Its true costs were reduced by an even greater amount. But NWCA’s cost reductions were mostly programmed by USAID. Reform of national labor rules in 1992 provided the impetus for NWCA to reduce overhead (fixed) costs significantly through employee layoffs and deep cuts in salaries and allowances. Cooperatives also changed the terms of employment of many their employees from permanent to seasonal. The total overhead costs of NWCA’s eleven cooperative unions were reduced by 74 percent between 1989/90 and 1992/93. Unions’ variable costs were also significantly reduced due to improvements in their technical and managerial capacity. The turning point in the reform process occurred in 1992/93. Because it had successfully
reduced costs, NWCA realized a profit on its coffee sales and was able to pay bonuses of 27 CFA kilo to farmers and 20 CFA to cooperatives.

In the reformed market structure, pressures for cooperatives to control and reduce costs were driven by the altered incentives created through institutional reform. Cooperatives determined their costs in budgeting exercises in both 1993/94 and 1994/95. Although NWCA’s lowered its total per kilo marketing costs from 150 CFA to 140 CFA between 1992/93 and 1993/94 by reducing export-related expenses, total cooperative costs increased by 12 CFA per kilo--despite a higher tonnage estimate. Budgeting exercises failed to elicit their expected variation or reduction in cooperative costs. Transportation costs were the primary source of cost variation at the society level. Union costs tended to converge around 70 CFA per kilo and varied within a narrow range, despite large differences in the tonnage estimates of individual unions and differences in their transportation cost structures. The average estimated tonnage of the six low volume unions was four and a half times less that of the five high volume unions, but their mean budgeted per-kilo costs were slightly lower. Instead of providing a per-kilo cost advantage, the large tonnage of some unions apparently sheltered management from pressures to reduce costs. In addition, the union cost evidence raised questions about the accuracy and transparency of some cost estimates.

Cooperatives revised their per-kilo costs during the 1993/94 season to account for the 50 percent devaluation of the CFA franc against the French franc in January, 1994. But unions and societies did not complete their revisions until the end of the marketing campaign, enabling managers to adjust their initially budgeted costs to reflect their actual costs per-kilo costs. This weakened pressures on management to economize. The mean
revised total cooperative costs (which exclude export charges) were 157 CFA per kilo, or 47 percent higher than initially budgeted. Primary societies and the apex were relatively successful in minimizing cost increases, but unions were not. Mean revised union costs increased by 53 percent, but exhibited greater variation than initial costs. Once again, small volume unions were more successful than large volume unions in controlling cost increases. Although this result was inconsistent with the assumption of economies of scale at the union level, it was consistent with the greater control principals have over agents in smaller groups.

The mean total budgeted cooperative cost in 1994/95 was 223 CFA per kilo, an increase of 42 percent over the revised 1993/94 level. Although precise tonnage information was unavailable, it is likely that estimated tonnage in 1994/95 was significantly greater than in 1993/94 because price incentives at the farm level improved significantly. Once again, societies were relatively more successful in controlling per-kilo cost increases than either the apex or unions. Mean per-kilo union costs increased by 41 percent in 1994/95, but individual union costs varied by even greater amount than their revised 1993/94 costs. The relative increase in costs was nearly three times greater in small volume unions than in large volume unions. Overall, the mean per-kilo cost of high volume unions was 25 CFA per kilo less than that of small volume unions in 1994/95. Although these results were more consistent with the assumption of economies of scale at the union level, the cost performance of individual unions provided less convincing evidence.

There was a general trend of rapidly rising nominal cooperative costs after reform, particularly at the union and apex levels. Much of the nominal increase was attributable to the 50 percent devaluation of the CFA franc in 1993/94 and inflation in post-devaluation
Cameroon. But the mean total budgeted per-kilo cooperative cost in 1994/95 was 106 percent higher than the initially budgeted in 1993/94, prior to devaluation. The apex per kilo budgeted cost was 109 percent higher, and the mean budgeted costs of unions and societies increased by 112 and 76 percent respectively. One would have predicted that the apex and unions would have been able to offset devaluation-related per-kilo cost increases because of increasing tonnage. Furthermore, since cooperative marketing services do not consist of 100 percent traded goods, devaluation should not have doubled cooperative costs. Although an expansion in number or level of the services cooperatives were providing after reform, particularly in the area of quality control, may have contributed to increasing costs, there was little evidence to support such a claim. In fact, results of the 1994/95 campaign suggest that inefficient cooperative performance may have contributed to rising costs.

Expressing cooperatives in real terms confirmed that cooperatives failed to control costs after reform. The real total mean cooperative per-kilo costs increased by 45 percent between the beginning of 1993/94 and 1994/95. The real apex per-kilo cost increased by 48 percent, and the mean real per-kilo costs of unions and societies increased by 24 and 50 percent respectively.

The cost evidence raised serious doubt about the effectiveness of reformed institutions in promoting cost control within cooperatives, and particularly the apex and unions. But several factors may impeded their effectiveness. Cooperative cost revisions in 1993/94 and budgeting exercises in 1994/95 took place amid expectations of windfall profits within the arabica subsector. Devaluation in 1994 immediately doubled the CFA value of NWCA’s exports. World coffee prices began to increase dramatically shortly after price
reforms were implemented. The expectation of high profits likely muted incentives to economize since cooperatives could offer producers significantly higher prices even while failing to control their costs. However, one would expect farmers to exert greater pressure on management to economize in the context of decreasing export prices, since rising cooperative costs would more perceptible in producer prices. Moreover, reforms anticipated that competition from private traders entering the market (and UCCAO in West Province) would reinforce incentives to economize in cooperatives. During the first two years after reform, private firms had yet to enter arabica markets in North West Province. But, informal traders were active at the farm level. If private traders enter the market, and observed union cost differences are sustained, competitive forces would be expected to increase pressures on cooperative managers to control costs over the longer-term.

But experience suggests that rising cooperative costs were in part explained by institutional factors. Because of progressively greater economies of scale in secondary processing and exporting, the apex and unions should have been comparatively successful in minimizing cost increases after reform. However, the cost evidence showed that the opposite was true. Under reformed institutions, incentives to economize are directly related to the collective ability of farmers to demand cost control and accountability from management in budgeting exercises, particularly at the higher levels of the cooperative structure. The two unions that experienced the greatest amount of society level restructuring and were most open to reform were markedly more successful in minimizing per kilo cost increases in 1993/94 and 1994/95 than were unions that experienced relatively little society restructuring. Societies, which are directly governed by members
and exposed to their scrutiny, were the most successful level of the cooperative structure in minimizing cost increases. This cost results suggested that when farmers were able to participate effectively in cooperative governance and make their voices heard, they successfully controlled costs. But the results also showed that while reform may have empowered farmers to participate in and influence the budgeting process, several unions and the apex were able to impede farmers' effective use of these new rights.

Evidence from the first two years after reform suggested that the ability of farmers to participate effectively in budgeting exercises, particularly at the union and apex levels, was related to the information they received. Farmers and their elected union and apex delegates need to have access to historical cost information and, ideally, comparative cost information to evaluate the information contained in budgets. Early in post-reform era, this information was in very limited supply. Over time, one would expect that farmers will develop an improved conception of what they consider to be appropriate costs, and a better ability to evaluate budgets as they acquire greater familiarity and experience with new budgeting procedures. But information is asymmetrically distributed within the cooperative structure and concentrated at the upper levels. There are high acquisition costs for individuals (and societies) in obtaining cost and price information from all areas of North West Province. There is no guarantee that information will become more accessible to members unless it is collected and disseminated by NWCA, for which information acquisition costs are relatively low.

A more fundamental information problem related to the reformed cost procedures themselves. As implemented, society-level pricing arrangements required that cooperatives calculate their costs in per-kilo terms, and made no distinction between overhead (fixed)
and variable costs. Overhead costs, which include personnel-related expenses, do not vary with tonnage. However, per-kilo overhead costs are directly influenced by tonnage, and are the primary expression of economies of scale. Per-kilo overhead costs between years and across cooperatives are not directly comparable. If estimated tonnage is unknown, it is extremely difficult for a general assembly member to determine whether overhead costs have increased if they are expressed in per-kilo cost terms. In the context of increasing tonnage, constant per-kilo costs are an indicator that actual costs increased. If actual tonnage exceeds estimated tonnage, a cooperative’s actual per-kilo overhead costs would be less than budgeted. Cooperatives could claim any surplus since rules entitled them to retain their budgeted per-kilo costs. The failure to distinguish between per-kilo overhead and variable costs provided an opportunity for cooperative managers, particularly at the union and apex levels where economies of scale exist, to obfuscate and conceal overhead costs by either manipulating their tonnage estimates or creatively allocating them to the different cooperative activities detailed in budgets.

It takes an informed membership to ask union and apex managers why they did not achieve economies of scale and pass them on to producers. But experience suggested that by pricing all cooperative services on a per-kilo basis, reformed cost determination procedures failed to provide members with sufficient information. Finally, experience showed that per-kilo pricing of cooperative services created strong incentives for some cooperative managers to lower their per-kilo costs, and reduce pressures for cost discipline, by actively purchasing coffee from non-members. As observed in Chapter 8, incentives to increase tonnage were not always compatible with incentives to enforce quality standards at the cooperative level.
9.5.3 Producer Prices

During the transitional period of reform between 1989/90 and 1992/93, the government continued to fix national arabica prices. In 1989/90, arabica producer prices were slashed by 47 percent from 250 CFA per kilo, where they were maintained through the 1991/92 season. In 1992/93, the producer price was lowered to 200 CFA per kilo. At these low levels, returns to arabica production were marginal at best, and growers had little economic incentive to produce. Compounding problems, NWCA experienced difficulty in procuring timely and adequate crop financing during the early years of the reform period. In 1989/90 and 1990/91, NWCA's payments to producers were unreliable and severely delayed. Many cash-strapped farmers sold their coffee at price discounts of between 30 and 50 percent to local businessmen and traders who had with cash on hand. A number of these informal traders were from West Province, who subsequently delivered the coffee to UCCAO for immediate payment. Beginning with the 1991/92 season, NWCA's payments to producers became noticeably more reliable.

NWCA began to price coffee autonomously during the 1993/94 season, when society-level pricing arrangements were introduced\(^7\). Producer prices improved dramatically after reform. The mean initial producer price in North West Province was 260 CFA per kilo in 1993/94, 30 percent higher than at the start of 1992/93. The producer prices offered by societies varied with the budgeted per-kilo costs of societies and unions costs. Although the range of producer prices was 33 CFA per kilo, the lack of variation in initial 1993/94 union budgeted costs meant that the initial producer prices offered in most areas clustered

\(^7\) UCCAO continued to establish a single producer price for its members, although one of its member unions broke ranks during the course of the season.
within a narrow 8 CFA per kilo range. Transportation costs represented the primary
source of price variation between societies. Thus, price competition amongst cooperatives
was muted during the first year of reform.

In the midst of the 1993/94 season, NWCA nominally doubled producer prices in
response to the CFA devaluation. Revised cooperative costs were reflected only in final
1993/94 prices, which included residual payments. The final mean producer price in NW
Province for the 1993/94 season was 775 CFA per kilo. Since society-level pricing
arrangements linked producer prices to export prices, producers were the primary
beneficiaries of both devaluation and rising world prices.

The mean initial 1994/95 producer price in NW Province was 1,000 CFA per kilo.
Initial prices would have been considerably higher if the government hadn’t implemented a
26 percent ad valorem tax on arabica exports (see below). Although complete price
information was unavailable, 1994/95 producer prices reflected the large variations in
unions’ budgeted per-kilo costs. The highest producer prices were offered in the Nso
area. This was the result of Nso Union’s policy of strictly controlling costs to maximize
producer prices. Oku-Noni Union was also relatively successful in controlling costs and
offered high prices. These two unions were previously identified as being open to reform
and responsive to members. But, NWCA failed to anticipate that spikes in world coffee
prices are usually short-lived, and overestimated the 1994/95 export price. As a result, its
initial producer prices were too high, and NWCA sustained losses of 219 CFA per kilo on
its coffee sales in 1994/95. Under society-level pricing arrangements, cooperatives would
have been required to cover these losses in 1995/96 budgets, resulting in considerably
lower producer prices. Although North West arabica producers received high prices for
their coffee during the first two years after reform, it is extremely doubtful that NWCA could sustain this performance.

After reform, NWCA was able to offer its members consistently higher prices than UCCAO in West Province. The initial 1993/94 producer price offered by UCCAO was 250 CFA per kilo, 10 CFA per kilo less than the mean producer price offered by NWCA. But after devaluation, NWCA nominally doubled producer prices, increasing its mean producer price to 520 CFA per kilo. In contrast, UCCAO raised its producer price to only 400 CFA per kilo, and later, 425 CFA per kilo. NWCA continued to offer higher prices than UCCAO through the 1995/96 season. NWCA’s competitive advantage over UCCAO was directly attributable to its lower marketing costs. UCCAO maintained a more costly structure than NWCA. Through reform, NWCA had become a pro-competitive force in the domestic arabica market. However, there were strong indications that competition from NWCA was creating pressures for UCCAO to restructure and cut its costs. To maintain its competitive price advantage over UCCAO, cooperatives within the NWCA cooperative structure would have to economize.

9.5.4 Distribution of Residual Profits

Although NWCA obtained rights to export coffee abroad independently and to retain and distribute the residual income from sales in 1989/90, it sustained heavy marketing losses it experienced during the 1989/90, 1990/91 and 1991/92 seasons. The original reform design included a provision to introduce a graduated tax on arabica exports, but USAID and the Cameroonian government failed to reach an agreement on its implementation. After the reform program was concluded on June 30, 1994, the
Cameroonian government unexpectedly imposed taxes equivalent to 16 percent of the value of all arabica exports after July 1, 1994. Although this affected only a fraction of NWCA’s exports, tax payments nevertheless totaled 76 CFA per kilo in 1993/94. In January, 1995, the export tax was increased to 26 percent, and made retroactive to July, 1994. Port charges were also increased. In introducing the tax, the government expropriated part of residual profits from producers and cooperatives so that it could reward its own clients. Although the export tax adversely affected residual earnings for arabica, NWCA was able to absorb the tax and pay producers significantly higher prices in 1993/94 because of high world prices. However, the tax contributed to NWCA’s losses in 1994/95.

In 1993/94, NWCA realized net profits of 163 CFA per kilo (based on revised costs) on its coffee sales. Although cooperatives had revised their costs to reflect actual cost levels, the NWCA Board of Directors recommended that cooperatives retain 60 CFA per kilo (20 CFA per kilo for the apex, each union and each primary society) before distributing the remaining 103 CFA per kilo to producers. By changing rules to enable NWCA to determine residual payments shares, significant discretion over residual payments to producers was vested in the apex and union governing bodies, the levels of the cooperative structure furthest removed from direct scrutiny from members. This was the inverse of the relationship contemplated by the original reform design. Since cooperatives were allowed to stake their claim on residual profits before paying producers their share, both incentives to economize and the ability of membership to hold management accountable were weakened.

Despite the government’s export tax and the cooperative claim on residual profits, the
mean producer share of the 1993/94 export price of 1,114 CFA per kilo was 70 percent, and the cooperative share was 20 percent. The government’s share was 7 percent, with port and export charges making up the balance. In contrast, under the administered institutional arrangements, when the average export price in 1983/84 was 1,177 CFA per kilo, the producer share of the export price was only 37 percent and the cooperative share was 11 percent. The Marketing Board’s share was 52 percent. The negative impacts of the government’s 26 percent export tax were clearly seen in results from 1994/95. The mean producer share of NWCA’s 1,800 CFA per kilo export price forecast was only 56 percent, and the cooperative share was 12 percent⁸. Until the government introduced the export tax, reformed marketing institutions were successful in redistributing residual earnings away from the government to producers and cooperatives. However, at lower world price levels the export tax threatened to wipe away any price benefits from cooperative cost reductions to negate the improved economic incentives to produce achieved through reform. It was only in 1996/97 that the Cameroonian government, under pressure from France and the European Community, lowered the export tax to 13.5 percent. USAID had pulled out of Cameroon.

9.5.4 Coffee Production

After coffee prices were slashed in 1989/90 and maintained at low levels through the 1992/93 season, arabica production levels in Cameroon fell precipitously—with the

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⁸ If NWCA had accurately forecast the 1994/95 export price of 1,500 CFA per kilo, the producer share would have been only 52 percent and the cooperative share 15 percent.
exception of a bumper crop in 1991/92. In North West Province, total arabica production fell by 53 percent between 1988/89 and 1989/90, and an additional 18 percent between 1989/90 and 1990/91. The arabica tonnage handled by NWCA in 1990/91 was only 2,141 tons, 61 percent less than the 5,527 tons it handled in 1988/89. The price decrease had a clear disincentive effect on arabica production.

Arabica production also fell steeply in West Province, but less precipitously than in North West. Because of NWCA’s inability to reliably pay producers in 1989/90 and 1991/92, there was a significant (if unquantifiable) outflow of coffee from North West into West Province where payments were more reliable.

Although arabica production in Cameroon spiked in 1991/92 because of an exceptional bumper crop, production fell back to its previous low levels in 1992/93. The average annual arabica tonnage handled by NWCA during the transitional period of reform (1989/90-1992/93) was 2,940 tons, but only 2,384 tons if the bumper 1991/92 harvest was excluded. In contrast, when producer prices were set at 475 CFA per kilo between 1986/87 and 1988/89 (the last three years of the administered market era), the average annual arabica tonnage handled by NWCA was 5,564 tons.

Beginning with the 1991/92 season, NWCA began to pay significantly lower prices for unwashed arabica than washed, and changed the rules for accepting unwashed coffee. The proportion of unwashed arabica in total arabica production immediately plummeted.

After society level pricing arrangements were introduced in 1993/94, producer prices improved significantly. The tonnage of washed arabica handled by NWCA rose from 2,229 tons in 1992/93 to 3,038 tons in 1993/94, an increase of 36 percent. Bonus payments in 1992/93 and higher initial prices in 1993/94 had a positive impact on
production. Between 1993/94 and 1994/95, washed arabica production increased a further 27 percent to 3,845 tons. Production in 1994/95 was 70 percent greater than in 1992/93. Remarkably, the first two years after reform were the first in which North West arabica production had increased in consecutive seasons dating back to 1971/72. After reform, farmers in North West Province responded to improved incentives to produce by significantly expanding production.

Regional coffee marketing patterns within Cameroon and NW Province changed. Because of NWCA’s improved payment reliability and ability to pay higher prices than UCCAO in West Province, the outflow of coffee from North West into West Province ceased in the post reform period. Instead, there was a reversal in provincial coffee marketing patterns, and significant (if unquantifiable) quantities of arabica from West Province flowed into North West Province. Within North West Province, coffee tonnage increased by a significantly greater amount in cooperative unions that were relatively successful in controlling costs than in cooperatives that failed to control costs, particularly in 1994/95. This evidence provided a strong indicator that reform was successfully promoting price competition between unions. If cost (and price) differences between unions persist over time, one would expect that inefficient and high cost unions will be forced to either improve their efficiency to remain competitive, or fail. Intra-union competition should strengthen incentives to economize.

Although the first two years after reform suggest that the long-term trend of declining production may have been reversed, the sustainability of production increases is difficult to predict. As discussed above, the implementation of society-level pricing arrangements coincided with devaluation of the CFA franc and rising world prices. Because of reform,
farmers were able to benefit and realize higher prices. But these events, which were external to the reform process, explain much of the improvement in farm-level production incentives that was observed after reform. Over the longer-term, increases in productivity will depend on cooperatives’ ability to pay farmers reliably and to generate price incentives for producers by economizing costs and improving coffee quality.

9.5.5 Coffee Quality

Between 1989/90 and 1993/94, the rate at which NWCA’s coffee was price discounted by international buyers decreased in every season except 1991/92. Whereas NWCA’s coffee was discounted by 26 percent relative to the world (New York “C”) price in 1989/90, in 1993/94 the discount had fallen to near zero. The improvement in the NWCA-NY “C” price differential between 1989/90 and 1993/94 translated into a 120 CFA per kilo increase in the value of NWCA’s arabica exports. An econometric analysis of NWCA’s sales contracts showed that the key factor contributing to the improvement in the price differential was the speed with which cooperatives collected, processed and shipped coffee. This suggested that improved vertical coordination of cooperative marketing activities had a beneficial impact on quality. More anecdotal evidence suggested that improved control of inferior quality unwashed coffee within the cooperative structure also had a beneficial affect on prices.

However, the econometric analysis also showed that NWCA’s price differential was influenced by market factors, particularly world price levels and the French Franc-US dollar exchange rate. Because better quality coffees are highly demanded and in relatively limited supply in the world market, the price premiums they command tend to be stable
even as world coffee price levels vary. However, price differentials for average and
below-average quality coffee tend to be sensitive to variable market conditions since they
are usually in large supply in the market relative, and demand for them is weaker. The
sensitivity of NWCA’s price differential to market factors suggested that it continued to
have a reputation among buyers as a supplier of below-average to average quality coffee.
If NWCA is to sustain its improved price performance, it will have to improve the quality
of coffee it markets abroad.

There was no statistical evidence that the price differential behaved differently in
1993/94, the first year of full institutional reform, than in previous years. Although this
implied that NWCA’s cup quality did not significantly improve as a result of reform,
available measures of cup quality were not fully satisfactory, so the issue remained open.

Available evidence demonstrated that NW arabica producers were highly responsive to
changing incentives during reform. Farmers delivered parchment to cooperatives rapidly
after harvest after payments became more reliable. After NWCA changed its unwashed
arabica pricing and acceptance procedures in 1991/92 and significant price differences
between washed and unwashed coffee emerged, producers immediately expanded their
production of washed arabica relative to unwashed. A higher proportion of larger size
grade beans in total arabica production in 1993/94 relative to preceding years hinted that
North West producers responded to improved price incentives by investing more
resources in coffee production. Finally, producers responded positively to new parchment
acceptance procedures. The overall appearance of the parchment delivered by farmers to
cooperatives improved noticeably in each year that reformed acceptance procedures were
in place, indicating farmers were improving measurable parchment quality.
However, cup quality is the most critical aspect of coffee quality. Available quality assessments from buyers between 1989/90 and 1994/95 gave the impression that although the overall cup quality of NWCA coffee may have improved, unclean cups and stinker beans continued to mar the reputation of NWCA’s coffee. The 1992/93, 1993/94 and 1994/95 were plagued by quality claims by buyers. These quality problems were indicative of poor washing and drying techniques at the farm level and poor grading and sorting by cooperatives. Quality problems were more pronounced in some union areas than in others, indicating that quality control was uneven within the cooperative structure. NWCA suspected that a failure by some cooperatives to control for an inflow of inferior quality coffee from West Province had undermined the quality improvement efforts of North West producers. In some cooperatives, incentives to increase tonnage and reduce per kilo costs apparently outweighed incentives to enforce quality standards during acceptance and processing.

The observation that relatively small quantities of poor quality coffee were damaging NWCA’s overall reputation was a result that was consistent with earlier observations that reformed market institutions failed to resolve fully quality problems associated arabica’s high information costs and economies of scale characteristics. Specifically, the reforms-as-implemented failed to control free-rider problems associated with the high exclusion cost characteristics of the quality premium. Society-level pricing arrangements and parchment acceptance procedures were poorly linked. Although acceptance procedures classed the quality farmers’ coffee as good, average and poor, only poor quality coffee was discounted in price. In practice, this represented little effective change from the “good bean-bad bean” price distinctions that had existed prior to reform. Although reform
introduced stricter quality control procedures during farm level acceptance, as implemented, pricing arrangements failed to use observable quality attributes of parchment to differentially reward producers. Instead, price incentives rewarded producers of average quality coffee.

As discussed previously, NWCA marketed all its coffee under one name and distributed residual earnings based on the average value of its total exports in the post-reform era. NWCA’s failure to use fully available price measures to distinguish and differentially reward unions for quality created opportunity for some unions to shirk from controlling quality, but free-ride on the contributions of others in the NWCA pool. The differential quality performance observed in unions after reform was consistent with unresolved incentive problems. The quality results suggested that similar dynamics were at play at the producer level. Quality improvement over the long term will depend critically on NWCA’s ability to modify marketing institutions and overcome these problems.

9.6. Recommendations

Although performance in the arabica subsector in North West Province improved noticeably after reform, whether this improvement will be continue over the long-term remained an open question. The impact analysis showed that sustained improvements in performance will depend critically on the ability of cooperatives to control costs, and for both producers and cooperatives to improve quality. Previous sections of this chapter identified weaknesses in the reforms-as-implemented in creating incentives to economize and to improve quality. This section proposes institutional changes that might strengthen these incentives.
9.6.1. Actions to Strengthen Incentives to Economize

Under society-level pricing arrangements, cooperative costs are reflected in producer prices. Through reform, discretion to decide costs was decentralized within the cooperative structure, and the cost determination process became more inclusive. Each cooperative was required to determine its unique costs, and cover these costs independently. Reformed budgeting procedures empowered farmers and their elected representatives to participate and to develop a strong voice in the cost determination process. Institutional elements were in place to generate competitive pressures for cooperatives to control costs and offer higher producer prices to membership.

Despite evidence of rising cooperative costs after reform, there were reasons to believe that incentives to economize within the cooperative structure would become stronger over time if the reformed institutional structure remained in place. These reasons included:

- The effects of CFA devaluation would work their way through the system. Devaluation was a key factor contributing to rising costs, and introduced a large element of uncertainty into the cost determination process in both 1993/94 and 1994/95.

- High export prices and windfall profits related to devaluation and high world price levels, were a short term phenomenon. In the context of rising export prices, producer prices increased significantly despite rising cooperative costs, dampening incentives to economize. In the context of low or declining export prices, the adverse consequences of cooperative cost increases on producer prices would be more readily perceived by farmers. This would likely intensify incentives for farmers to demand cost control and make more effective use of their voice in budgeting exercises.

- A learning process accompanies institutional change. One would expect that the effective ability of farmers to influence the cost determination process to increase as they acquired greater familiarity and experience with budgeting procedures, and developed a better understanding of appropriate costs.

- Increased competition would increase pressures on management to control costs,
particularly at the union level. Significant differences in union costs emerged in the post-reform period only late in the 1993/94 season after cost revisions were completed. The 1994/95 marketing campaign was the first in which the producer prices varied significantly. Empirical evidence showed that union tonnage increases were directly related to their ability to control costs. If union cost differences persisted, the competitive advantage of lower cost unions would increase pressures on high-cost unions to economize. Over the longer term, competition from UCCAO in West Province and private traders would further strengthen incentives to economize. Farmers in North West Province clearly demonstrated that they were willing to bypass cooperative marketing channels entirely if they were dissatisfied with cooperative performance.

Although there were reasons to believe that incentives to economize would increase at the union and apex levels over time, much would still depend on the collective ability of farmers and their elected representatives to pressure management to control costs. But the impact analysis raised questions whether implemented institutional reforms provided farmers with sufficient information to participate effectively in budgeting exercises. There are a several institutional changes NWCA could adopt to improve the flow of information to farmers and thus enhance their collective ability to control union and apex costs.

As implemented, budgeted initial cooperative costs were expressed on total cost per kilo basis, and made no distinction between overhead (fixed) and variable costs. Simplicity was the virtue of this arrangement, making it easy for societies to calculate producer prices. However, cooperative costs can be evaluated and compared only if tonnage is known since per-kilo overhead costs vary with tonnage. In other words, budgeted per-kilo cost allowances are only as accurate as the tonnage estimate on which they are based. Under current arrangements, total per kilo cooperative costs may remain constant between years yet conceal rising overhead costs if calculated from higher estimated tonnage. Present cost determination procedures also created incentives for
some cooperatives to reduce pressures to economize by aggressively buying coffee from non-members to increase tonnage and lower actual per kilo costs. In effect, economies of scale were used by cooperatives to reduce pressures to control costs, and in some cases, generate rents.

If some cooperatives close to allow others to achieve economies of scale, this could give higher returns to producers. Farmers can benefit from cost cutting via elimination of excess employees and better management, as well as union mill closures and reallocation of volume among plants. However, the failure of reformed cost determination procedures to distinguish between per-kilo overhead and variable costs had the unintended effect of creating incentives for some cooperatives to increase volume by accepting poorer quality coffee, thus lowering the price for the all-union pool.

An alternative method for determining costs that distinguished between overhead and variable costs was discussed in Chapter 5. This method would entail accounting for overhead (indirect) and variable costs separately. Cooperative overhead costs would be paid through membership or subscription fees. The apex would budget its total overhead costs, and propose subscription fees for affiliated unions in budgeting exercises. Likewise, unions would propose an annual subscription fee for member societies, and societies a fee for member farmers. Overhead costs would be paid independently from variable costs, which would continue to expressed in per kilo terms and deducted from sales prices. Farmers would have strong incentives to minimize total subscription fee payments, thus increasing pressures on cooperatives to economize. Since overhead costs would no longer be influenced by tonnage, this arrangement would also weaken incentives for cooperatives to lower per kilo costs only by increasing tonnage.
When first proposed by project implementers in November, 1993, this proposal met strong resistance from cooperative officials. Although subscription fees could be apportioned between unions and societies to reflect the size of membership, ultimately farmers would bear total overhead costs. Cooperatives would have to find an equitable method of linking the fees paid by individual farmers to the amount of coffee they produced. Otherwise, the costs to small farmers could be burdensome. Cooperatives could collect a farmer’s dues by retaining a per-unit fee based on kilos of coffee he marketed. But to the extent that cooperative officials benefit from current cost determination arrangements, one would expect such a proposed rule change to encounter strong resistance. Without strong pressure from either donors or membership, it is doubtful whether this resistance could be overcome.

Barring a change in per kilo pricing of cooperative services, there are a number of ways in which NWCA could increase the flow of price and cost information to farmers. Reformed pricing rules sought to create competitive pressures on cooperatives to economize by linking costs and initial producer prices. Thus, it is vital that farmers have access to adequate price information. In 1993/94, USAID and the Cameroonian government established an Arabica Coffee Marketing Information System (AMIS), which disseminated coffee price information (world price trends, domestic prices) every week over national television, in radio broadcasts in 26 local languages in North West Province, and in the written press. During its first year of operation in 1993/94, farmers who had heard the broadcast actively demanded to know why domestic producer prices were so

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9 The cost and pricing reforms that were implemented had also met strong resistance from the NWCA Board of Directors, which had only recently been overcome.
much lower than world prices. This required NWCA to justify its costs to members. However, there were strong indications in 1994/95 that the price information provided through AMIS was out-of-date and unreliable. There is no reason why NWCA should rely on the government to disseminate price information since it could likely find its own radio time to disseminate its own price information at a relatively low cost. The NWCA apex is ideally placed to assemble and disseminate this information since it interacts directly with unions, which in turn interact directly with societies. In contrast, farmers interact only with their societies, and have little direct contact with unions or the apex. Nor does NWCA have to rely on the media to disseminate price information. The flow of information within the cooperative structure improved noticeably after the NWCA Apex began to produce and distribute Monthly Newsletters. It would be easy for NWCA to include price (and cost) information in these newsletters. However, experience has shown that Marketing Newsletters have not been widely circulated within the cooperative structure. Subject to the approval of membership, NWCA should expand its newsletter service and revise its internal marketing arrangements so that each society and union is required to post them.

At the farm-level, the dissemination of adequate price information is critical in creating incentives for farmers to demand cost control from cooperatives. A subset of rule changes could be introduced to enhance the budgeting process itself, particularly at the union and apex levels. Improving the information contained in budgets would enable farmers and their representatives to participate more effectively in determining costs. NWCA could easily change budgeting procedures to require that cooperatives present both absolute cost data and the previous year’s costs be presented in their budgets, in addition to per-kilo
costs. This would enhance the ability of general assembly members to detect changes in
cost levels. Once again, a simple rule change that required each cooperative to post
copies of budgets in advance of budgeting exercises could have a profound effect on the
ability of general assembly members to assimilate budget information. Observation of
budgeting exercises in 1993/94 left a strong impression that in most instances, general
assembly delegates had extremely limited access to budget information prior to their oral
presentation\textsuperscript{10}. As a result, delegates had little opportunity either to study budgets or
discuss cost items between themselves, and budget approval was largely a formality.
Advance posting of budgets at cooperative offices would eliminate at least some of these
problems.

An additional rule change which would strengthen incentives to economize would be
to vest authority to distribute residual earnings in societies. Under current arrangements,
cooperatives are permitted to claim a share of residual earnings prior to distributing them
to farmers. This weakened incentives to economize by reducing the pressure on
cooperatives to keep actual costs within the limits prescribed by budgets (assuming a
profit was made). The original proposal to vest societies with rights as residual claimants
was intended to empower farmers determine the share of earnings received by
cooperatives, not to deny them a share. Whether or not farmers would be willing cede
part of their residual earnings would depend on what cooperatives proposed to do with

\textsuperscript{10} Most cooperative offices in North West Province, including unions, are poorly
equipped. Photocopying machines are in very limited supply, and many cooperatives lack
mimeograph machines. But even the Apex, which possesses computers and photocopy
machines, did not make its budget accessible to delegates before the budget meeting took
place.
their share. In addition to reinforcing bottom-up governance relationships and enhancing transparency and accountability, vesting societies with the right to claim residual earnings would re-establish the link between residual producer payments and the quality premium.

Finally, the reformed market structure predicted that competition would resolve the problem of excess union processing capacity at the union level by forcing high cost and inefficient unions out of business. Whether or not this will happen is as yet uncertain. But the prospect of some cooperatives failing runs counter to the prevailing norm of mutual aid and solidarity among cooperative officials and managers that is summed up in NWCA’s official motto “one for all and all for one” (Oakerson, 1994c). Currently, several unions process no more coffee than a large society and operate well below capacity. NWCA should consider closing some high-cost, low tonnage unions, or merging them to create higher tonnage, lower cost unions. This does not imply that consolidated unions would disappear, or that current cooperative governance relationships would be altered in any fundamental sense. Throughout the reform effort it was continually pointed out that the function of a union is to arrange for the processing of member societies’ parchment coffee at minimum cost. Unions could contract out their processing to other, lower cost unions.

9.6.2. Actions to Strengthen Quality Incentives

Although the reform period witnessed a significant improvement in the quality produced by cooperatives, this mostly related to improvements in union processing capacity and improved coordination of collection, processing and marketing activities within the cooperative structure. Much of the quality improvement witnessed after reform
was achieved administratively within the vertically integrated cooperative structure.

Although some individual farmers and cooperatives responded favorably to acceptance procedures, others did not. The impact analysis concluded that incentives for farmers and cooperatives to produce quality were differentially perceived, and overall, rather weak. The source of this weakness was the failure of implemented reforms to use fully available quality measures to differentially reward producers and cooperatives.

Reform introduced parchment acceptance procedures to classify according to observable quality attributes (number of defects in a sample, appearance/color, and odor). Although imperfectly correlated with cup quality attributes, observable measures of parchment quality could be used to introduce differential pricing arrangements that distinguished, certified and rewarded quality. In addition to providing economic incentives for producers to improve quality, differential pricing might help farmers to internalize the importance of proper harvesting and washing techniques. Although NWCA found a method to distinguish and reward bad quality separately from better quality, it failed to establish different prices for average and good quality. Even without such a price distinction, the overall appearance of parchment delivered by farmers improved, suggesting that many farmers responded to the acceptance-rules-as-implemented by improving measurable parchment quality. This strongly suggests that incentives for farmers to invest resources in producing good quality could be significantly strengthened if NWCA priced each class of coffee differently. Whether or not quality differences between classes of coffee are discerned among buyers, the key to quality improvement at the farm level is to find an institutional means for rewarding producers for investments in quality. Farmers will have little incentive to invest greater resources in production and washing
unless there are economic payoffs to doing so.

Oakerson (1994c) recommended that primary societies could eventually use new parchment acceptance procedures to devise identify and penalize producers of consistently lower class coffee, including possible eviction from the cooperative. An alternative and more benign approach would be to target extension efforts towards these producers.

The disincentive effects of current pricing arrangements were clearly seen in the following observations of a respected leader in Kikaikom village in the Nso area during a June, 1993 interview. When asked what the response of farmers was to reformed parchment acceptance procedures, he observed that farmers were initially enthusiastic. A number of farmers boasted that they would produce only Class I coffee. Others boasted they would do everything they could to ensure that Kikaikom would produce a greater amount of Class I coffee than neighboring villages, an indication that social capital factors were having an impact. But, when farmers learned that they would not be paid higher prices for Class I coffee the Kikaikom leaders observed that their enthusiasm vanished, and many wondered what the new acceptance procedures sought to accomplish (personal communication, 1993).

For years, North West arabica growers washed their coffee under institutional arrangements that failed to distinguish, certify and reward quality. As a result, producers had a did not internalize that own their harvesting and washing practices affected quality and price, much less the practices of others. The harvesting and washing techniques of growers were generally poor. This suggests that grass-roots education and extension efforts could have a big payoff at the farm level. With assistance from USAID, NWCA began farm-level quality education programs. NWCA should continue these efforts. For
farmers to improve the quality of their coffee, they must first be aware of proper
harvesting and washing techniques. However, instruction in proper techniques is not
enough. If social capital is to be effective in controlling some types of opportunistic
behavior, farmers must internalize that their incomes are dependent on the actions of a few
individual producers and cooperative officials in the union pool. NWCA's education
efforts should emphasize this interdependence.

Secondary processing strongly affects cup quality. Farm-level efforts to improve
quality will have little impact on sales prices if coffee is poorly or inconsistently graded
and sorted by unions. Even without significant improvement in farm-level quality, the
sales value of coffee can be enhanced through consistently grading and sorting. But the
impact analysis concluded that although there was overall improvement in secondary
processing, significant differences remained in the way individual unions enforced quality
standards during processing. This was an indication of incentive problems.

Quality measurement problems are less deep at the cooperative than farm level
because the quality premium perceived in export prices can be backwardly communicated
directly to unions. Thus, export prices provide a measure of the quality of coffee
produced by a union. By marketing coffee under one name, and calculating and
distributing residual earnings based on the average export price of coffee sold during each
season, NWCA failed to use available price information to reward unions differentially for
the quality of coffee they produced. Incentives for quality control and rule enforcement at
the union level would be strengthened if NWCA calculated residual payments based on the
actual sales prices received by a given union. If NWCA were to market coffee on a union
by union basis, unions which successfully promoted quality improvement at the farm level
and took care to sort and grade their coffee carefully would likely acquire a market reputation for consistent quality and be paid higher prices than unions that were lax in controlling quality during secondary processing. Currently, the quality failures of a single union may tarnish NWCA’s overall reputation.

One reason why NWCA decided not to market coffee on a union by union basis was that it feared if one union defaulted on its commitment to supply a given amount and quality of coffee at a specified time, NWCA’s market reputation as a reliable supplier would be damaged among buyers. Although this might be true, by replacing the coffee of the defaulting union with coffee from another union, inefficient and poorly managed unions were let off the hook. This considerably weakened pressures on unions to uphold their market commitments.

Another reason why NWCA chose to market all coffee under one name was that many unions produced an insufficient quantity of coffee to attract buyer interest. But NWCA could market the coffee produced by large tonnage unions individually, and pool and market the coffee of small tonnage unions under a single name. To date it has not attempted to do this.

Even if coffee is not marketed on an individual union basis, it is relatively easy for NWCA to internally track coffee and link residual payments to individual unions. By doing this, residual payments would reflect the differences in quality (if any) between unions. Although there was considerable sentiment among some union managers that NWCA adopt these arrangements in 1993/94, to date they have not been implemented.

Finally, through the end of the 1994/95 season, the apex had yet to take an active role in controlling quality prior to export. During the reform effort, cup tasting facilities were
established at the Apex and staff members were trained in Europe in cup tasting techniques. Although cup tasting is a skill acquired only through experience and practice and there is no guarantee that NWCA’s cup tastes would correspond with those of buyers, the unclean tastes and stinker beans that were the source of most of NWCA’s quality problems should be relatively easy to identify. If NWCA’s cup tastes (or any other quality control procedures it established before shipping coffee) revealed quality problems, the Marketing Department could require a union to re-sort or re-grade coffee before selling it. Alternatively, the Apex itself could re-sorting or re-picking coffee at a local union and assign the costs to the union responsible. Either of these actions would require unions to bear the costs of their quality failures. Alternatively, NWCA could use quality criteria to fine unions that consistently produced poor quality coffee.

9.7. Lessons Learned: Implementing Institutional Reform

The observed performance improvements in prices, costs, farm incomes, coffee production and quality tend to validate the institutional approach that was taken in reforming the arabica marketing system in Cameroon. Given arabica’s high quality information costs and economies of scale characteristics it doubtful that the standard market privatization model of enabling competition and market prices would have elicited a comparable improvement in performance. Instead, the evidence strongly suggests that the cooperative marketing infrastructure in North West Province would have been destroyed through sudden privatization. However, the performance of NWCA cooperatives fell short of expectations. Reform implementation difficulties were in large part responsible (Chapter 5). This section highlights some of the strengths and
weaknesses of the reform experience in Cameroon.

A key factor in the success of the reform effort was that it focused on changing both marketing rules and underlying authority rules. The Marketing Board, which under the administered market structure had near total authority over coffee marketing in North West Province, withdrew from arabica marketing in 1989/90 and was liquidated in 1992\textsuperscript{11}. Cooperatives assumed the Board’s powers and marketing functions. Similarly, reform of national cooperative law abolished the government agency with supervisory authority over cooperatives, and farmers assumed its roles.

In contrast to the Cameroonian experience, several other countries in Africa adopted policy reforms during the 1980s which only partially privatized export markets, such that private traders were allowed to compete with parastatal marketing organizations. Overall, these reforms yielded disappointing performance results. Marketing Boards often retained significant residual market power through their ownership of physical capital such as processing plants, restrictive trader licensing practices, and preferential disbursement of credit (World Bank, 1994; Jaffee and Morton, 1995). But, the arabica reform effort in Cameroon fundamentally altered each of these elements.

At the beginning of the reform process, the key concern of USAID/Cameroon was that there was a risk that the NWCA Board of Directors would become a Marketing Board in miniature, insulated from member control through layers of authority, if authority

\textsuperscript{11} A much reduced National Cocoa and Coffee Board (NCCB) was established in its place to represent Cameroon in international coffee meetings and provide information services. AMIS was lodged within this office. The post-reform era witnessed an expansion of NCCB’s involvement in port marketing activities, including pre-export quality control and implementation of several fees. The NCCB was abolished in 1996/97 under pressure from international donors.
rules were not reformed and there power within NWCA was not decentralized (Oakerson, 1994). Reforming internal marketing and governance rules within NWCA resulted in a significant, if imperfect, redistribution of power towards farmers.

However, the reform effort did not attempt to reform rules at the deeper constitutional level. Immediately after the reform effort was concluded, the government enacted the export tax on coffee by Presidential decree. This suggests that reform of marketing and authority rules may not always be sufficient to elicit a desired improvement in performance. Deeper, constitutional level reforms may be required. USAID/Cameroon was aware changes in government policies after its reform effort ended represented the greatest threat to institutional reform. As originally conceived, USAID planned to sequence its reform efforts in Cameroon. Arabica marketing reforms would be followed by programs to privatize robusta coffee and pesticide markets. USAID believed this would extend the reform process in the arabica sector, as well as and enable the continued monitoring of policies concerning the arabica subsector. But instead of extending the reform process, USAID closed its mission in Yaounde on June 30, 1994. Immediately afterwards, the government enacted its export tax. It was only through the efforts other international donors that the arabica export tax was reduced from 26 to 13.5 percent and the National Cocoa and Coffee Board, which was becoming increasingly involved in arabica marketing, was abolished in 1996/97.

If there is a single message to be learned from the institutional reform experience in Cameroon, it is that details of implementation profoundly affects the performance of institutional reform design. Reform implementation is an inherently difficult and contentious process since it requires those who benefitted under previous institutional
rules to sacrifice for an uncertain payoff in the future. An irony of the institutional reform process is that proposed rule changes must often be implemented through the very people who must sacrifice and cede power. It is often in the personal interest of these stakeholders to resist institutional changes. There are no guarantees that an agreement to implement an institutional design will result in its being actually implemented in full. Many of the weaknesses in the reforms-as-implemented in the Cameroonian arabica subsector were the result of compromises that were made to unblock implementation deadlocks in order to keep the reform process going. Successful implementation of a institutional reform is an inherently labor-intensive activity, requiring dialogue among the parties who are affected, and continuous monitoring of the reform process itself. This is not an automatic process that can be accomplished by the signing of an agreement.

Although the reform experience in Cameroon demonstrated that there are benefits to a flexible implementation approach, there are trade-offs. Specifically, there is a risk that the content of reform may be fundamentally altered as a result of compromises that are made. For example, USAID relaxed its requirement that disbursement of project assistance be tied to an agreement by the government to implement a graduated tax on arabica coffee. This gave the government the loophole it needed to enact its own export tax after the reform project ended. But the reform process would likely have remained at an impasses, and key privatization reforms not enacted, if USAID not compromised.

At the NWCA level, USAID insisted upon the implementation of core elements of institutional design (reformed price and cost determination rules and acceptance procedures), but ultimately did not press NWCA to link producer prices to parchment acceptance rules, vest societies with the rights to claim residual earnings, or calculate
residual payments on a union-by-union basis. Similarly, USAID planned to disseminate the new cooperative law within NWCA through a grass-roots education campaign was planned. But at the last minute, USAID and NWCA could not agree about its details, and the education campaign was abandoned. Subsequently, several unions were able to resist society restructuring. Each of these compromises significantly weakened institutional performance, and more specifically, incentives to economize and improve quality.

In other cases, there may be undetected flaws in the reform design itself. The ability of reformed market structure to resolve arabica’s high information cost problems was weakened by the modifications made to the institutional design after it was realized that it was not feasible to track coffee from the society level. A key assumption had been that if residual payments reflected the quality of a society pool, and societies were organized according to villages, individual farmers would have powerful incentives to monitor and influence the harvesting and washing practices of their neighbors. This would have increased the effectiveness of social capital in countering individual’s incentives to shirk and free-ride. But society tracking was not feasible, and the process of building social capital is poorly understood.

The reform experience in Cameroon also demonstrates that it can’t be assumed that incentives created by reform will be perceived in the same intensity by all parties affected by reform. Different elements of an institutional design may also create incompatible

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12 The problems experienced in coordinating and sequencing national policy and cooperative restructuring reforms was a contributing factor. By the time key policy reforms were finally enacted at the national level, only a short period remained in which key cooperative restructuring reforms could be implemented since the 1993/94 coffee season was looming. Key reforms had to be adopted rapidly, which intensified pressures to compromise on details.
incentive effects. For example, in some cooperatives incentives to increase tonnage and reduce per-kilo costs outweighed incentives to enforce quality standards during processing. Quality differentials on prices were too low because NWCA failed to use available price measures to distinguish and reward cooperatives’ quality adequately. As a result, incentives to economize and incentives to improve quality conflicted in some cases.

Finally, there are a number of intervening variables that may impact the effectiveness of institutional reform. Reformed cost determination procedures failed to account fully for the characteristics of information flows within the cooperative structure and to farmers. This appears to have compromised the ability of many farmers to participate effectively in budgeting exercises. The restructuring of relationships within the NWCA structure encountered powerful inertial forces that had to become overcome. These forces included factors such as learned patterns of behavior, ways of doing business and standard operating procedures, and the social status and learned expectations associated with the occupants of key cooperative positions at upper levels of the cooperative structure. Although institutional reform by necessity focuses on changing formal rules, how these rule changes will interact with psychological, cultural and social variables cannot be predicted. Although farmers responded positively to improved economic incentives, their response to new political and social incentives within the cooperative structure was weaker.

However, the institutional approach to policy reform recognized many of these problems. A critical element of the original implementation design was that it included a transitional year of reform, followed by a year to refine and extend the reform process. If it had been possible to keep to this schedule, many of the compromises made during
implementation would likely have been corrected, and institutionally-created incentives strengthened. But a year was lost to implementation difficulties, meaning that the transitional year of reform became the final year of reform. There was no opportunity to modify the reforms that were implemented or extend the reform process. Had a year not been lost, reformers might have been able to implement the institutional design more completely, and the reforms might have become re deeply entrenched and rooted. With appropriate incentives in place, the reforms themselves might be self-sustaining.

To conclude, institutional change is effective only to the degree that new rules are internalized and acted upon by those affected. There is no automatic link between nominal rule changes and improved performance. Implementation matters, and can profoundly affect the content of an institutional design and the incentives it creates. Because of implementation difficulties, a full year of the reform effort was lost, and the reforms that were implemented remained fragile. Despite the many improvements in performance observed after the first two years of reform, it is up to NWCA to extend the reform process and strengthen incentives to economize and improve quality. If it fails to do so, the arabica reform experience in Cameroon may represent a missed opportunity.