
**COFFEE PRICES AND REGULATION AND THEIR IMPACT ON
LIVELIHOODS OF RURAL COMMUNITY IN KENYA**

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ABBREVIATIONS AND ACRONAMES

ACPC	Association of Coffee Producing Countries
AFC	Agricultural Finance Corporation
CAPs	Cherry Advance Payments
CBK	Coffee Board of Kenya
CFC	Common Fund for Commodities
CFDS	Coffee Factories Development Scheme
COMESA	Common Market for East and Southern Africa
COP	Code of Practice
COTEPA	Coffee and Tea Parliamentary Association
CRF	Coffee Research Foundation
EU	European Union
FAO	Food and Agriculture Organisation
FILS	Farm Input Loans
FMO	Framework of Mutual Obligations
GoK	Government of Kenya
HCDA	Horticultural Crops Development Authority
ICA	International Coffee Agreement
ICO	International Coffee Organisation
IDA	International Development Agency of the World Bank
IPS	Improved coffee Payment System
ITF	International Task Force on commodity risk management
KPAU	Kenya Plantation Workers Union
KPCU	Kenya Planters Co-operative Union
lb.	Pound (2.2 lb. = 1 kg)
MoA	Ministry of Agriculture (also abbreviated as MoA & RD)
MT	Metric Tonne (1,000kg)
NGO	Non-Governmental Organisation
PIT	Presumptive Income Tax
SACCOs	Saving and Credit Co-operative Societies
SAPS	Structural Adjustment Programs
SC(UK)	Save the Children (UK)
SCIP II	Second Coffee Improvement Programme
UBS	Union Banking Section
UNCTAD	United Nations Conference on Trade and Development
VAT	Value Added Tax
WTO	World Trade Organisation

Currency

Ksh	Kenya Shilling
US \$	USA Dollar
DM	German Marks

Conversions

7 kg of cherry = 1 kg of clean (green) coffee

EXECUTIVE SUMMARY

1. Background

This study was commissioned by Save the Children (UK) as a follow up to an earlier household study undertaken in Murang'a district of Central Province whose objectives were to better understand the economic factors that contributed to child poverty in the area. Coffee is the main agricultural enterprise in the district and the major source of income. In the last decade coffee production in the district has declined thereby eroding farm incomes and increasing poverty. This study evaluates the impacts of various international, macro-economic, sectoral and coffee industry policies on smallholder coffee production, household incomes and poverty in Kenya and Murang'a district in particular for the period 1990/91 to 2001/02. The study makes use of various data sets, both primary and secondary. Interviews with various stakeholders and in-depth literature review were undertaken in the course of the study.

2. The global coffee economy

Coffee is undoubtedly one of the most important agricultural commodities in world trade. However, the coffee industry worldwide is currently in a crisis. Coffee prices in world markets, which averaged around US cents 120/ lb. (132 cents/kg) in the 1980s, are now around 50 cents /lb. (55 cents/kg), the lowest in real terms for 100 years. The drastic drop in prices in the last five years has severely affected countries that depend heavily on coffee export revenues as well as the livelihoods of 25 million small producers and over 125 million people who directly or indirectly depend on coffee.

A review of the global coffee markets indicates that the current coffee crisis is caused by major imbalances between supply (production) and demand (consumption). Whereas coffee production has been increasing at an annual rate of 3.6%, its demand has been increasing by a mere 1.5%. Global coffee production in 2001/02 is estimated at around 113 million bags, which combined with world stocks of 40 million bags adds up to 153 million bags. Production is projected to increase to 119.6 million bags in 2002/03 after taking into account the record crop expected from Brazil. In the last decade production of Arabicas increased by 12% while robustas production increased by 53% with major increases in Brazil and Vietnam. This has led to oversupply of low quality coffees in the world market.

Global coffee consumption is shown to have stagnated at around 106 million bags with the main importing countries showing signs of saturation. Consumption per capita is, however, still very low in most producer countries, who absorb 24% of total consumption. Nevertheless, the study shows that in the recent past, several market niches have emerged and continues to expand in Europe, USA and Canada. The niche markets are many but the well known ones include gourmet or speciality coffees, organic or other health and environmentally friendly coffees, and fair trade coffees. The global coffee trade is also characterised by high market concentration of roasters and traders. For example, four large multinational companies provide more than half of all the coffee consumed by the 25 main consumer countries. These companies are Jacobs/Kraft General Foods, Nestlé, Proctor & Gamble and Sara Lee/DE. Vertical integration between these multinationals, roasters and supermarket chain is also becoming a common phenomenon. The consumer market is also highly differentiated through a pyramid of blends. These features of the international coffee trade in the main consumer nations offer considerable barriers to entry for producer nation companies. The governments of major consumer nations also imposes various taxes on processed coffee imports, a factor that limits value addition in producer countries while increasing the disparity between producer and consumer prices. Like in most coffee production nations, these international market conditions together with other internal factors have influenced coffee production in Kenya

3. Coffee industry policy reforms in Kenya

Since October 1992, a number of policy reforms have been made in the coffee industry aimed at improving farmers' incentives and thereby increase their control of the sub sector. The reforms have been undertaken gradually in phases with an objective of having minimal disruption of coffee production,

processing and marketing. Furthermore, most of the reforms have been initiated and implemented after broad consultations between the government, Coffee Board of Kenya (CBK), farmers and other stakeholders in the industry. In October 1992 CBK was mandated to conduct the Nairobi coffee auction in US dollars. Gradually permission was given for coffee farmers to be paid in dollars and they were also allowed to retain dollars for their own use. A direct payment system was also introduced to reduce the delays in payments that characterised the old pool system. Three commercial millers were licensed in 1993 thereby breaking the monopoly held by Kenya Planters Cooperative Union (KPCU) Ltd. In 1996, the minimum acreage required for a farmer to be licensed as a coffee planter was reduced from 10 to 5 acres. The government removed its tight control over the way co-operatives operate in June 1998 when a new Co-operative Act was enacted. The government has retained a minimal regulatory role in the co-operatives while encouraging members of the societies to run them as economic units.

In order to harmonise the policy reforms already implemented and to complete institutional and legal reforms, a new coffee Act came into force in April 2002. The salient features of new Act included; Separation of the roles of regulation and marketing with CBK role confined to regulation, Direct grassroots elections of CBK and Coffee Research Foundation (CRF) board members, Removal of old draconian rules on coffee uprooting, planting and intercropping, Limitation of deductions to cater for CBK and CRF expenses to 3% of gross proceeds, allowing private sector players to offer extension and advisory services and establishment of a coffee development fund. However even under the new Act farmers are not allowed to trade in cherry at the farm gate level and all coffee sold in Kenya have to pass through a central auction. Elections to elect CBK and CRF board members have already been held while the process of licensing marketing agents is underway.

The emerging policy and institutional framework impacted both positively and negatively on smallholder farmers' welfare. On the positive side, the reforms have reduced the government involvement in coffee matters while encouraging farmers and private sector participation. Gains in lower processing costs and statutory deductions are also anticipated as a result of enhanced competition. It was also expected that delays in payments would also be minimised. Nevertheless, the politicisation of co-operatives has led to splits that continue to erode their economies of scale. There has also been an increase in governance problems that have led to an increase in mismanagement of coffee co-operatives. Corruption, lack of financial accountability and transparency are some of the mismanagement issues that cut across most institutions in the coffee industry including co-operatives. The farmers more than ever before are exposed to price risks arising from fluctuations of coffee prices, exchange rates and performance risks in marketing institutions. The reform period has also been accompanied by under-capacity utilisation in coffee processing and milling, factors that do not argue well to farmers returns. Although farmers' expectations have been raised with the enactment of the new legislation, this might prove to be misplaced especially given the prevailing global coffee economy and the not so clear benefits of the emerging internal institutional arrangements. There is therefore need for guarded caution not to raise farmers' expectations on the prospects of coffee industry, both in the short and medium term.

4. Performance of the coffee industry in Kenya

In Kenya, coffee ranks fourth after tourism, tea and horticulture, accounting for 10% of the total export earnings in 2000 and 6% in 2001. Over 600,000 smallholders are engaged in coffee production and currently command a 48% share of the market. Coffee production has been on a declining trend since 1987/88 when a record 130,000 MT of clean coffee was produced. During the last decade, the country's production averaged 77,514 MT of clean coffee. This is 40% less than what was being produced in 1987/88. This means that the country was utilising only 60% of the 1987/88-production capacity, which translates to a loss of 51,412 MT of coffee per year. The decline in production is more pronounced in smallholder farms where it declined by 47% during the same period. The smallholder average yields during the last one-decade were only half those realised in 1987/88. The low productivity in smallholder farms therefore remains one of the major challenges to be over-come if coffee is to remain a viable farm enterprise.

Although the Nairobi coffee auction prices have remained marginally higher than those prevailing in the international markets, they exhibit the same pattern characterised by declining prices in the last few

years. The smallholder farmer's margin (farm gate as % of auction prices) initially increased from an average of 52% in the late 1980s to about 63% during the mid-1990s. This was attributed to changes in taxation and lowering of statutory deductions. With decline in prices and production without commensurate decrease in overhead processing and marketing costs, the farm realisation has been declining in the last five years. Farmers in Murang'a, for instance, received an average of 44% of the auction price in 2000/01-crop year. Currently, the statutory deductions and taxes are estimated at 12.8% of the auction price and have not changed significantly even with the new legal legislation. Deductions by the Co-operative societies continue to take the lion share. Societies in Murang'a district deducted 51% of what they received in 2001/02 to cover their overhead cost and debts.

Coffee production costs have escalated in the recent past mainly due to major increases in the cost of purchased farm inputs. Currency devaluation, inflation and inefficient input markets have been some of the factors behind the increase in costs. Poor road infrastructure also has significantly contributed to the costs of inputs due to high transport costs. During the period under review, coffee production costs almost tripled from Ksh 26,000 in 1990/91 to Ksh 66,000 per tonne in 2000/01. The increases in costs of production when juxtaposed on the declining and low farm productivity, decline in coffee prices, and enhanced price and performance risks have made returns to coffee production to dwindle in the recent past. The gross margin per tonne was highest in 1997/98. This was attributed to the mini-boom that was occasioned by a drought in Brazil. Since then, the gross margins have been on a declining trend and by 2000/01, a smallholder farmer could only make about Ksh 14,000 per tonne. In reality a farmer with half an acre under coffee (500 trees) could at best make only Ksh 1,900. This explains the coffee neglect and abject poverty in most coffee growing areas. Indeed, the gross margins per farm could not buy enough food for a family leave alone paying fees for a child in secondary school.

5. Initiatives to promote coffee production

The study reviews initiatives that have been applied to promote smallholder coffee development in the country in the last decade. Two of these initiatives stand out; the second coffee improvement project (SCIP II) and STABEX funded projects. SCIP II that was funded by World Bank was instrumental in giving smallholder farmers loans for input credit, advance payments, factory development as well as for training. When the project ended in 1998, most of these components could not be sustained. Despite the good intentions of the project some of its components particularly factory development contributed towards increasing the indebtedness of coffee societies. These debts are currently estimated at Ksh. 4.2 billion of which Ksh 550 million are bad debts. Murang'a co-operative societies owe around Ksh 750 million. These debts have continued to be a major problem facing coffee societies and their members and have significantly contributed to the high deductions (low producer share) by co-operatives. The high debt portfolio in the coffee cooperatives have acts as a disincentive to coffee production as the loans are only paid by the few farmers who remain in coffee production coffee.

Stabex funds have also been used to supplement some components of SCIP II project while other funds have been allocated to rehabilitation of coffee roads, electrification of coffee factories and in building laboratories at the CRF. In 2001 a total of Ksh I billion was given to Co-operative bank of Kenya for fast track lending to coffee farmers to buy inputs. The use of Stabex funds has so far remained unsatisfactory due to a number of reasons.

6. Strategies (Recommendations)

In light of the foregoing, this study proposed a number of strategies that can be applied to enable smallholder coffee farmers in Kenya and in Murang'a to cope with the current situation. The study also recommends a number of strategies that can be used to improve coffee farmers welfare both in the medium and long term.

Coping strategies

- Enhance food production by addressing issues related to access and costs of farm inputs, and food production technologies. This will enable families to grow their own food in light of the poor incomes from coffee as well as reduce their high dependence on markets for their food.

- Encourage alternative farm enterprises by addressing the various technical, institutional and economic constraints that hinder their expansion. The alternative enterprises considered include dairy, horticultural crops and other perennial crops such as bananas, avocados and macadamia nut.
- Farmers should be encouraged to intercrop coffee with other crops as a method of enhancing their incomes from coffee plots. This system also ensures that coffee is not totally neglected or uprooted. Beans, fruit trees (e.g. Macadamia), nappier grass and bananas are some of crops that are allowed to be intercropped with coffee.

Medium and long term strategies

The results of the study indicate that the coping mechanisms and strategies only offer short-term alternative but do not offer credible and sustainable alternative to coffee. This is mainly due to a number of institutional and marketing constraints which have to be over-come. As such, the study recommends that there is need to seek medium and long-term strategies that can be used to promote coffee production, processing and marketing. Such strategies include:

- Improving efficiency and performance producer organisations (co-operatives and self help groups)
- Measures to improve coffee productivity and to reduce cost of coffee production
- Introduction of innovative coffee marketing strategies in line with global consumption trends
- Promotion of domestic consumption and value addition
- Price stabilisation/ guarantee scheme
- Improving the regulatory and enabling environment.

Finally the study proposes a number of indicators that can be used to monitor and demonstrate change in marketing opportunities for coffee farmers in Murang'a district. The monitoring mechanisms are also highlighted.

THE STUDY

1. BACKGROUND

Coffee is undoubtedly one of the most important agricultural commodity in world trade. In early 1990s, earnings by the 52 coffee producing countries were some US \$ 10-12 billion with retail sales value, mainly in industrialised countries, of about US\$30 billion. This made coffee the second most traded commodity after petroleum. However, the coffee industry worldwide is currently in a crisis. Coffee prices in the world markets, which averaged around US cents 120/ lb (132 cents/kg) in the 1980s, are now around 50 cents /lb (55 cents/kg), the lowest in real terms for 100 years. The drastic drop in prices in the last five years has severely affected countries that depend heavily on coffee export revenues as well as the livelihoods of 25 million small producers and over 125 million people who directly or indirectly depend on coffee. Although the consequences of the current situation vary across countries, there is little doubt that they are causing immense hardships and escalating poverty in many coffee-producing countries thereby posing a very real and wide-ranging threat to sustainable development.

Historically, coffee has been an important commodity in Kenya because of its contribution to foreign exchange earnings, farm incomes and employment opportunities. Prior to 1988, coffee was Kenya's leading foreign exchange earner and currently ranks fourth after tourism, tea and horticulture, accounting for 10% of the total export earnings in the year 2000 and 6% in 2001. Over 600,000 smallholders are engaged in coffee production and currently command a 48% share of the market. The remaining 52% is produced on 2,500 estates. While the large farms have been able to maintain production at around 32,000 metric tonnes per annum, the smallholder farmers' production has declined by 47% in the last decade although the area under coffee has almost remained constant. This decline has reduced smallholder farmer's share of total production from 70 percent in the 1985 to 48 percent in 2001. This decline could have been accounted for by the depressed coffee prices that followed the collapse of the International Coffee Agreement (ICA) in July 1989. However, the macro-economic and agricultural sector policies as well as specific policies within the industry have played a major role in the downturn of the sub-sector.

Due to the large number of smallholder farmers directly engaged in coffee production, coffee serves an important equity role, one that could not be matched by capital-intensive service sectors like tourism. At the household level, income from coffee accounts for a major proportion of total farm income in the coffee growing areas. These incomes have important multiplier effects in the national economy and more so in rural areas. The decline in coffee incomes has a direct bearing on poverty in most coffee growing areas. Furthermore as coffee incomes are normally used to finance major household incomes such as school fees, investments, health care which has direct and indirect impact on child poverty. It is with this realisation that Save the Children (UK) undertook a household study in Murang'a district, which is one of the main coffee growing districts in central Kenya. The study had the objective of evaluating economic factors and key social factors that have a direct effect on child poverty. The study also aimed at identifying appropriate strategies that could be used to alleviate child poverty in the district.

Murang'a is a high potential agricultural area on the eastern slopes of the Aberdare ranges with good soils and favourable rainfall. The district occupies an area of about 748 sq. km with a population of some 350,000 in 1999. Coffee is the main agricultural enterprise and the major source of income. In the last decade coffee production in the district had declined thereby eroding farm incomes and increasing poverty. The SC (UK) study identified liberalisation of agricultural markets as the main factor behind low output prices and high input prices. Other underlying causes for the decline in coffee production identified in the study were decline in international coffee prices, corruption and mismanagement of the producer organisations (co-operatives), land sub-division and unfavourable weather patterns. The household study identified the need for a further study to evaluate factors beyond the target community, which have positively or adversely affected the livelihoods of farm households in Murang'a district. This is the focus of the current study. The main objective of this study is therefore to evaluate the impacts of various international, macro-economic, sectoral and coffee industry policies on smallholder

coffee production, household incomes and poverty. The outcomes of the current study are hoped to add value to the results of the pilot household study by linking the micro-economic results to the international and macro level. The specific objectives are as detailed in the terms of reference (Annex 1).

2. DATA SOURCES

This study uses both primary and secondary data to analyse the trends in coffee production and marketing at both international and national levels. Data was collected from various institutions dealing with coffee both in the country and internationally. The main ones being Coffee Board of Kenya (CBK), Coffee Research Foundation (CRF), Kenya Planters Co-operative Union (KPCU), Co-operative Bank of Kenya, International Coffee Organisation (ICO), Food and Agriculture Organisation (FAO), Common Fund for Commodities (CFC) and World Bank (WB). The study also relied on the database and reports at Tegemeo Institute. Official government sources and publications are also used to provide information and data on various macro-economic and coffee related aspects.

A detailed literature review was undertaken on the international and local coffee economy with a view of understanding the patterns and prospects of production (supply), consumption (demand) and prices. A coffee market chain analysis was undertaken to link the farm level with the national and international coffee markets. The structure and marketing margins along the local coffee marketing chain was determined. This was done by holding discussion with co-operative officials and other stakeholder in the coffee industry in Kenya and in Murang'a district. Five coffee societies, Iyego, Kiawanduma, New Kiriti, Rwaikamba and Kanguno, were visited for in-depth study of their operations and performance. Iyego is the largest society in the district with 12 factories and a membership of 10,844 of which 76% (8,196) are active. Rwaikamba is medium in size with 6 factories, New Kiriti has 3 factories while Kiawanduma and Kanguno are one factory societies. The list of those interviewed during the course of this study is given in Annex 2. The study also utilised the farm household data already collected by SC (UK) from Murang'a District.

3. REVIEW OF THE GLOBAL COFFEE ECONOMY

There are a number of underlying fundamental factors affecting the world coffee trade that in turn contribute to the determination and evolution of coffee prices. The key determining factors continues to be production, consumption and stocks. Other economic, social, political and natural factors sometimes profoundly change the impact of the fundamental factors on the determination of prices and their evolution.

The International coffee market was subjected to continuous control from 1962 to July 1989 through four International Coffee Agreements (ICA). When the agreements were in force, coffee market was regulated through systems of export controls (quotas), which were triggered when prices fell to significant low levels. According to Gilbert and Brunett (1998), and Gilbert, (1996), the main benefit of the coffee agreements was to raise the average level of producer prices relative to the levels which would have prevailed without the agreements. Gilbert & Brunett (1998) estimate that the agreements may have indeed raised producer prices by as much as 50-60%. In Kenya it has been shown that the farmers also benefited through 30% higher prices when the ICA was in place (Karanja, 2002a).

The success of the first four International Coffee Agreements (signed in 1962, 1968, 1976 and 1983) was to maintain relatively high and stable prices and significantly strengthening the economies of coffee producing countries while enhancing development of international trade and co-operation. However, due to lack of consensus between and among consumer and producer countries the 'Economic Clauses' of the 4th agreement were suspended on 4th July 1989 (ICO, 1997). According to Gilbert (1998), this date was the coffee 'Independence day' in that coffee trade regulation through ICA was no longer to be the case. The prevailing economic thought advocating for increasingly globalised and free trade also means that commodity agreement such as ICA is a thing of the past. Indeed, obituary notices in regard to commodity agreements have already been written (Gilbert, 1996). Consequently, the current ICA that entered into force on 1st October 1994 did not have any price regulation mechanism.

In desperation, the coffee producer nations formed the Association of Coffee Producing Countries (ACPC) in 1993 as lobby group. However, despite various attempts to impose supply quotas and price bands, the association has not managed to have a major impact on the world coffee trade. Eventually ACPC announced plans to voluntary wind up in January 2002.

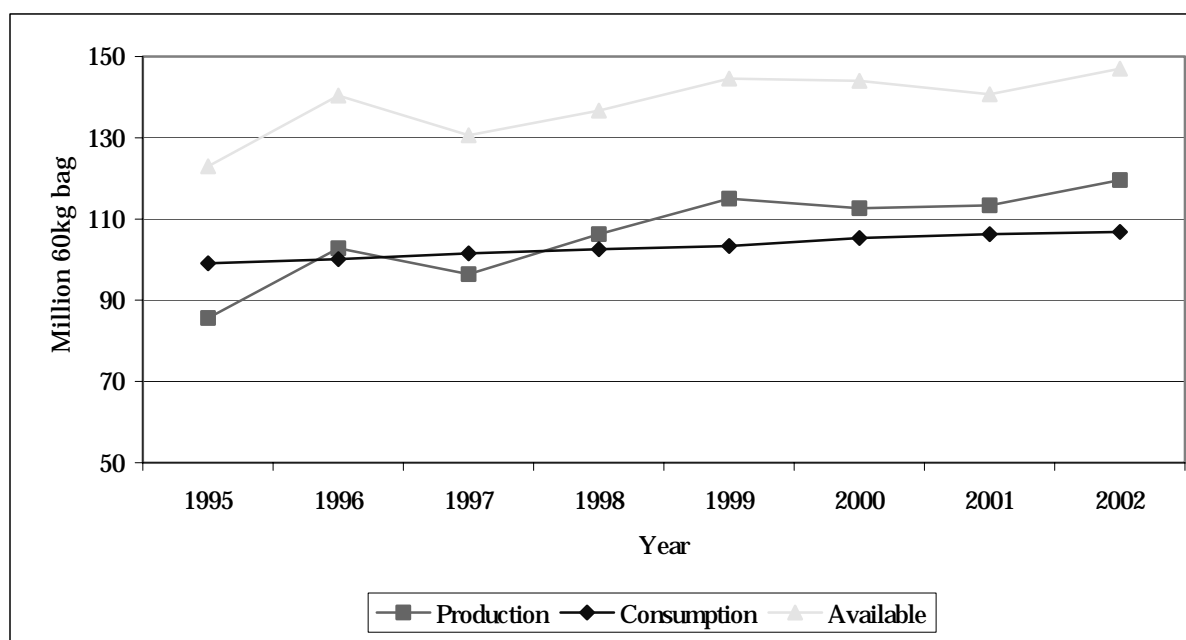
3.1 World Coffee Supply

The current coffee crisis is caused by major imbalances between supply (production) and demand (consumption). According to International Coffee Organisation (ICO) statistics, coffee production has been increasing at an annual rate of 3.6% while demand has been increasing by only 1.5%. The increase in coffee production in the recent past has been attributed to production increases in Brazil and Vietnam. Vietnam alone has increased its production by 1,400% between 1990 and 2000 while Brazil has increased its production by 31%. Both countries have large number of trees in development, which could lead to an overproduction for the next 2-4 years. Indeed, Brazil is expected to harvest one of its highest production (44.7 million bags) in 15 years. The over-supply scenario being witnessed in the coffee market is reminiscent to the "fallacy of composition" which indicates that commodity producer countries as a group can hardly expect to boost their export revenues by merely increasing their individual production.

Figure 1 shows the global coffee production trends and consumption for the last 10 years. Total coffee production in 2001/02 is estimated at around 113 million bags, which combined with world stocks of 40 million bags adds up to 153 million bags. This production is projected to increase to 119.6 million bags in 2002/03 after taking into account the record crop expected from Brazil. However, according to ICO projections there could be a decrease in production in the year 2003/04. This is mainly attributed to the adjustments made in most producer countries in terms of production costs and farm maintenance due to the prevailing low coffee prices. The current high production levels in Brazil are also expected to lead to

lower production in 2003/04 as the coffee trees recover (the biannual bearing natural phenomenon¹). Nevertheless, this decrease in production will have limited impact on prices given the current levels of stocks in both producer and consumer nations.

Figure 1: Global coffee production and consumption trends



Note: Available = Production + stocks

Source: ICO statistics

Table 1 shows the world coffee production by category. Arabica coffee is differentiated into three groups comprised of Colombian milds, Other milds, and Brazilian Naturals. Colombian milds are of high quality and are produced in Colombia, Kenya and Tanzania. During the period under review, production of Colombian milds decreased by 9.8% while other milds increased by around 5%. However, there was a 35% increase in Brazilian naturals whose major producers are Brazil and Ethiopia. In total the Arabicas increased by 12% while the robustas increased by 53% with major increases in Brazil and Vietnam. Most of the robustas are of low quality, this growth therefore imply that the world coffee market have a sizeable (estimated at 5 million bags) of low quality coffee. This has been one of the factors behind the current low prices and the crises in the global coffee markets. The rescue plan being promoted by international NGOs, such as Oxfam, is aimed at finding ways of financing the destruction of these low quality coffees.

¹ Coffee tree, like many fruit trees, has a natural phenomenon of producing one good crops followed by a low crop. The low production allows the tree to rejuvenate itself by growing new branches and nodes, which are used to produce coffee berries.

Table 1: Coffee production by category, 1992 -2000

	Arabica coffee				Robusta	Total Production
Year	Colombian Milds	Other Milds	Brazilian Naturals	Total	Robusta	
	Thousand 60 kg bags					
1992	15,813	25,944	22,834	64,591	24,783	89,374
1993	13,189	25,029	24,888	63,106	28,138	91,244
1994	15,153	25,594	20,260	61,007	27,082	88,089
1995	15,292	28,849	20,968	65,109	28,164	93,273
1996	12,666	27,271	24,125	64,062	34,311	98,373
1997	13,532	28,386	27,201	69,119	33,555	102,674
1998	12,756	27,705	33,294	73,755	32,379	106,134
1999	11,460	32,977	31,103	75,540	38,913	114,453
2000	14,262	27,188	30,881	72,331	37,993	110,324
<i>Mean</i>	<i>13,791</i>	<i>27,660</i>	<i>26,173</i>	<i>67,624</i>	<i>31,702</i>	<i>99,326</i>
<i>% change*</i>	<i>-9.81</i>	<i>4.79</i>	<i>35.24</i>	<i>11.98</i>	<i>53.30</i>	<i>23.44</i>

* % change- 1992 compared to 2000

Source: ICO statistics

3.2 Coffee demand (consumption)

Coffee is mainly consumed in developed countries, which account for about 76% of the total consumption (Table 2). The rest 24% is consumed in the producer countries.

Table 2: Coffee consumption in producer and importing countries, 1992 to 2001

Year	Producer countries		Importing Countries		Total
	Consumption**	% share*	Consumption**	% share*	Consumption**
1992	21,227	22.06	75,001	77.94	96,228
1993	21,926	22.07	77,410	77.93	99,336
1994	22,170	22.69	75,534	77.31	97,704
1995	23,191	24.03	73,326	75.97	96,517
1996	24,269	24.18	76,103	75.82	100,372
1997	24,404	24.03	77,148	75.97	101,552
1998	24,679	24.06	77,892	75.94	102,571
1999	24,632	23.83	78,753	76.17	103,385
2000	26,120	25.44	76,551	74.56	102,671
2001	26,200	24.65	80,100	75.35	106,300
Average	23,882	23.70	76,782	76.30	100,664

* % of total consumption

** Units= Thousand 60kg bag

Source: ICO statistics

Consumption per capita is still very low in most producer countries, varying between 2.6 kg in Nicaragua and 1.5 kg in Ethiopia to 0.007kg in Tanzania and 0.01kg in Kenya (Anon, 2001). This is considerably low compared to the levels in developed countries where consumption per capita can reach 10kg (see Annex 3). This is despite the liberalisation of coffee markets in most of the producer countries, which could have been expected to promote local demand. Low income per capita and the tea-drinking habits in former English colonies have been some of the factors behind the low local consumption. Government policies which had tended to promote coffee, as an export crop has not helped either. A case in point is the Kenyan situation where the perception of coffee as an elite drink has lingered on despite the low coffee prices. Most of the producer countries have also not seized the

opportunity to promote local coffee consumption despite having vibrant tourist sectors. Forced delivery to specific market outlets and consumption taxes has also contributed towards increasing retail prices of roasted coffee in local markets. For instance, in Kenya farmers have to deliver their produce to the central auction from where all buyers (including local roasters) have to source their raw coffee. This limits the number and volumes of coffee finding its way to local consumption as trade volumes in the auction are set at around 30 bags. Roasted coffee also attracts 18% VAT apart from duties on packaging materials. For coffee producers, and particularly smallholder farmers, promotion of domestic consumption may offer more dependable markets and alternatives to exports. Furthermore, expansion of local consumption has the added effect of increasing world coffee demand and hence prices.

As indicated earlier, the world coffee consumption has almost stagnated with the main importing countries showing signs of saturation. Annex 3 shows the levels of per capita consumption in the major coffee importing countries. In the EU market, which is the main market for Kenyan coffee, the price elasticity of demand is low (0.3-0.6) because of near saturation levels². This is especially the case in Germany, Netherlands, Finland, Norway, Denmark and Sweden with per capita consumption of more than 7kg. These EU countries absorb more than 75% of Kenya's coffee. The per capita consumption in USA and Japan is rather low given their levels of income. This might be attributed to consumer health concerns and competition from other beverages such as tea, cocoa and soft drinks. There is therefore limited scope in increasing consumption in the traditional Kenya coffee markets. However, consumption in USA, Japan and other emerging markets is more likely to increase and Kenya should endeavour to position itself in these markets. In the past, CBK as the body responsible for coffee promotion have tended to concentrate its promotional campaigns in the traditional markets in Europe. Limited promotion has been directed to USA and Japan as well as other emerging markets such as COMESA region. However, there have been private initiatives to promote production and marketing of Kenyan coffee in America and other emerging markets. One such initiative is by Eastern Africa Fine Coffees Association (EAFCA), which is a voluntary organisation of traders and other coffee industry stakeholders in the East African region.

Identification of new market niches is one way of increasing market shares and prices. In the recent past, several market niches have emerged in Europe and USA. The niche markets are many but the well known ones include gourmet or speciality coffees, organic or other health and environmentally friendly coffees, and fair trade coffees. The organic, shade grown and fair trade coffees are in most cases referred to as sustainable coffees³. These segments of the coffee market continue to expand. For instance, the speciality coffee market sales continue to expand by 5% to 10% per year, according to conservative estimates. In USA, the speciality market accounts for 17% of the total green coffee imports with retail sales value of US\$7.8 billion in 2000 (ICO, 2000; Giovannucci, 2001). The certified sustainable coffee global trade in 2000 was estimated to be worth US\$490 million. A study done in USA and Canada indicates that the Latin American countries are, by far, the leading suppliers of sustainable and speciality coffees. Africa has the least share of the market (see Annex 4). These niche coffees guarantee a certain level of price to growers, which includes a premium over the international market prices. For instance fair trade coffee guarantees a minimum price of US \$1.26/lb while coffee that is both in fair trade and organic certified, the producers receive US \$1.41/lb (Sorby, 2002).

Kenya coffee is world renowned for its high quality that makes it ideal for these niche markets. Indeed most niche coffee markets identify quality as the single most important factor. It is therefore apparent that Kenyan smallholder farmers can benefit from these niche markets provided they are better organised to overcome critical constraints like certification. Furthermore, given the envisaged restrictions in EU based on minimum pesticides residue levels, the path towards sustainable coffees becomes even more imperative.

² Low price elasticity indicates that demand increases at low rates when prices fall. This is an indication that unless population changes there is limited scope for increasing consumption. The reason for the low growth in demand is the high consumption rate per capita.

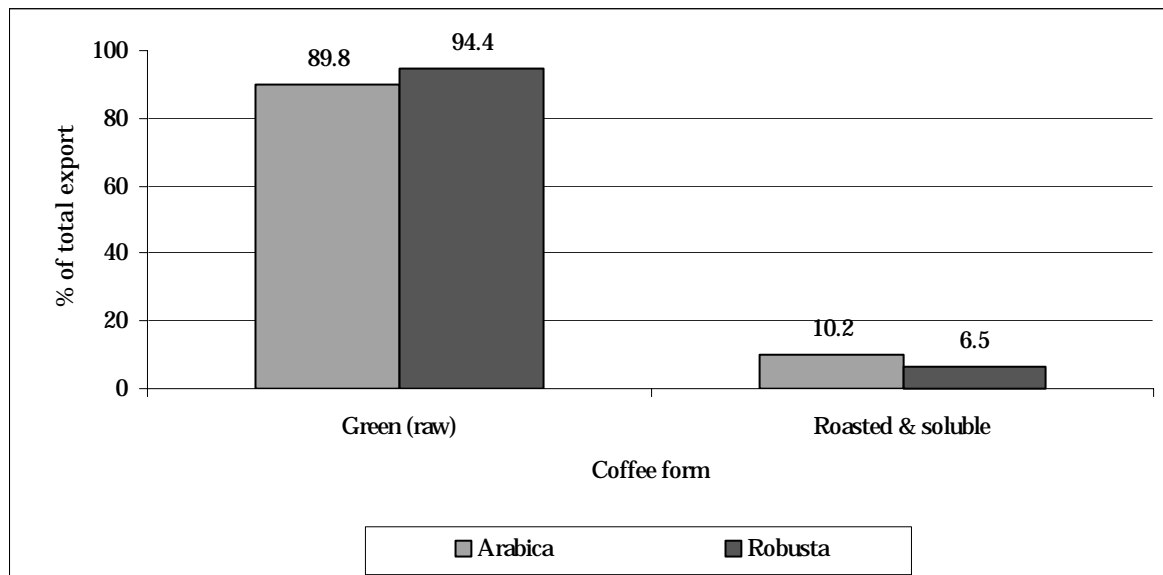
³ Organic coffees are described as those coffees produced with methods that preserve the soil with minimal or no use of synthetic chemicals. Shade coffee is grown under shade (trees), which promote biodiversity conservation. Fair trade coffee is purchased directly from smallholder farmers' organisations, which adhere to the principles of fair trade (Giovannucci, 2001).

3.3 Trade Issues

One major feature of the global world trade is the high market concentration of roasters and traders. Four large multinational companies provide more than half of all the coffee consumed by the 25 main consumer countries. These companies are Jacobs/Kraft General Foods, Nestlé, Proctor & Gamble and Sara Lee/DE (Pelupessy, 1999). The first three controls 73% of the USA market and the concentration is said to be increasing. In Germany the big-four market share has risen from 75% to 86% while in Netherlands, Sara Lee/DE has a market share of 70% (Anon, 2001).

The increasing concentration in international trade and roasting is also replicated in retailing. In European countries the five largest supermarkets chains have, in most cases, a joint market share of at least 50%. Vertical integration between multinationals, roasters and supermarket chains is also becoming a common phenomenon. The consumer market is also highly differentiated through a pyramid of blends. These features of the international coffee trade and the consumer nations offer considerable barriers to entry for producer nation companies. This diminishes the opportunities that can be exploited by producer nations in adding value to the raw coffee. For instance, in 2000/01, about 90% of arabica and 94% of robusta coffee exported by all producer countries was exported in raw (green) form (see Figure 2).

Figure 2: Proportion of raw (green) and processed coffee exported by producer countries in 2000/01



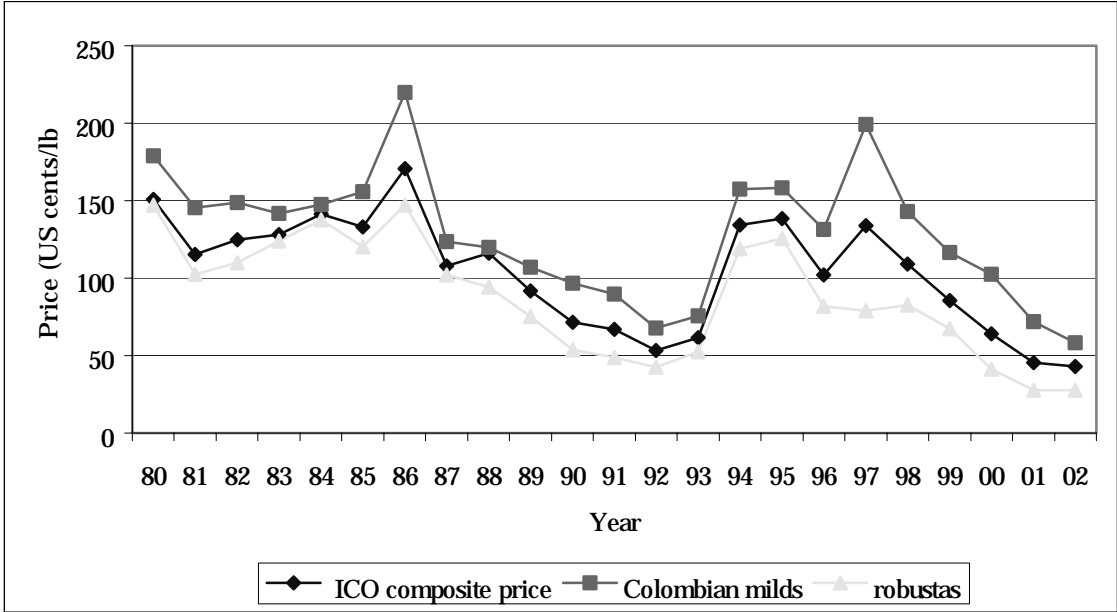
Source: ICO statistics.

3.4 Coffee Prices

The trends in production described above have impacted negatively on international coffee prices. Coffee prices have not only declined to historical levels but have also become very unstable and unpredictable. Figure 3 shows the trend in international coffee prices over the last two decades.

The historical evolution of coffee prices indicates the cyclical and instability phenomena that characterise the world coffee markets. The trends in Colombian Milds at the New York futures market, which are used as reference prices for Kenyan coffee, show three main periods of rising prices, which alternate with periods of falling prices (Figure 3). The first two periods of rising prices (1981 to 1986 and 1994 to 1995) were mainly as a result of supply problems in Brazil arising from adverse weather conditions. A third period of rising prices was also witnessed in 1997 and like the rest of earlier periods was also attributed to supply problems in Brazil (ICO, 1997). The same trends are replicated for robustas.

Figure 3: Trends of international coffee prices, 1980 to August 2002



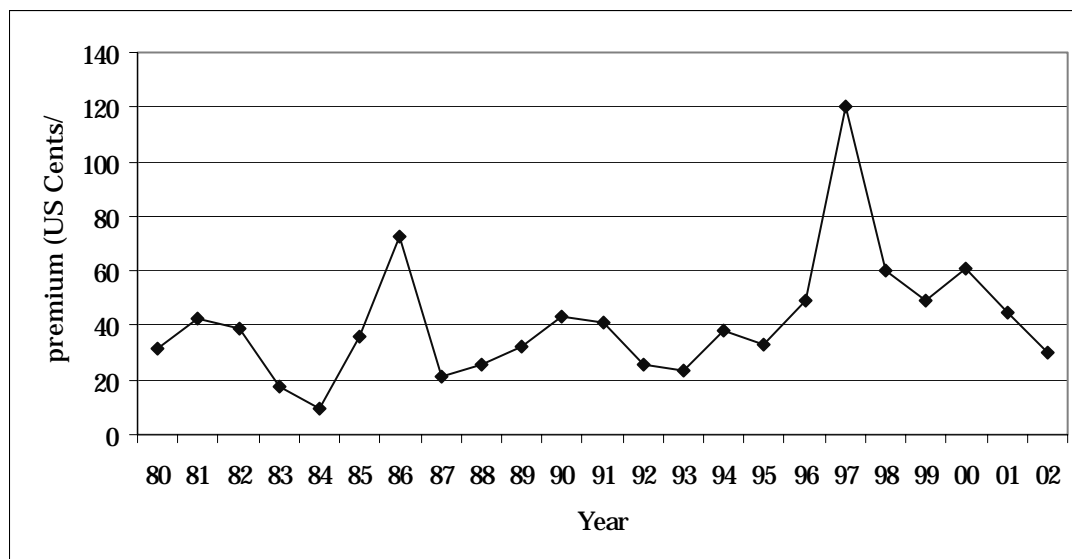
Source: ICO Statistics

Since 1998, the prices have been on a downward trend and are currently at the lowest levels in 100 years. It can also be observed from Figure 4 that, from 1980 up to beginning of 1990, Colombian Mild prices have remained above 100 US cents/lb. It was only in two periods in the last twenty years (1990 to 1993 and 2000 to current) when Colombian Mild prices were below 100 US cents/lb. This indicates that the chance of the average for both Colombian Milds going below 100 US cents/lb. is one in every three years. The long-run yearly average for both Colombian Milds has been 130 US cents/lb. during the last thirty years. This should form the long-term price expectation for Kenyan farmers.

As compared to the robustas, the arabicas continue to enjoy a considerable price differential (premium) despite the down-turn in prices (Figure 4). This premium is attributed to differences in quality. The premiums have averaged between US cents 20/lb to US cents 60/lb and have tended to increase in the recent past. These premiums indicate that the world market still recognises and rewards high quality coffee. For Kenyan farmers this means that quality coffee production can pay, the only issue remains on cost of producing that coffee and the proportion of the premium received by farmers.

When the price regulating mechanism of the International Coffee Agreement was in place, coffee prices world-wide were maintained within agreed price bands, thereby raising the producer prices as well as protecting them from high price volatility. The free market situation after the withdrawal of the export quotas in July 1989 coupled with liberalisation of domestic foreign exchange market has not only affected the general level of coffee prices but also their volatility. The coefficient of variation of Colombian milds prices increased by 26% during the period 1990 to 2001 as compared to period the 1980 to 1989. Studies done by ICO and United Nations Conference on Trade and Development (UNCTAD) indicate that coffee market has become the least stable among tropical beverages (ICO, 1977, UNCTAD, 1995). Studies done in Kenya also indicate the same phenomenon has been replicated in the country (Karanja, 1998, 2002a). This trend is likely to continue, thereby making it even more imperative for producers to consider intervention mechanism aimed at minimising the effects of price volatility.

Figure 4: Premiums* enjoyed by Colombian milds 1980 to 2002



* The premium is calculated as the difference between Colombian mild indicator price in the New York Market and the average Robusta indicator price

Source: Author Calculation

Market reforms in most developing countries have greatly limited the direct market intervention options (such as stabilisation funds) by governments and agricultural marketing boards. It is however possible for producer countries, like Kenya, to trade away much of the price risks by using modern market instruments such as futures, option and commodity swaps. However, this development requires a suitable legal and financial environment before it can become reality. The World Bank led International Task Force on commodity risk management (ITF) has already undertaken a study of the way these instruments are used. Pilot projects to test their use are being undertaken by the Common Fund for Commodities (CFC, 2001)⁴. The ITF proposal identifies the need to strengthen smallholder producer associations and co-operatives to enable them to serve as a bridge between international price insurance markets and their members or what are termed as *Local Transmission Mechanisms* (LTMs). It is envisaged that LTMs will aggregate the volumes needed for purchasing price insurance. They are also expected to distribute the funds from the price insurance (in case of claim) and facilitate the provision of core services and technical assistance. However, before this scheme becomes a reality, major investments in capacity building and farmer education are needed. Equally, the producer associations have to learn to accept their new role in price risk management, a role that, before liberalisation, was largely borne by governments and marketing boards⁵. Indeed, the transition from commodity production to future exchanges and market-based price risk management may seem far-fetched at the moment. However, given current global trends, farmers and their associations cannot simply limit themselves to commodity production and processing but must become actively involved in marketing and planning based on certain price expectations. Farmers associations therefore need to take a more active role in the promotion and use of market-based risk management and see it as an essential element of their forward-looking strategy.

⁴ According to the Common Fund for Commodities (CFC), the first such project was approved in April 2000 and will assess the feasibility of using market based price risk management instruments in the cocoa sector in West Africa (CFC, 2001). Studies have also been undertaken in Uganda, Tanzania and other Latin America states to establish how these instruments can be used in coffee trade. The Kenyan coffee study was initiated early this year by ITF.

⁵ As indicated in section 4.2, before liberalisation, the fixed exchange regime and coffee pool payment system (average price in a year) helped to dampen the of both coffee price and exchange rate fluctuations thereby reducing the price and exchange rate risks to farmers.

3.5 Disparity between Producer and Consumer Prices

Apart from growth in coffee supply, there is also robust evidence, both across commodities and countries, which supports the hypothesis that there is a growing disparity between producer and consumer prices (CFC, 2001). According to ICO, in the 1990s coffee producing countries earned US\$10-12 billion per year while the value of retail sales in industrialised countries was about US\$ 30 billion. Now the sales exceed US\$70 billion but coffee producing countries only receive US\$ 5.5 billion per year.

There are considerable appropriations of economic rents by importing governments that are in most cases higher than those of producer nations. These policies are also often ignored when discussing restructuring strategies in producer countries despite the importance of such policies in distorting the international coffee markets. One such policy is the Value-added and excise taxes levied by some importing countries. For instance, Germany has a VAT of 7%, excise tax of DM 4.3/kg of roasted coffee and DM 9.35/kg of coffee extracts, Italy charges VAT at 11%, France 5.5% and Netherlands 6%. As a consequence of both market power concentration, alluded to earlier, and government interventions, the value added in retail prices of the main importing countries is very high and increasing, as shown in Table 3.

Table 3: Share of gross value added as % of retail price of roasted coffee, some selected importing countries

Country	1993	1994	1995	1996	1997	1998	1999	2000
	(%)							
USA	70	56	58	62	58	65	72	78
Germany	79	71	66	73	58	71	80	80
France	67	43	56	62	41	58	68	69
Italy	84	71	70	78	70	76	83	86
Netherlands	63	61	50	55	46	65	73	72
UK*	78	67	73	79	76	77	93.5	95
Japan	94	88	89	90	87	89	94	92

* Soluble coffee

Note: Share of gross value added = (retail price- unit value of imports)/ retail price x 100, after adjustments to roasted and soluble coffee equivalents

Source: Calculated from ICO tables VI-I and VI-8, ICO, 2000

These trends mean that the value of raw coffee as a percentage of the consumer price continues to dwindle. This also means that the producer share of consumer price is very low after taking into account the local overhead and marketing costs. The challenge remains therefore on how to improve the producer share. Currently, most producers, even in Kenya, cannot recoup their production cost with the current level of prices.

4.0 REVIEW OF COFFEE MARKETING AND POLICY REFORMS IN KENYA

4.1 Coffee Marketing

Coffee marketing starts at the farm gate and ends at the consumer level. In Kenya, there are two distinct coffee-marketing channels, one for the co-operatives and the other for the estates (See flow chart 1a). The difference in the two channels is mainly at the primary processing level. The smallholder farmers (farmers with less than 2 ha under coffee) deliver their cherry to co-operative factories for primary processing as compared to the estate farmers who have processing factories located in their farms. Primary coffee processing involves cherry sorting, pulping (removal of out skin), fermentation, drying and storage. Dry cherry (mbuni) is usually bulked at the farm and delivered to the factory for onward transport to the millers. Some isolated smallholder farmers especially the ones not near a co-operative society use hand pulpers to process their coffee in their farms. By 2001, there were 462 coffee co-operative societies in the country with over 890 processing factories. Murang'a district had 19 societies in 2001 with a total of 64 factories. Smallholder farmers have to transport coffee cherry from their farms to their nearest co-operative factory. To do this, farmers rely on rural access roads. In most areas, including Murang'a, these roads are in poor condition making farmers to incur high transport costs. This is despite farmers being charged a road cess at the rate of 1% of total coffee sales value to maintain these roads.

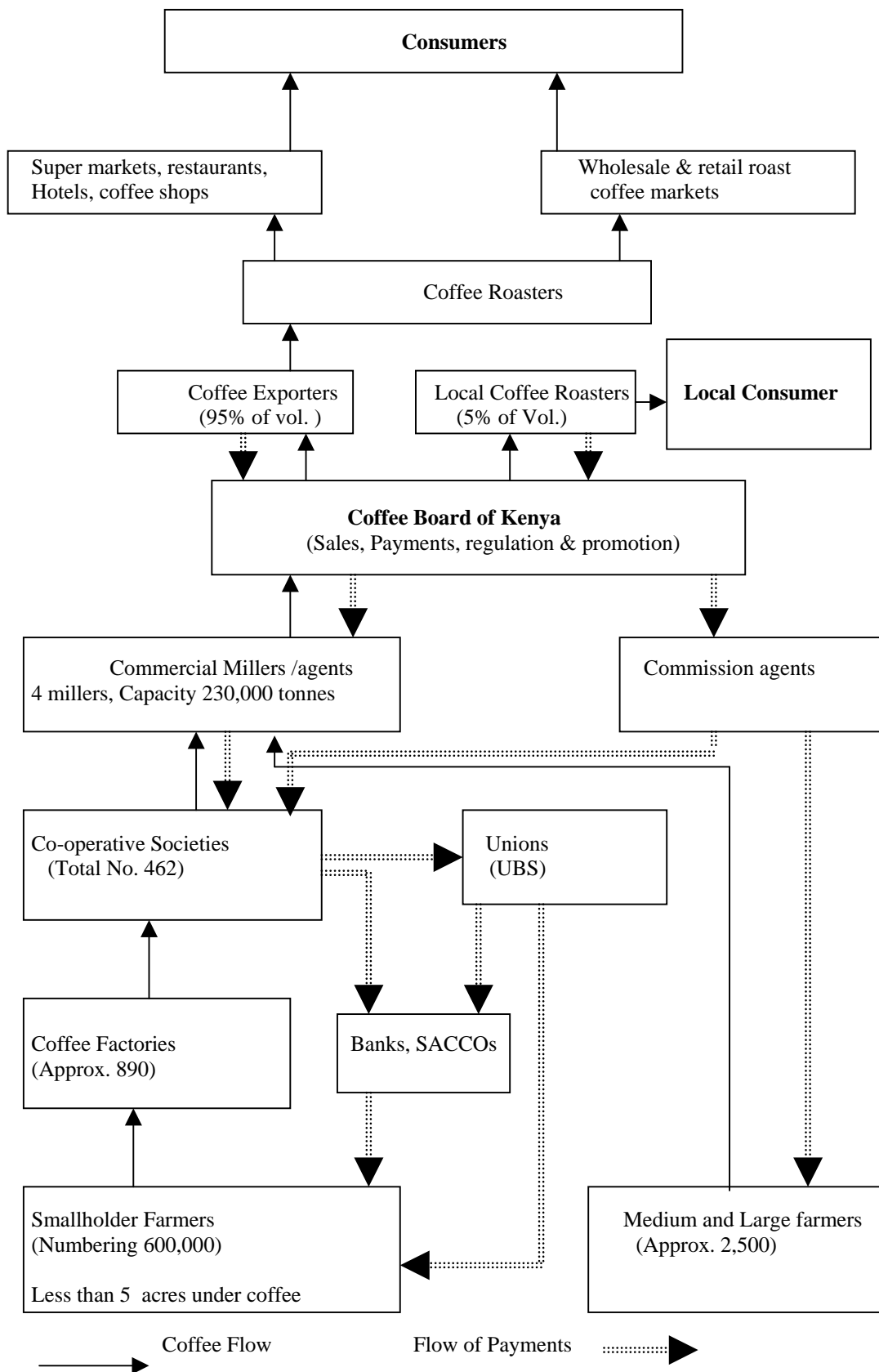
Farmers own the Co-operative societies, factories and other infrastructure that handles coffee. Some of the societies are affiliated to district unions. For instance in Murang'a district, majority of the societies are affiliated to Mugama Co-operative Union. The unions offer specialised services such as accounting and banking services to their member societies. Mugama has a union banking (UBS) section that offers financial services to smallholder farms. Indeed majority of farmers in Murang'a and Maragwa district receive their coffee payments through Mugama or through Murata co-operative union⁶. Apart from financial services and coffee processing, co-operative societies are expected to provide farm inputs either in cash or on credit to their members. They are also expected to provide technical services such as extension and advisory. However, these services have dwindled in recent past to various reasons.

After primary processing, coffee is delivered to the millers for secondary processing. Secondary processing involves hulling, grading and sorting of parchment coffee to produce clean (green) coffee before storage and marketing. Currently there are four main coffee millers in the country. These are Kenya Planters Co-operative Union (Nairobi plant and 4 rural branches), Thika coffee mills (Thika), Socfinaf Ltd (Ruiru) and Gatatha farmers' Ltd (Kiambu). Most societies in Murang'a deliver their coffee to KPCU Ltd, mainly as a result of historical relationship. After milling, the millers are supposed to pass on the coffee to CBK or the appointed marketing agent within 24 hours. The millers are also obliged to issue documentation on quality assessment, final weights and milling losses to the growers or their agents. Some millers such as KPCU also double up as commission agents and are therefore involved in processing of farmers' payments.

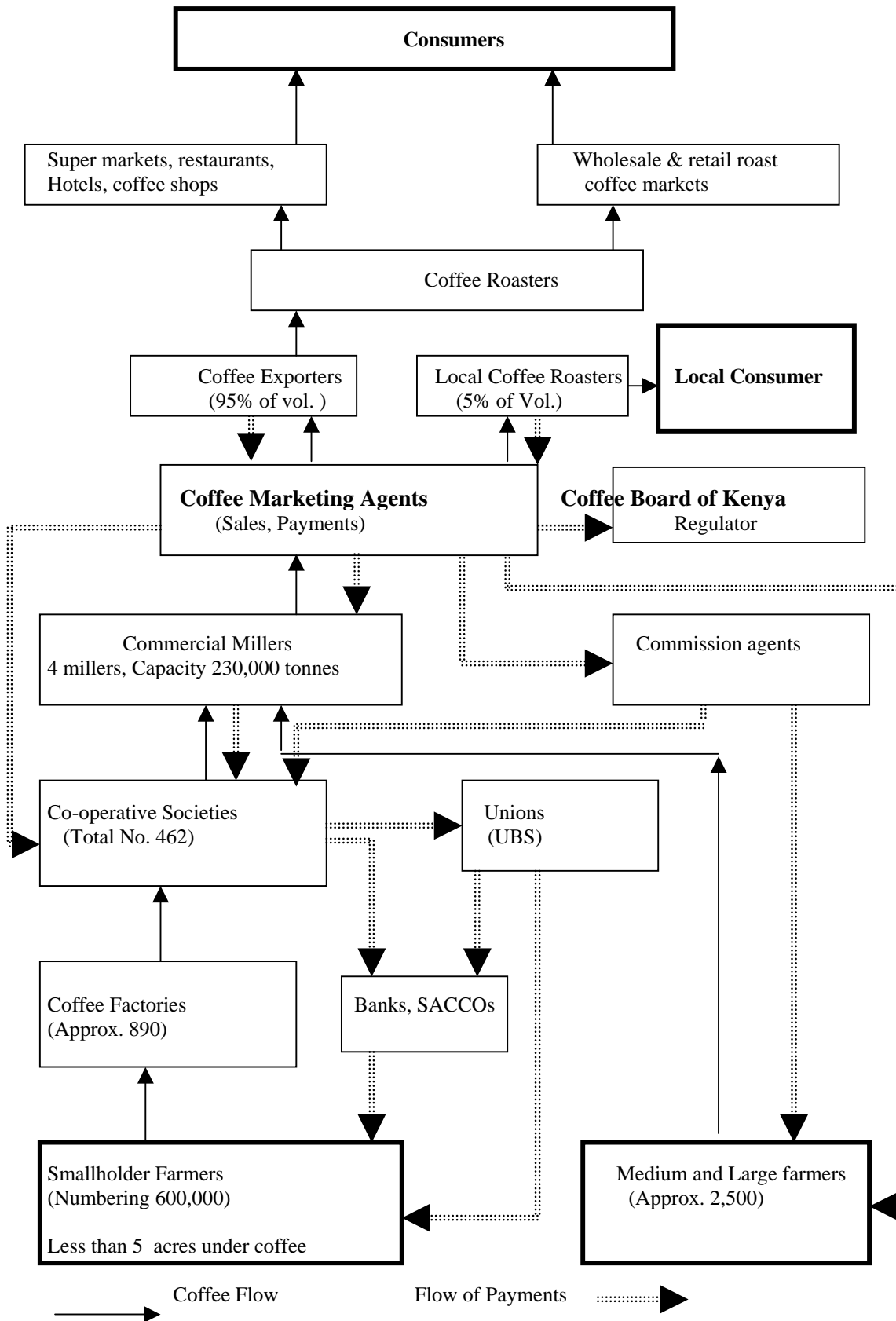
Prior to April 2002, CBK was the sole marketing agent. Since then a number of marketing agents have been licensed to undertake the coffee marketing function with CBK relegated to industry regulator (see flow chart). This is in line with the new Coffee Act, 2002. The marketing agents are supposed to warehouse clean coffee, undertake classification and in conjunction with auctioneers prepare a sales catalogue, which is used, for bidding in the Nairobi coffee auction. After coffee is sold the marketing agents receive payments from the buyers within seven days from the date of sale. After deducting statutory deductions and taxes, the agents are supposed to remit the rest of the money to the farmers or his/her appointed commission agent within 14 days. However this is rarely done thereby causing delays in paying farmers.

⁶ Murata Union is a rival of Mugama union having split from from Mugama in 1998.

Flow of coffee and its proceeds, from the farmer to the consumer before April 2002.



Flow of coffee and its proceeds, from the farmer to the consumer after April 2002.



Dealers (traders) who source their coffee from the auction carry out coffee export. The dealers are also involved in exporting coffee from other countries in the region such as Uganda, Rwanda, Tanzania, Burundi and democratic Republic of Congo (DRC). As of 2001 there were over 89 licensed traders but only around 40 participate regularly in auctions. The rest are unable to participate actively and regularly coffee trade mainly due to financial constraints. Local coffee roasters also participate in the auction where they buy raw coffee for further processing. However their market share is only around 5% and has been declining.

As discussed above, coffee payments follow almost a similar route to coffee. However, the smallholder farmer's payments follow a lengthier route, which is prone to delays and heavy deductions (see chart flow). These features of co-operative payment system have changed little even after liberalisation. The large-scale farmers are paid directly by their marketing or commission agents while smallholder payments go through their co-operatives and other rural financial institutions such as Union Banking Sections (UBS) and Saving and Credit Co-operatives (SACCOs). The lengthy co-operative payment system therefore is a major hindrance and a source of concern to farmers. Other commodities that compete with coffee for resources such as tea, dairy and horticultural crops offer more attractive modes of payments based on daily, weekly or monthly payments.

4.2 Policy Reforms

Since October 1992, a number of policy reforms have been made in the coffee industry in an attempt to improve farmers' incentives and their control of the industry's affairs. The reforms were also aimed at addressing specific challenges facing the coffee industry. The challenges includes:

- i. Increasing coffee production through intensification in the high potential areas in the wake of diminishing land availability.
- ii. Enhancing the diversification of coffee production through introduction of new yielding and high quality varieties.
- iii. Enhancement of yields in smallholder farms whose current yields are approximately half that in the plantations.
- iv. Restructuring the institutions in the industry to allow for greater decision-making and managerial responsibility to the principle stakeholders, the farmers. To prepare these institutions for greater operational efficiency in the emerging liberalised economic environment.
- v. Improvement of returns to smallholder farmers by reducing transaction costs in the marketing chain.
- vi. Intensify strategic marketing initiatives for coffee in the existing markets and extending them to new markets.
- vii. Modernising the central auction market to allow greater participation of more stakeholder while improving on transparency, and to create an open market driven system that can accommodate modern market trading instruments such as futures, options, all within the framework of a commodity exchange.
- viii. Enhance tertiary processing to value add on Kenya coffee with a view of stabilising and enhancing farmers returns.
- ix. Putting into place a system of prompt payment for farmers.

In late 1992, the government issued broad policy guidelines, which started the liberalisation of the coffee industry in line with structural adjustment programme (SAPs). Under these guidelines, the CBK was required to conduct the Nairobi coffee auction in US dollars. Gradually permission was given for coffee farmers to be paid in dollars and they were also allowed to retain dollars for their own use. These policies were intended to make it possible for farmers to benefit from currency gains and to allow them to participate in foreign exchange dominated trade. Due to the overvaluation of the Kenya shilling prior in 1992, exporters of commodities like coffee had a heavy indirect tax. Ephanto (1993) estimated the overvaluation of the Kenya shilling in 1992 resulted in coffee farmers and other agricultural exporters carrying an implicit tax burden of 29%. The flotation of the exchange rate and subsequent depreciation has removed this implicit tax burden. The retention of foreign exchange by coffee farmers has also allowed them to access cheaper foreign currency dominated credit from local banks. Nevertheless, the fluctuations in the exchange rate has exposed farmers to price volatility. The smallholder farmers who

market their coffee through co-operatives have benefited marginally from the liberalization of the foreign exchange market as most of them lack the necessary skills needed in the money markets.

Another important policy change has been the introduction of an alternative, farmers' payment system. Although coffee farmers in Kenya have always received prices that are close to the export parity price (Swamy, 1994), payment delays have been a major problem. The delays in payments arise from stock management problems and delays in the processing of proceeds along the marketing chain. Prior to 1993, coffee payments were pooled together by the CBK, which made several interim payments based on the averaged price for the season. A final payment was made after reconciliation of accounts. The pool payment system served the purpose of pooling price risks and maintaining as steady a flow of funds as sales realisation allowed. This system was reviewed in 1992, by allowing farmers to opt for a 'direct'-payment system. In this system, farmers are paid the amount their coffee fetches at the weekly Nairobi coffee auction less statutory deductions. Thus, the system eliminated the pooling of funds. By the end of 2001, 80% of Kenyan coffee was paid through the direct payment system and 20% through the pool. The main advantage of the direct system is that farmers are paid much more quickly and good quality coffee that fetches high premiums also receives the weekly auction price rather than the yearly average price. To some extent this avoids the adverse selection problem inherent in the former pool payment system. Nevertheless, adverse selection continues to be a major issue in smallholder coffee-marketing channels as coffee pooling is still practised at the co-operative society level. It should be noted, however, that the direct payment system coupled with the deregulation of exchange rates might have exposed coffee farmers to higher price risks.

Reforms have also been introduced into the coffee-milling sector with the licensing of more commercial millers. The coffee milling monopoly held by Kenya Planters Co-operative Union was dismantled in 1993 when four more commercial millers were licensed. This move has increased the installed coffee milling capacity in the country from around 140,000 metric tonnes to around 230,000 metric tonnes (Karanja, 1998). This increase in installed milling capacity against a backdrop of declining production has resulted in an over-capacity of about 60% in 2000. This low capacity utilisation is expensive to maintain and is a major constraint to securing lower milling charges which was the original objective of liberalising milling.

In an effort to enhance coffee production, major changes have been introduced into the way coffee planters are licensed. In 1996, the minimum acreage required for a farmer to be licensed as a coffee planter was reduced from 10 to 5 acres. This change has resulted in a doubling of the number of small estates (below 20 acres) from 630 in 1994 to over 1500 in 2000. Thus, the co-operatives continue to lose a sizeable number of their well-to-do members as these become licensed as planters. This has further lowered the capacity utilisation of those coffee-pulping factories owned by co-operatives while creating an increasingly important group of medium-sized coffee producers. The small estates like other estate farmers are able to process their coffee separately and therefore have more incentives to improve on their coffee quality unlike smallholder farmers who have to pool their cherry at the co-operative factories. Furthermore, the estates receive their payments directly and more quickly thereby avoiding the delays and high deductions characterising the co-operative marketing channel. As such, most farmers with the required minimum coffee acreage prefer to operate as independent coffee estates. Indeed some smallholder farmers have of late tried to form joint family units to qualify to be licensed as independent estate farmers.

Neither have coffee producer co-operatives been spared in the reform process. The government removed its tight control over the way co-operatives operate in June 1998 when the new Co-operative Act was enacted. The government has retained a minimal regulatory role in the co-operatives while encouraging members of the societies to run them as economic units. The review of the Act and politicisation of the co-operative together with the new era of multi-party democracy in the country, have resulted into splits of the co-operatives into smaller units. As a result the number of coffee co-operative societies have increased from 207 in 1990 to 462 by 2001 (Table 4). The number of societies in Murang'a district has increased from 13 in 1997 to 19 in 2002 (Annex 5). Majority of the societies are small having less than three affiliated factories.

Table 4: Number and turnover of coffee co-operative societies in Kenya, 1990-2002

Year	No of societies	Turnover (Ksh billion)	Average throughput per society* (tones of clean coffee)
90/91	207	2.26	248.8
91/92	208	2.53	249.8
92/93	209	2.39	202.9
93/94	213	5.33	186.6
94/95	213	-	293.7
95/96	215	6.96	264.5
96/97	248	7.23	154.2
97/98	279	7.49	118.2
98/99	308	7.66	127.9
99/00	335	7.71	185.6
00/01	366	7.74	67.7
01/02	462	6.92	60.6

* Coffee production divided by number of societies

Source: Statistical abstracts and Author calculation

The increase in the number of cooperative societies has occurred at time when the turnover and throughput (amount of cherry intake) per society has been decreasing. While these splits might bring decision making closer to the smallholder farmers, the newly formed societies have a weaker capital base that hampers their ability to provide services such as farm inputs to their members. Furthermore, the significant decline in average throughput per society greatly erodes the economies of scale thereby increasing operational and other overhead costs. Splitting of societies is also an expensive affair, as a liquidation process has to be undertaken. For instance when Kiriti farmers co-operative in Murang'a split in 1998 the total cost for the liquidation process was Ksh 8.5 million. This cost has to be met by farmers. Co-operatives more than ever before have to contend with opportunistic trade practices that have emerged as smallholder farmers try to avoid channelling their produce through societies to avoid loan repayment and performance risks being associated with the societies. A good example is where a farmer is given farm inputs such as fertilisers from the society but decides to sell his/her cherry or mbuni to private traders instead of delivering to the society. Although cherry trade at farm level remains illegal under the coffee Act, it is, however, rampant in most coffee growing regions including Murang'a. For example, a study done in four coffee growing districts in Central Kenya indicated that by 2000, 55% of smallholder farmers in the region were either participating in this parallel market or were able to identify active private coffee traders in their localities (Karanja, 2002a).

The liberalisation of the coffee industry has been undertaken gradually in phases with an objective of having minimal disruption of coffee production, processing and marketing. Furthermore, most of the reforms have been initiated and implemented after broad consultations between the government, CBK, farmers and other stakeholders in the industry. However, finding a common ground on some of the reforms have been characterised by acrimony and sometimes-outright fights due to various vested interests. This has delayed and sometimes derailed the reform schedule.

4.3 The new Coffee Act, 2002

In order to harmonise the policy reforms already implemented and to complete the institutional reform, the government published the sessional paper No. 2 in February 2001 on *Liberalisation and Restructuring of the coffee industry*. The sessional paper was debated in parliament thereby paving way for introduction and consequent enactment of Coffee Act, 2001, which came into effect in April 2002. Among the salient features of the new legal framework include:

1. Separation of the roles of coffee marketing and regulation. The coffee board of Kenya (CBK) is to retain the regulatory role while the marketing function is to be taken over by the marketing agents. This change is hoped to increase private sector participation in coffee marketing, increase

competition and hopefully lower the marketing costs to the farmer. It is also hoped that CBK will be able to concentrate on its regulatory role thereby enforcing contracts among the various parties as well as ensuring fair play in the coffee industry.

2. Direct election of CBK and CRF boards by the farmers. In the old Act the board members of the two institutions were elected through a delegates system, which was conducive to manipulation and lack of accountability to farmers. In the new Act farmers will directly elect 11 board members (8 from co-operatives and 3 from plantations). The Act also stipulates that no board member shall be elected to CBK if they are board members in other sister coffee organizations like the CRF, KPCU or Co-operative Bank. The objective of this piece of legislation is to put to a stop the old system where some board members could sit in all the four boards thereby creating major conflicts of interests. The new system therefore offers checks and balances in the apex coffee institutions.
3. The new Act removes the draconian and archaic rules in coffee production. In the new act a smallholder farmer is only required to register with a co-operative society if he/she wants to plant or uproot coffee. This is only meant for maintaining accurate and reliable statistics. The coffee planting zones and rules on inter-cropping has also been abolished. This change offers farmers a leeway to diversify from coffee production where possible.
4. Under the new Act, it is still illegal for farmers to trade in cherry at the farm-gate level. The smallholder farmers are supposed to deliver coffee cherries to their co-operative societies for processing and marketing. This is meant to safeguard the investments made by farmers in co-operatives and enhance economies of scale in coffee processing. However, this law remains controversial, as some farmers would wish to be given the freedom to sell their coffee cherries to any willing buyer, a system that is already rampant in most coffee growing regions.
5. The Act allows millers, management agents and marketing agents to offer extension and advisory services to coffee growers. This expands private sector participation in extension and advisory services, which hitherto were given only by public institutions.
6. The Act retains the requirement that all coffee sold in Kenya has to go to the auction. This may create a problem in future when farmers and their marketing agents want to explore other alternative coffee sales methods.
7. The new Act limits the deductions that can be made to cater for CBK and CRF expenses at 3% of gross sales. While this may increase farmers' payouts, the Act is however silent on other major levies and charges imposed by millers, marketing agents and other intermediaries in the coffee marketing chain. While the principle is to allow price competition among the various players, the lack of guidelines on such deductions leaves the farmers vulnerable. A case in point is the increase in milling charges (through un-declared charges) after liberalisation of milling.
8. The act proposes an establishment a Coffee Development Fund, whose funds can be used for farm development, farm inputs and operations, and price stabilisation. A coffee development levy (no amount specified) is to be established. This will increase the statutory deductions levied on farmers' proceeds. The fund is also envisaged to consist of funds provided by donors, money voted by parliament and any loans and advances. The creation of the fund will offer a centralised channel through which funds can be made available for coffee development, a system that was lacking in the past.

One of the stated objectives of the legal and other reforms has been to reduce direct government involvement in the affairs of the coffee industry. Farmers through their elected representatives are expected to independently run the affairs of the industry with government only providing the necessary conducive environment. Furthermore, the legal reforms were directed towards improving coffee marketing by enhancing competition and innovation. It was hoped this would translate into higher efficiency and performance leading to higher returns to the farmer.

The outcomes of the new institutional arrangements in coffee production, processing and marketing are not yet clear at the moment. It is however important to point out that the implementation of some of the reforms have been delayed due to various reasons. Others are in the process of being implemented. So far, new CBK and CRF boards are in place having been elected into office and gazetted in June 2002. However, there are widespread allegations that the operations of the boards continue to be interfered with by the government, contrary to the stated government policy. CBK restructuring is also underway to streamline its operations in line with the reduced mandate. Already about 700 staff members have been retrenched and it is envisaged that CBK will have a work force of around 70. Equally, CRF has retrenched about 500 of its staff member to reduce costs.

CBK has embarked on the process of licensing coffee-marketing agents after the publication of the coffee marketing agents' rules 2002. This process is expected to be completed around January/February, 2003. In the mean time, three marketing agents who also doubles-up as millers have been licensed as the interim-marketing agents. The licensing of marketing agents has been dogged by suspicion and brinkmanship mainly due to vested interests and politicisation of the process. There are also fears that, the entry of marketing agents might create hostilities and uncertainty in coffee industry, just as it happened when more millers were licensed. The process if not handled sensitively might result in further disruption of coffee production, processing and marketing.

Although farmers expectations have been raised with the enactment of the new legislation, this might prove to be a misplaced expectation especially given the prevailing global coffee economy and the not so clear benefits of the emerging internal institutional arrangements. This calls for guarded caution not to raise farmer's expectations on the prospects of coffee industry, both in the short and medium term. However, politicians from the coffee growing areas who belong to the coffee and tea parliamentary group (COTEPA) have for political reasons thrown caution to the wind and taunted the new Act as a panacea to the coffee industry woes. The Ministry of Agriculture has remained silent on the prospects of the coffee industry under the new Act, leaving farmers to go by the politicians' words.

Although the emerging legal framework has fewer regulations in terms of coffee production, it still retains a lot of regulatory roles in terms of coffee processing and marketing. These regulations have been justified as safeguards to protect farmers (especially smallholder) from exploitation by middlemen and other agents. The regulations are also meant to ensure that statutory deductions are made and remitted in a organised manner to the various institutions in the coffee industry. This makes coffee to be a highly regulated crop next only to tea. These two commodities have a high participation of smallholder farmers and are therefore politically sensitive even from a historical perspective. Furthermore, coffee and tea require high level of processing, higher degree of product differentiation (grading and classification), which makes them ideal for a vertically integrated marketing system. This unlike sugar, milk, maize and other commodities which are almost homogenous products requiring little to medium level of processing.

5.0 PERFORMANCE OF THE COFFEE INDUSTRY IN KENYA

Coffee was introduced in Kenya by the missionaries' way back in 1900. During the initial years, the crop was only grown by white settler farmers. It was not until mid 1930s when restricted smallholder coffee production was allowed in Kisii and Meru districts on experimental basis. Smallholder production was expanded in 1950s in line with recommendations contained in the Swynnerton plan (Colony and Protectorate, 1954)⁷. Whereas, in 1963/64 the area under coffee in smallholder farms was only 13,000 ha, the area grew steadily to surpass the area under plantations in 1966/67. This was despite the restrictions on production and sales imposed by the International Coffee Agreement (ICA) in the period 1964 to 1972, which were translated into a ban on new plantings. The growth tempo was, however, maintained and even accelerated in the 1970s and 80s mainly as a result of the high coffee prices during that period. The sub-division of large farms during this period also contributed towards enhancing the prominence of smallholder production to the detriment of plantations. There were, however, major reversals in 1990s that were mainly precipitated by the changes in price regulations in the international coffee markets and domestic macro-policy environment (mainly the liberalisation policies). The rest of this section examines the trends in coffee production, marketing and returns in the last one decade (1992 to 2002), given the global and domestic situation as reviewed in the preceding sections. Although the focus is on smallholder farms, the trends in the plantations are also used, where necessary, for comparative purposes.

5.1 Coffee Production Trends

5.1.1 Area under coffee

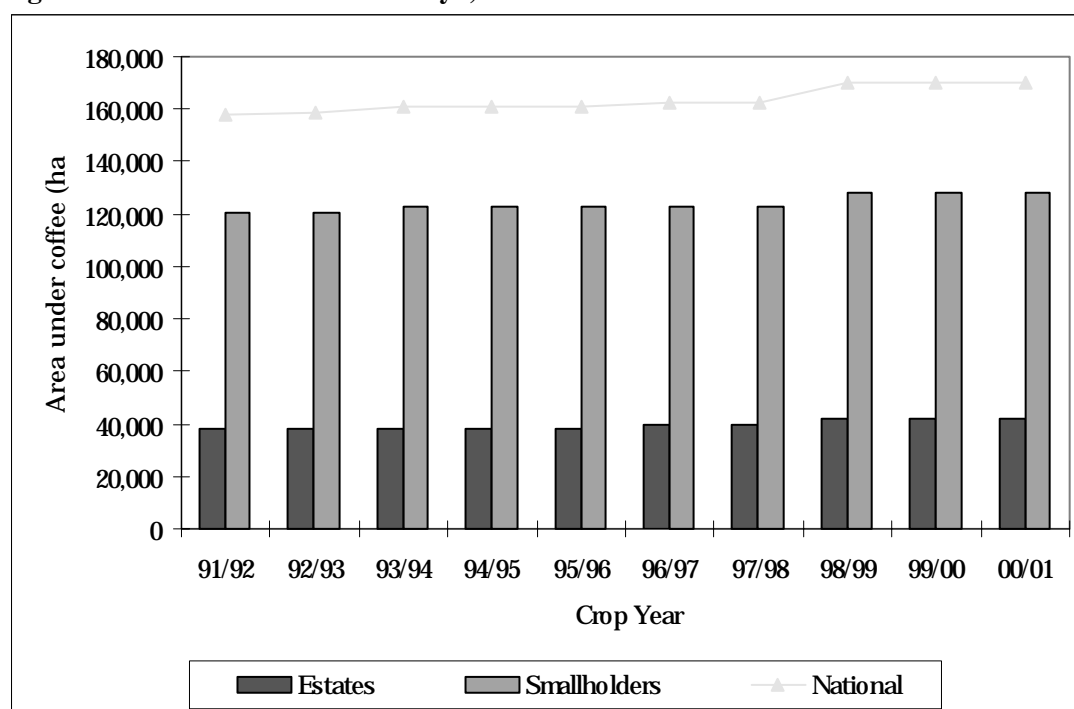
Official estimates indicate that the area under coffee has is estimated at between 160,000 and 170,000 ha as shown in Figure 5. The smallholder farms account for around 128,000 ha, equivalent to 75% of total area. Although the estimates indicate marginal increases in coffee area in smallholder zones, there is cause to belief that decreases have occurred in the last decade. These decreases could be attributed to neglect of farms and uprooting mainly as a result of the slump in coffee prices, competition from other farm enterprises and the need to create room for human settlement. This is especially the case in the traditional coffee zones of Central, Eastern and Western Kenya, which have high population densities. The prospects for coffee expansion are therefore quite limited in these traditional areas as land unit per household continues to decrease as a result of population growth and sub-division. Nevertheless, limited coffee expansion has occurred in the recent past in some non-traditional coffee zones mainly in Rift Valley Province such as Uasin Gishu and Trans Nzoia districts. This expansion has been driven by the desire of farmers in these areas to diversify from maize and dairy production.

5.1.2 Coffee production

Coffee production has decreased since 1987/88 when a record 130,000 MT of clean coffee was produced. In the 1990s the national coffee production was on a declining trend except a few years when there was an upswing in production (see Table 5). The upswings in production were mainly attributed to increases in coffee prices following drought/frost in Brazil in 1994 and 1998. During the last decade, the country's production averaged 77,514 MT of clean coffee. This is 40% less than what was being produced in 1987/88. This means that the country was utilising only 60% of the 1987/88-production capacity, which translates to a loss of 51,412 MT of coffee per year.

⁷ In 1954, in response to mounting resentment amongst the African population, the colonial government published a document - popularly referred to as the Swynnerton plan - setting out how the intensification and development of African agriculture was to be achieved. The plan aimed at creating a rural elite as the vanguard of development and the first defence against revolt. It contained a strategy for the development of smallholder agriculture that has remained the corner stone of agricultural policy up to the present day. Swynnerton's plan recommended, among other things, relaxation of restrictions on the production of export crops by Africans. According to the plan, progressive African farmers were expected to grow coffee, tea or pyrethrum to generate cash income as well as employ the landless labour. Nevertheless, production controls to ensure quality standards were maintained.

Figure 5: Area under coffee in Kenya, 1991 to 2001



Source: CBK annual reports and economic surveys

The decline in production is more pronounced in smallholder farms as shown in Table 6 and Figure 6. While the production in the plantation sector decreased by around 39% in the last decade, the decline in smallholder farms was around 47% during the same period. Indeed, in 2000/01-crop year the smallholder farmer's production declined by 71% as compared to the 1987/88 while the plantations decline was around 39%. On average, the smallholder production in the last decade decreased by around 39,300 MT per year as compared to a decline of 12,192 MT for the plantations.

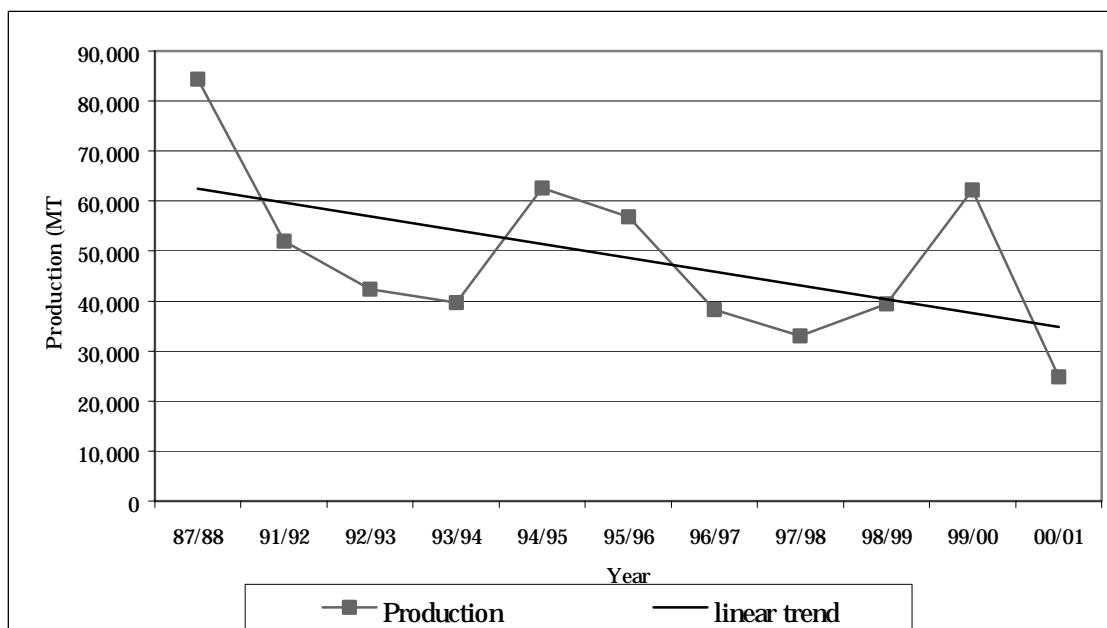
Table 6: Clean coffee production and yields in Kenya, 1987 compared to 1991/92-2000/01

Year	Production (MT)			Yield (kg/ha)		
	Estates	Smallholder	National	Estates	Smallholder	National
1987/88	44,406	84,420 (65%)	128,926	1,210	730	842
1991/92	37,520	51,977 (58%)	89,497	987	439	565
1992/93	32,781	42,426 (56%)	75,207	859	352	474
1993/94	33,037	39,747 (54%)	73,516	860	324	457
1994/95	32,795	62,567 (65%)	95,806	855	510	595
1995/96	40,109	56,881 (58%)	97,576	1,045	464	606
1996/97	29,737	38,261 (56%)	67,997	748	312	419
1997/98	22,061	32,981 (60%)	55,042	555	269	339
1998/99	28,700	39,400 (58%)	68,100	684	307	400
1999/00	38,500	62,200 (62%)	100,700	916	485	592
2000/01	26,900	24,800 (48%)	51,700	640	193	304
Average	32,240	45,124 (58%)	77,514	815	365	475

Figures in parenthesis indicate the percentage of coffee produced by smallholder farmers

Source: CBK and Economic surveys

Figure 6: Smallholder coffee production trend



5.1.3 Yields

In line with the trend in coffee production, coffee yields in Kenya have declined from 842 kg of clean coffee per ha in 1987/88 to an average of 475 kg per ha during the last decade (see Table 5). The smallholder average yields during the last one-decade were only half those realised in 1987/88. In most cases yields in smallholder farms are usually half those realised by plantations mainly due to differences in intensity of input applications, and availability and use of production technologies such as irrigation.

Apart from the decline, the yields exhibit high inter-year variation mainly due to weather factors and the bi-annual coffee bearing patterns. Equally, there is wide variation in yields among smallholder farmers even in the same zone or locality depending on their level of coffee management. Farm level surveys conducted over several years by CRF, indicate that most smallholder farmers (47%) can be categorised into 'low management category' with an average yield of a mere 1.4 kg of cherry per tree (266kg of clean coffee /ha). Another 33% and 20% of the farmers belong to the 'medium' and 'high' management categories with average yields of 2.1 kg of cherry per tree (401kg of clean coffee/ha) and 4.2 kg of cherry/tree (806kg of clean coffee/ha), respectively (CRF, 2000). Majority of the high management farmers have in the last few years moved away from co-operatives after being licensed to process and market their own coffee. The low productivity in smallholder farms remains a major challenge to be over-come if coffee is to remain a viable farm enterprise.

5.2 Coffee Prices, Cost of Production and Farm Profits

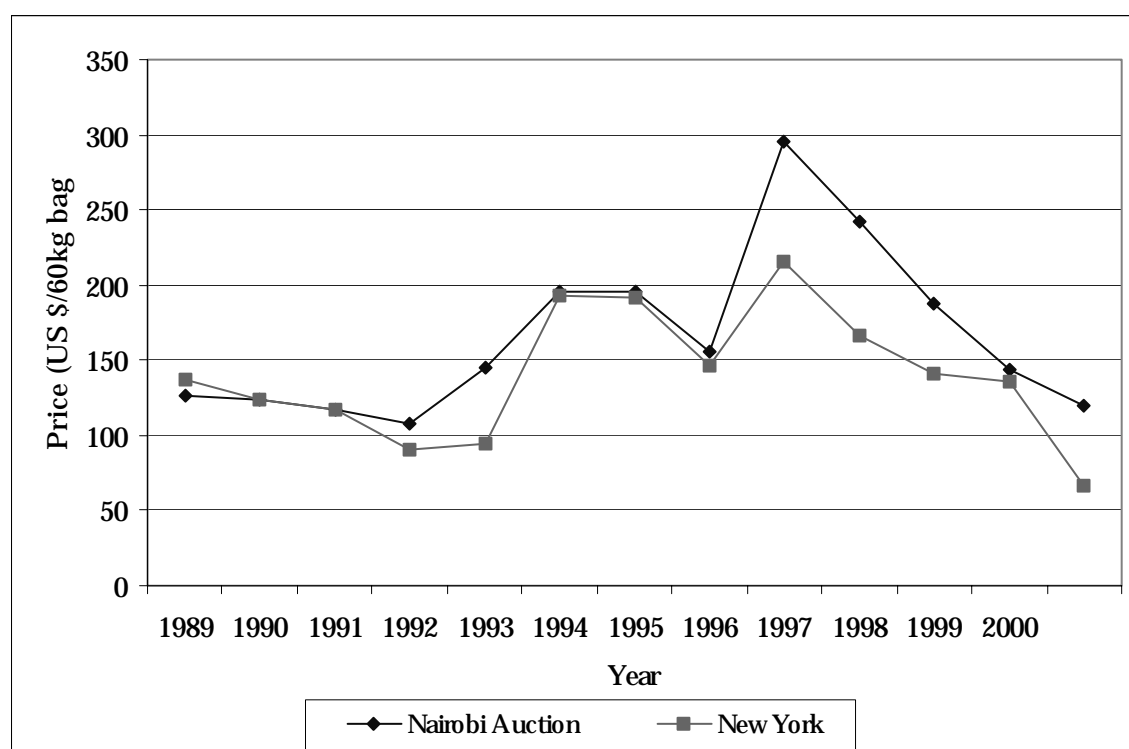
The returns to coffee production are determined by number of factors. The main ones are the general level of prices, the transaction costs, cost of production and level of farm productivity. These factors are interrelated in more than one way and are in most cases influenced by both local and international conditions. As already indicated in section 3.1 majority of smallholder farmers realises very low coffee yields, which have a great impact on overall profitability of the enterprise. Furthermore, due to population pressure and sub-division of farms in most of the coffee growing regions, farmers end-up with only a few coffee trees that are in most cases uneconomical to manage. The vagaries of the weather, diseases and pests, and market risks further lower the real benefits farmers can realise from farming.

5.2.1 Coffee prices

Kenya coffee currently accounts for about 1.5% of total global coffee exports and production. Thus, the Kenya's coffee prices are greatly influenced by international coffee market conditions. Internal domestic factors such as production levels, quality and exchange rate also play a major role in final price determination at the Nairobi coffee auction.

Figure 7 shows the trend of annual coffee prices at the Nairobi auction as compared to the New York exchange for the period 1984/85 to 2000/2001. Although the Nairobi auction prices have remained marginally higher than those prevailing in the New York exchange, they exhibit the same pattern characterised by declining prices in the last few years. It is only in years of high prices such as 1998 that Kenyan farmers enjoy considerable premiums over the international prices. The premiums are minimal or non existence during the periods of low prices, such as the ones currently being experienced.

Figure 7: Nairobi coffee auction prices as compared to the New York coffee exchange prices, 1989 to 2001



5.2.2 Producer margins and transaction costs

The smallholder farmer's margin (farm gate as % of auction prices) has increased from an average of 52% during the pre-reform period to about 63% during the reform period (see annex 6). The changes in producer margins are mainly attributed to removal of export duty in 1990, which averaged 5.2%. However, the export duty was replaced by presumptive income tax (PIT) in 1992. PIT was originally pegged at 5% but later reduced to 2% in 1998.

Marketing charges, levied by CBK, have also been on a downward trend from as high as 10.2% of realisation in 1996/97 to around 3% in 1999/2000. Nevertheless, the total amounts deducted were high in the mid and late 1990s due to the high coffee prices prevailing then. Within the new Coffee Act, these marketing charges are to be negotiated between the marketing agents and the co-operative or individual estate farmers. The non-marketing charges, to cater for research costs, promotion and other CBK overheads, have also declined from around 6% during the pre-reform period to about 2.4% during

the reform period (see annex 5). As from 2002, these charges will be regulated to a maximum level of 3% with research taking 2% and CBK the rest.

The levels of milling charges have not changed during the reform period. This is despite the liberalisation of milling function, which was expected to have enhanced price competition. Indeed farmers throughout the country complain that most millers have introduced some hidden costs such as drying and sorting costs, which in some cases are more than the declared milling costs. But this kind of pricing pattern can be expected given the over-capacity and in-efficiencies in coffee milling.

Smallholder farmers have not only to transport coffee cherry to the nearest factory but also they have to transport farm inputs. To do this, farmers' rely on rural access roads. In most areas these roads are in very poor condition making farmers to incur high transport costs. This is despite farmers paying a road cess to the county councils at the rate of 1% of their coffee earnings.

Table 7 indicates the actual charges levied on Murang'a farmers in September 2002. The charges levied to cater for CBK ,CRF and local government cess are as per statutory recommendations. The total milling charges take another 4.3%. Marketing costs and auctioneer's fees take 3.88%, which is actually higher than what was being charged by CBK prior to December, 2001.

Table 7: Recommended and actual charges paid by farmers in Murang'a district, 2002

	Recommended	Actual	Actual per ton of clean coffee* US \$	Actual as % of GP
CBK Levy	1% of GP	1% of GP	20	1
CRF Levy	2% of GP	2% of GP	40	2
Cess	1% of GP	1% of GP	20	1
Auctioneer fee	negotiable	0.28% of GP	5.6	0.28
Milling charges (Basic)**	negotiable	US \$ 45/ton of parchment	60	3
Other charges e.g. sorting**	negotiable	US\$ 20/ton of parchment	26.6	1.33
Marketing charges	negotiable	US \$ 72/ton of clean coffee	72	3.6
Total			244.2	12.21

GP= Gross Proceeds (Auction price)

*Based on an average price of US\$ 100 per 50kg bag

** Based on an average milling loss of 25%

Source: Field survey, Murang'a district

An examination of margins along the coffee marketing chain indicates that the margins at the primary processing stage, i.e. the co-operative stage, remain inordinately high averaging 24% at the national level. This is despite the government a policy guideline that indicates that processing and other overhead costs should not exceed 15% of the farmer's proceeds. Table 8 summarises the trends in cherry production, and rates of member's payment in Murang'a district. Annex 8 summarises the rates of payments for the five societies visited during the course of this study.

Table 8: Cherry production and payment rates to farmers in Murang'a, 1995/96 to Jan 2002

Year	Production (kg of cherry)	Gross Sales* (Ksh)	Payment to Members (Ksh)	% Payment rate**	Average rate Ksh/kg
95/96	51,400,000	1,099,000,000	748,000,000	68.1	14.6
96/97	23,754,614	965,731,343	718,349,390	74.4	30.2
97/98	20,599,750	847,217,255	618,437,408	73.0	30.0
98/99	19,847,860	428,809,972	208,552,759	48.6	10.5
99/00	45,613,332	636,605,396	428,809,972	67.4	9.4
00/01	19,196,317	248,743,816	123,223,527	49.5	6.4
01-Jan 02	17,407,150	145,853,781	88,628,410	60.8	5.1

*Gross sales refer to the amount received by the society after statutory deductions and milling charges

** Calculated as (payment to members divided by Gross sales) x 100. The reciprocal gives the percentage retained by the society (society deductions)

Source: District Co-operative office, Murang'a

The highest rates of payment were realised in 1996/97 and 1997/98 when farmers were paid about Ksh 30 per kg of cherry. During this period the coffee prices were high following a shortfall in production in Brazil. Furthermore, co-operatives were working under tight guidelines that stipulated the levels of deductions under the SCIP II project. Since 1998 the producer share has been decreasing as well as the actual payment. This has mainly arisen from the falling coffee prices, escalating cost overheads at the co-operative level and SCIP II debt servicing obligations.

As discussed earlier, these high costs can also be attributed to low capacity utilisation, inefficiencies, poor governance, financial mismanagement and rent seeking behaviour that currently plagues most co-operatives. The high charges when combined with high performance risks in co-operatives can explain why smallholder farmers are shunning this formal marketing channel in favour of informal channel. This situation is unlikely to change unless deliberate steps are taken to streamline the operations and governance of co-operatives. Amendments of the current Co-operative Act and implementation of good governance policies are therefore much needed.

5.2.3 Coffee production costs and farm profits

Coffee production costs have escalated in the recent past mainly due to major increases in the cost of purchased farm inputs and the reducing coffee yields. Currency devaluation, inflation and inefficient input markets have been some of factors behind the increase in costs. Poor road infrastructure also has significantly contributed to the costs of inputs due to high transport costs. For example, the average prices of the common fertilisers used in coffee production have increased from Ksh 4 per kg in 1990 to Ksh 24 per kg in 2001 (see Table 8). This is an increase of 500% or annual increase of 50%. The resulting low and declining trends in fertiliser use have significantly depressed coffee yields. Given the situation, smallholder farmers have resulted to substituting fertilisers with manure. However the unavailability of adequate manure has limited the extent of this substitution.

In coffee production, disease and pest control is a major cost centre estimated to account for 30-35% of total variable costs. Coffee Berry Disease (CBD) and coffee leaf rust, which are the major coffee diseases, can cause crop loss of up to 80% if uncontrolled. However, the prices of fungicides used to control these diseases have also increased significantly in the last decade (see Table 9). Studies done by CRF have shown that, over 70% of smallholder farmers have abandoned the use of fungicides or use them sub-optimally, citing the high cost. In addition, there have been increased cases of substandard pesticides in the market whose use could even cause destruction of coffee trees. The long-term solution is for farmers to adopt disease resistant coffee varieties. One such variety, Ruiru 11, was released by CRF way back in 1985. However the high cost of adopting the variety, shortages in planting materials and lack of awareness has severely limited wide scale adoption of the variety among smallholder farmers.

Table 9: Trends in Agricultural wage, coffee picking rates, fungicide and fertiliser prices

	Fertiliser * Ksh/kg	Fungicide** Ksh/kg	Coffee picking rate Ksh/debe	Wage Rate Ksh/manday
1990	4.00	50.10	7.5	24.15
1991	4.00	59.15	10.0	29.65
1992	6.30	72.25	10.0	35.05
1993	7.75	82.25	10.0	45.05
1994	9.55	100.60	10.0	52.10
1995	11.75	118.75	15.0	62.55
1996	17.00	214.00	15.0	75.00
1997	17.00	263.00	20.0	80.30
1998	17.50	277.00	25.0	93.00
1999	18.00	280.00	25.0	100.00
2000	21.00	285.00	25.0	120.00
2001	24.00	295.00	25-30	120.00

Note: the prices are in nominal terms i.e. they have not been adjusted for inflation.

*Average CAN and compound fertiliser prices

** Average of Copper and organic fungicides prices

Source: CBS Statistical abstracts and CRF Economics section data

The cost of labour has also increased significantly during the market reform period. For example, the daily wage for casual labour has increased from Ksh 24 in 1990 to around Ksh 120 in 2001. Equally, the cost of picking coffee has increased from Ksh 10 in 1990 to the current rate of Ksh 25-30 per debe⁸. This increase in labour costs has occurred despite the high unemployment rates especially in rural areas. These wages are usually negotiated between Kenya plantations workers union (KPAU) and plantation owners, based on among other factors productivity and inflation⁹. Smallholder farmers are forced to pay similar wages as plantations in order to attract labourers during the peak (labour- shortage) periods. This has put most smallholder farmers; especially labour deficit households, at a disadvantage due to their low productivity as compared to the plantations. However, for labour surplus households, able to secure employment, the increase in wages may have enhanced incomes from off-farm employment.

The total effect of the input price trends has been to significantly increase the cost of coffee production and lower returns. Table 10 shows the average cost of production and gross margins over time while annex 7a and 7b shows the breakdown of costs per ha and their distribution, respectively.

During the period under review, coffee production costs almost tripled from Ksh 26,000 per tonne in 1990/91 to Ksh 66,000 in 2000/01. Smallholder coffee production is labour intensive with minimal use of purchased inputs. This makes labour the most important input accounting for about 51% of the total production cost (see annex 6b). The other major cost components are fertilisers (16%), manure (19%), fungicides (12%) and insecticides (2%).

The increases in costs of production when juxtaposed on the declining and low farm productivity, decline in coffee prices and enhanced price and performance risks have made returns to coffee production to dwindle in the recent past. The gross margin per tonne was highest in 1997/98. This was attributed to the mini-boom that was occasioned by a drought in Brazil. Since then, the gross margins have been on a declining trend and by 2000/01, a smallholder farmer could only make about Ksh 14,000 per tonne. In reality a farmer with half an acre under coffee (500 trees) could at best make only Ksh 1,900 (Table 10). If family labour is valued, then most farmers have been making heavy losses for the

⁸ A debe refers to a tin used to measure coffee cheery which is about 12-15kg

⁹ These negotiations have increased the real wages which were falling during the period the government used to fix the wages (Karanja, 2002)

Table 10: Cost of coffee production and realisation in smallholder farms

YEAR	Cost	Realization*	Gross margin**	Gross margin per kg of cherry***	Income form 500 tress ****
	Ksh per tonne of clean coffee			Ksh	
90/91	26,000	30,348	4,348	0.62	620
91/92	33,200	30,721	(2,479)	(0.35)	(350)
92/93	37,300	59,627	22,327	3.18	3,180
93/94	52,000	93,743	41,743	5.96	5,960
94/95	53,600	128,035	74,435	10.63	10,630
95/96	56,300	97,085	40,785	5.80	5,800
96/97	61,900	127,250	65,350	9.30	9,300
97/98	62,000	162,924	100,924	14.41	14,410
98/99	65,000	98,547	33,547	4.79	4,790
99/00	65,200	75,616	10,416	1.50	1,500
2000/1	66,000	79,560	13,560	1.90	1,900

Note all figures are in nominal terms i.e. not adjusted for inflation

* Realisation = Auction price x producer margin (see annex 5)

** Gross margin = realisation - cost. Note gross margin excludes the cost of family labour

*** 1 tonne of clean coffee = 7,000kg of cherry

**** Income based on an annual production of 1,000kg of cherry (2kg per tree x 500 trees)

Source: Cost based on CRF surveys, others based on author's calculations

Table 11: Estimated number of required coffee trees per household in Murang'a district

	Type of household		
	Poor	Medium	Rich
Income (Ksh/yr)	20,000 - 60,000	70,000 - 150,000	250,000 - 500,000
Mean income (Ksh/yr)	40,000	110,000	375,000
Crop income share	7.5%	7.5%	10%
Coffee income (Ksh/yr)	3,000	8,250	37,500
	Best price Scenario*		
Coffee price (Ksh/kg of cherry)	30	30	30
Coffee trees required	50	138	625
	Poor price scenario**		
Coffee price Ksh/kg of cherry	5.10	5.10	5.10
Coffee trees required	294	808	3,677
Current number of coffee trees	50-100	100-400	500-2,000

Notes. The income, crop income share and current number of coffee trees derived from SC (UK), 2000 Murang'a baseline report. In deriving the coffee income, it is assumed that coffee as the main crop in the areas accounts for almost 100% of the crop income share.

*Best case scenario based on the highest price paid to farmers in Murang'a during the last seven year period. The required number of trees refer to number of trees a farmer needs to meet the coffee income assuming an average yield of 2kg of cherry per tree.

** Worst case scenario based on the coffee prices paid to farmers in Murang'a in 2001. The rest of the assumptions hold.

last one-decade. This explains the coffee neglect and abject poverty in most coffee growing areas. Indeed, the gross margins per farm cannot buy enough food for a family leave alone paying fees for a child in secondary school. Indeed, based on household data collected during the Murang'a baseline study (SC(UK), 2002) it is estimated most farmers that the current number of coffee trees owned by households in the district can only enable farmers to derive between 7.5 % to 10% of their income only

when coffee prices exceed Ksh 30 per kg of cherry. As shown in Table 8, this level of prices has been realised only in two years in the last seven year period. With the current level of prices, it is estimated that the poor, medium and rich households will require to have at least 294, 808 and 3,677 coffee trees in order to derive between 7.5- 10% of their income from coffee (Table 11). These numbers of trees are way beyond what farmers currently own.

As a coping mechanism, most farmers have diversified from coffee to other farm enterprises such as dairy, horticulture and more so food crops. Others who are lucky enough have engaged in off-farm activities such as small scale trade and casual employment. As a result coffee has been neglected, inter-cropped with all manners of crops and in extreme cases uprooted. These farmer responses are rational, especially given the short- and medium-term gloomy prognosis of the coffee economy.

6.0 OTHER INITIATIVES TO SIMULATE COFFEE INDUSTRY

During the past one-decade, several initiatives have been made to support and promote the coffee industry in Kenya. Two of the most notable initiatives have been the Second Coffee Improvement Project (SCIP II) and Stabilisation of export (STABEX) funded projects.

6.1 Second Coffee Improvement Project (SCIP II)

SCIP II was negotiated and signed in October 1989 between the Government of Kenya (GoK) and the International Development Agency (IDA) of the World Bank. The project implementation started in August 1990 and ended in June 1998. The objective of the project was to increase the incomes of smallholder farmers and small/ medium coffee estates through increased production and improved coffee quality. It was also aimed at increasing foreign exchange earnings, create employment and strengthen institutional capacity in key participating agencies.

These objectives were to be achieved through provision of credit to finance seven components:

- 1) Improved payment system (IPS)
- 2) Cherry advance payment system (CAPS)
- 3) Farm input loans scheme (FILS)
- 4) Coffee factories development scheme (CFDS)
- 5) Training
- 6) Establishment of project co-ordination and Management unit (PCMU)
- 7) Institutional support to the implementing organisations

6.1.1 Improved coffee payment system (IPS)

Objectives

- ◆ To alleviate the problem of delayed payment for smallholder farmers
- ◆ To reduce coffee societies operating expenses thereby increasing farmers' payment rates

Under this component the societies were to operate two accounts, a members payment account (MPA) and society operating expenses account (SOEA). The MPA credited with coffee proceeds for payment to members, while SOEA was credited with funds for society operations. The proportion going to SOEA was to be reduced gradually from 30% to 20% or less of farmers' payments. By the end of the project in 1998, some 70 societies were rated as the best managed having achieved a member payment rate of 82%. Murang'a district coffee co-operatives achieved a pay out rate of 77% and were among the best managed (Table 12).

Table 12: Farmers payment rate in Murang'a district 1997/98

Society	Rate of payment (%)
Kiiru	82
New Weithaga	77
Kiriti	80
Kigetuini	66
Kamacharia	80
New Gatugi	75
Kahuria	80
Iyego	70
Ka nyenya-ini	79
New Mugoiri	75
New Murarandia	74
Rwaikamba	83
Average	77

Source: MoA, SCIP status report, April 1998

The project not only improved farmers' payments rates but also speeded payments. This was achieved through training of co-operative management committees on good management. This component had also a coffee society management award scheme which rewarded well-managed coffee societies. These incentives and achievements has not been followed up and has led to the current problems.

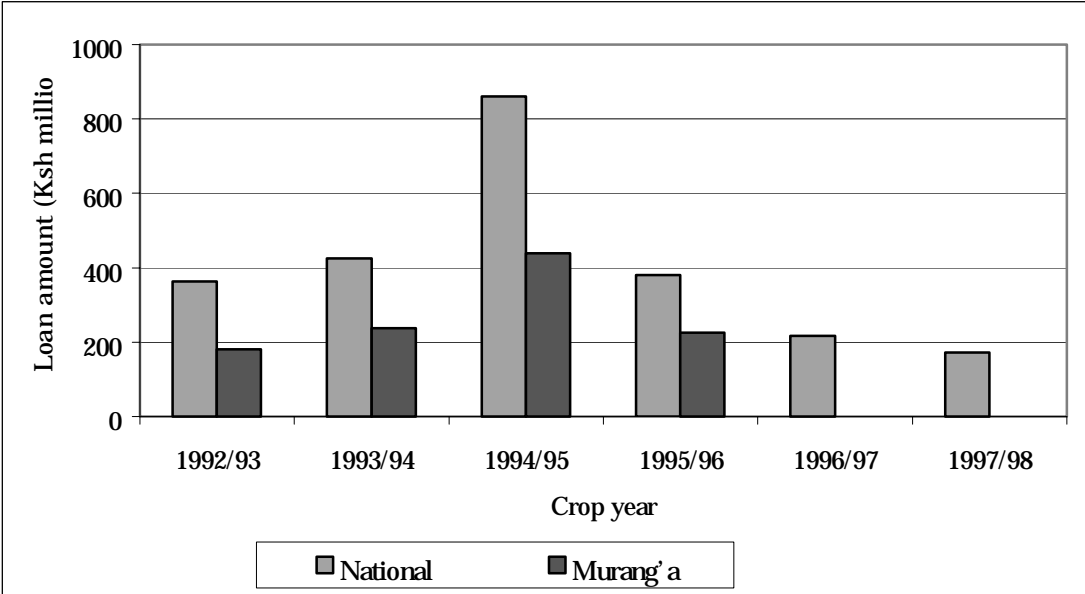
6.1.2 Cherry advance payment system (CAPS)

The objective was to provide smallholder farmers with cash advance during picking period for farm operations and other family needs. The rate of the advance was Ksh 1.50 per Kg of cherry delivered in 1991, which gradually improved to Ksh 5 per kg in 1998. The advance was given as a loan at consessional interest rate of around 12%. By 1997/98 a total of Ksh 2.8 billion has been disbursed. Of this total, coffee societies in Murang'a district had received Ksh 896 million by 1997/98. CAPS were popular with farmers as it eased their cash flow constraints. Although the funds were meant to create a revolving fund, the principal sum repayment by Co-operative Bank to GoK depleted the funds. As such the scheme was not sustainable without injection of new capital.

6.1.3 Farm Input loan scheme (FILS)

The objective was to provide a credit facility to smallholder farmers for procurements of fertilisers, chemicals and hand tools. The credit was administered by Co-operative bank at 1 interest rate of 15%, with a repayment period of 2 years that included one-year grace period. Disbursements of FILS started in July 1992 and by 1998 a total of Ksh 2.42 billion has been loaned to 204 societies in 16 coffee growing districts. 25 societies in Murang'a participated in the scheme and absorbed 47% (Ksh 1.128 billion) of the total amount. Figure 8 shows the amount disbursed over the project period.

Figure 8: FILS disbursements, 1992/93 to 1997/98



Source: MoA, SCIP status report, April 1998

This line of credit was crucial as it provided the much-needed input credit for enhancing production. However, due to the two-year repayment period, the revolving fund could not be sustained. The current unavailability of farm inputs is as a result of withdrawal of facilities such as FILS.

6.1.4 Coffee factories development scheme (CFDS)

The objective was to provide funds to coffee societies to develop and improve their coffee processing factories. Under the scheme societies could borrow to construct new factories, renovate, resite or electrify their factories. This component started in February 1994 and by 1997/98 tenders worth Ksh 706.4 million had been awarded. Table 13 shows the number of completed and on-going projects by the end of 1998.

Table 13: Status of CFDS projects by 1998

Type	National			Murang'a		
	Completed	Ongoing	Total	Completed	Ongoing	Total
New factory	17	6	23	6	0	6
Renovation	54	13	67	2	1	3
Resiting	8	0	8	0	0	0
Electrification	126	25	151	1	0	1
Total	205	44	249	7	1	10

Ongoing by end of 1998

Source: MoA, SCIP Status report.

CFDS component remains one of the most contested project under SCIP. The justification of increasing processing capacity at a time when coffee production was declining is to say the least non-existent. Furthermore, factories built under this component were costly with an average value of Ksh13.6 million per factory. For instance, the 6 new factories and 3 renovations done in Murang'a costed a total of Ksh 82.75 million, an average of Ksh 9.2 per factory. Most societies management committees happy with the CFDS component as it allowed them to secure economic rents and kickbacks. It is no wonder that a big proportion of outstanding debts in the coffee co-operatives (estimated at around 4-6 billion) is associated with CFDS.

6.1.5 Training

The training was aimed at building capacity in the industry. Under this component a modern training facility was put up at CRF at a cost of Ksh 37.6 million. Another 61 million was used to train farmers, society committee members, Ministry extension staff, factory, coffee nursery and society managers.

6.2 Stabilization of Export (STABEX)

Stabex - the compensatory finance scheme to stabilise export earnings - started operations in 1975 with the entry into force of the first Lomé Convention between the European Community and the ACP countries. The system is designed to remedy the harmful effects of instability of export earnings by smoothing the negative effects of export earning shortfalls. Instability of export earnings has to be considered as one of the main obstacles to sustainable development because it causes disruptions in the investment planning process and has negative effects on the productivity of capital. It also entails problems of the balance of payments and can lead to increasing internal as well as external indebtedness. In addition, instability of earnings strongly affects farmers and their living conditions.

The shortfall of export earnings on which a transfer is made, is based is the gross sum of the shortfalls in the individual exports of different agricultural products (commodity by commodity) - now counting 50 products and product groups. The financial endowment of the system has increased considerably over time. Under the first Lomé Convention, the system worked smoothly. But since the 1980s, insufficient resources became a serious problem: In 1980, 1981, 1987 - 1989 the system ran out of resources and Stabex was unable to meet eligible claims. With the persistence of low world market prices for coffee, cocoa, oil seeds, cotton and tea throughout the early 1990s, the financial crisis of Stabex continued. During the application years 1990, 1991 and 1992 only 40% and in 1993 60% of eligible transfer claims could be covered.

Prior to Lomé IV, the Stabex system had very low conditionalities concerning the use of funds. However, Lomé IV made substantial changes. All transfers had to be used in accordance with a "framework of mutual obligations" (FMO) established by the ACP state and the Commission. Transfers are devoted, in accordance with a FMO, "either to the sector, interpreted in the widest possible sense, that recorded the loss of export earnings and be used there for the benefit of economic operators adversely affected by this loss, or, where appropriate, to diversification, either for use in other appropriate productive sectors in principle agricultural, or for the processing of agricultural products. These conditions have been upheld by the current agreement (Cotonou agreement).

Kenya qualified for STABEX funds in 1990 and 1991 arising from shortfalls in coffee exports. The transfer of STABEX funds to coffee in 1992 and 1993 was about Ksh. 9.3 billion. The coffee sector has been allocated funds for rural electrification of coffee factories (Ksh. 375 million) SCIP II Programme fund (Ksh. 660 million) rural electrification of factories phase II (Ksh. 500 million), Tissue Culture Laboratory at CRF (Ksh. 130 million) and rehabilitation of roads in coffee and tea areas (Ksh. 1 billion). Nevertheless, rehabilitation of roads in coffee growing area and electrification of factories phase II failed to get off the ground for various technical reasons.

The SCIP component covered the CAPs, FILS and the CFDS. The distribution of the funds among the three components is as summarised in Table 14. The STABEX funds were supposed to create a revolving fund at the Co-operative Bank but according to the bank the funds have been exhausted due to non-repayments by coffee societies arising from the current financial difficulties. Indeed, the principal plus interest owed to Co-operative bank is currently estimated at around Ksh 1.2 billion. Co-operatives in Murang'a also benefited from these funds under the SCIP project as indicated earlier.

Table 14: STABEX funds allocated to SCIP II project, 1998

Credit line	Allocation	Interest	Total amount of revolving fund
	Ksh Million		
CAPs	190	4.7	194.7
FILS	425	10.5	435.5
CFDS	35	0.8	35.8
Equipping CRF training facility	10	-	0
Total	650	13.7	666

In 2001, another Ksh 1 billion was given to Co-operative Bank for fast track lending to the coffee sub-sector. Both smallholder and large-scale farmers were to benefit from the funds. The plantations were allocated Ksh 378 million as working capital and farm inputs. The co-operatives were allocated Ksh 622 million for farm inputs and cherry advances. No amount was allocated to co-operatives for working capital. Under the scheme, the Co-operative Bank pays input suppliers directly and farmer's payment accounts in case of CAPs. As such co-operative officials do not handle the loan amounts. The disbursements of these funds were however interrupted when the new marketing agents come into place, as Co-operative Bank was not assured of repayment. The loans resumed in July 2002 after the ironing out of the technical problems. Although the intention of giving farm inputs was good, interviews with co-operative officials in Murang'a indicate that most farmers took the inputs and sold them to meet their pressing cash requirement. Thus, the intended purpose of improving coffee production might not be realised. It also goes to show that any credit project intended to improve coffee production need to take care of both productive inputs as well as components geared towards easing their cash-flow constraints.

Some of the STABEX funds have also been allocated to other sectors of the economy such as Tourism. However, much of the funds allocated have not yet been disbursed. The use of STABEX funds has thus far been not been satisfactory, as a large portion of the funds remains unutilised. One of the reasons is due to slow response by GoK in coming up with the necessary documentation to enable the EU mission to prepare the framework of mutual obligations (FMO). The government through the Ministry of agriculture has stepped up the process of preparing the FMOs and anticipates that more funds will be realised to the coffee industry from the STABEX funds. Nevertheless, the Ministry of Finance still

insists that STABEX funds can be allocated to other sectors of the economy. This has created anxiety on the future utilisation of the funds.

6.3 Indebtedness of Co-operative societies

Despite the contributions these initiatives have made to the smallholder coffee sub-sector, they have also had a major negative impact. This is evident in the high level of indebtedness of the co-operative societies. In total coffee co-operatives owe the Co-operative bank around Ksh 4.2 billion arising from SCIP II loans of which around Ksh 550 million is termed as bad debts. In addition co-operatives owe another Ksh 1.1 billion arising from SCIP I project, debts that date back to 1989.

Murang'a coffee co-operatives owe a total of Ksh 782.2 million as shown in Table 15. Most of these loans have arisen from SCIP II project and STABEX components. These loans significantly increase the deductions made by the societies leading to low pay-out to farmers. Indeed, in some instances, farmers do not receive any money as the proceeds from coffee sales goes to servicing the debts. Any strategy to improve coffee production and marketing should therefore address this issue. In September 2002 the last parliament passed a private members motion urging the government to write off the debts owed by coffee co-operative societies. However, just like earlier initiatives to deal with the issue in the past, the government has not acted on the matter even as other debts owed to Agricultural Finance Corporation (AFC) were being written off.

Table 15: Amount of loans owed by Coffee Co-operatives as at January 2002.

	Name of Society	Amount (Ksh.)
1	Kahuhia Fcs Ltd	46,893,800
2	New Mugoiri (Under Liquidation)	2,257,338
3	Kigetuni Fcs	508,341
4	Kamacharia Fcs	123,176,183
5	Mbari-Kianjo Fcs Ltd	10,863,002
6	Rwaikamba Fcs	122,127,257
7	New Kiriti Fcs Ltd	40,968,001
8	Kiriti (Under Liquidation)	1,533,522
9	New Weithaga Fcs	106,154,020
10	Iyego Fcs Ltd	91,635,140
11	Kangunu Fcs Ltd	26,712,969
12	Kiawanduma	4,899,979
13	New Gatari Fcs	57,972,402
14	Mirwagi Fcs	4,053,673
15	Mikaya Fcs	49,093,304
16	New Kiboi	1,300,000
17	Kanyenyaini Fcs	12,620,721
18	Kiru Fcs	23,280,006
19	Wamugoiri Fcs	34,643,628
20	New Murarandia Fcs	21,557,666
Total		782,250,952

Source: District co-operative office, Murang'a

7.0 OPPORTUNITIES AND STRATEGIES TO ENHANCE COFFEE FARMER'S INCOME (RECOMEDATIONS)

Given the foregoing prognosis of both the international and domestic coffee economy, which strategies can be applied to stimulate coffee industry in the country and smallholder sub-sector in particular? In this section policies and strategies that could improve coffee production are discussed. In exploring these strategies three major assumptions are made

- ◆ From a macro-economic (national) and micro-economic (household) point of view, coffee remains an important commodity both in terms of incomes and as a source of livelihood for farmers, such as the ones in Murang'a district. As such, the government and coffee farmers would be interested in reviving the coffee industry.
- ◆ Although assumption (i) holds true, the realities of the prevailing international and domestic coffee economy implies that, the short term interest in reviving coffee industry are best served by addressing critical constraints that will enable farmers to cope with the current situation.
- ◆ The medium and long-term prospects of reviving the coffee industry are best served by addressing institutional, technological, marketing strategy as well as diversification issues. The objectives being to lower cost of production and enhance returns and incomes.

7.1 Short term household coping strategies

7.1.1 Food security

Food security both at national and at household level is a critical issue. As the household baseline survey done by SC (UK) in Murang'a district indicates, most households in the district are currently meeting their minimum annual calorific needs, but food purchases contribute 50 - 75% of these food needs. With the low incomes from coffee, households may not be able to purchase food from the market to meet their requirements. Furthermore, coffee is used as an anchor crop through which farmers are able to secure inputs, such as fertilisers, for enhancing cash and food production. The low coffee payments therefore mean that even own- food production is lowered. There is therefore a need to address issues of food security if malnutrition and related problems are to be avoided in coffee growing zones.

The viable strategy is to enhance food production by addressing issues related to access and costs of farm inputs, and food production technologies. Currently, there are no direct taxes levied on most agricultural inputs but the price of farm inputs remain high due to structural constraints in the input delivery chain, high transport costs among others. As a matter of urgency the government and other agencies should therefore come up with a strategy to lower costs of farm inputs. Such a strategy should abolish the taxes levied on inputs packaging materials, lowering of VAT and other indirect taxes on farm inputs, regulatory mechanisms to ensure quality standards and weights as well as streamlining the delivery of inputs. Food production technologies that can increase food production exist but are in most cases not available to smallholder and other farmers. One such technology is availability of hybrid and other types of seeds. Availability of extension and advisory services from government and other non-governmental organisations is also another input needed to boost food production.

7.1.2 Alternative farm enterprises

Given the poor returns from coffee production, farmers are investing in other farm enterprises. Dairy production, cultivation of horticultural crops (vegetables and fruits), honey production and poultry keeping were identified as the alternative farm enterprises in Murang'a district (SC, (UK), 2002). Studies done by Tegemeo Institute indicate that most of these alternative enterprises are faced by various technical, institutional and economic constraints, which hinder their expansion (Karanja, 2002b,

Kamau and Sisule, 2000). Due to these constraints, the profitability of these enterprises remains low and may not offer credible alternative to coffee.

Table 16 summarizes revenues, costs and gross-margins of various crop and livestock enterprises. Results from field surveys conducted by Tegemeo Institute in September 2002 indicate that food crops (maize and beans) have low profitability in Central and Eastern provinces. The gross margin is between Ksh 3,600 to 7,250 per acre per year. Low input use leading to low yields of about 7-10 bags per acre remains the major constraint in maize production. Low maize yields are also attributed to widespread use of un-certified seeds (Kamau, 2002). Although maize and beans are mainly grown as a subsistence crop, they occupy sizeable portion of smallholder farms and their performance have grave implications on households food security.

Table 16: Comparison of costs and gross margin across farm enterprises, 2000/01

Crop District	Cabbage	Irish Potato	Tomatoes	Maize/bean	Maize	Dairy-Zero		
	Nyeri	Kiambu	Nakuru	Nyeri	Embu	Kiambu	Nyeri	
Area	1	1	1	1	1	area	1.0	2
No. per year	2	2	2	2	2	Total cows	4	5
						milking cows	2	2
Yield (grade1)	5,000	20	50	5	10	milk(litres)	4,895	4,616
Yield (grade2)	2,500		60	2		other revenue	27,750.0	15,523
Yield (grade3)			30					
Yield (grade4)			10					
Units	number	90-kg bag	crate(60-kg)	90-kg bag	90-kg bag	litre	litre	
Price(grade1)	5	700	800	1,200	800	17	15	
Price(grade2)	2		600	3,200				
Price(grade4)			400					
Price(grade3)			200					
Total revenue	30,000	14,000	90,000	12,400	8,000	110,965	84,763	
Total Cost	26,596	11,160	39,424	8,775	6,190	72,838	72,336	
Gross Margin/Season	3,404	2,840	50,577	3,625	1,810	38,127	12,427	
Gross Margin/Year	6,808	5,680	101,153	7,250	3,620	38,127	12,427	

Sources: Kamau (2001) for cabbage, Irish potato and tomatoes budgets; Karanja (2002b) for dairy budgets.

The other alternative and widespread enterprise is horticultural production. As shown in Table 16, the gross margins of horticultural crops vary widely depending on the value of the crop and yields. Cabbages and Irish potatoes have poor gross margins of between Ksh 2,800 and 3,400 per acre per year. These types of crops are grown under rain-fed system due to un-availability of irrigation in most smallholder zones. Their supply and pricing therefore follow closely the weather patterns. Furthermore, these crops are grown mainly for home consumption and for the domestic market. Tomatoes offer a high return especially if grown under irrigation. However, the crop requires high levels of input use and it is also a high-risk crop.

Other important crops grown by farmers in Murang'a and in Central Province are, Macadamia nut, Avocados and bananas. These crops are perennial in nature and are mostly grown with minimal use of purchased inputs such as fertilizers. Macadamia nuts are sold to processors for further processing of the nut. Kenya Nut Ltd. located at Thika town (about 40km from Murang'a town) is the main buyer and processor of macadamia nuts. Currently the company buys macadamia nuts at a price ranging from Ksh 7 to 14 per kg, depending on the grade. However, as most smallholder farmers have limited quantities of the nut, they have to sell the same to local brokers (traders) who then sell to the company. In the end the farmer may receive around Ksh 5 per kg of the nut. Most farmers have 10 to 20 trees that cannot give significant income per year. Furthermore, most farmers have the low yielding varieties, as most cannot afford the cost of the high yielding varieties, which cost around Ksh 300 per seedling. Avocados are also sold to local traders who in turn transport them to Nairobi and other towns for local consumption

and a limited quantity for export. Similar to macadamia, farmers have a few trees that give limited income. Furthermore, due to their perishable nature, avocados tend to flood the market during harvest time thereby fetching Ksh 1 to 2 per fruit. Banana production is more widespread in Murang'a districts but marketing continues to be the major problem. Apart from forming a part of the diet, bananas are sold to middlemen who transport them to other towns. Farmers also ripen their bananas for sale. A whole raw bunch of bananas fetches around Ksh 80 at farm level while ripe bananas are sold for between Ksh 1 – 1.50 per finger. Low yields and black rot diseases are the other constraints.

Smallholder farmers can also produce horticultural crops for export. One such crop is French beans. As shown in Table 17, the gross margin per acre ranges from Ksh 39,000 in Kirinyaga district to Ksh 24,700 in Maragua district. Despite the attractions offered by export horticulture, the smallholder horticultural production and sub-sector in general, is besieged by a number of local and international challenges. These challenges include; unreliable markets, high costs in pre and post harvest operations, unreliable supplies of the right quantity and quality of produce, poor market intelligence, an ineffective research and extension service, poor infrastructure and high freight charges (Kamau and Sisule, 2000).

Table 17: Comparison of French beans costs and gross margins per acre, 2000

Area	Mwea	Ndia	Maragua
District	Kirinyaga	Kirinyaga	Maragua
Total output(Kg)	2,601	2,775	3,353
Average Price (ksh.)	32.8	27.8	32.2
Total Revenue(Ksh)	85,342	77,170	107,827
Labour			
Land Preparation	2,893	3,298	5,878
Weeding & fert appl.	3,736	3,344	6,759
Pesticide appl.	1,748	2,877	495
Irrigation	3,155	4,976	22,876
Grading	12,827	12,886	31,263
Total Labour Cost	24,359	27,381	67,270
Inputs			
Seed	6,613	4,782	5,792
Fertiliser	3,887	4,671	4,283
Chemical	6,497	13,867	5,768
Fuel	4,539	9,020	-
Total Input Costs	21,535	32,340	15,843
Total cost	45,894	59,721	83,114
Net Income (GM)	39,447	17,449	24,714
Cost per kg	17.65	21.52	24.79

Source: Kamau and Sisule (2000) p.15

Today, Kenyan horticultural products are faced with stiff competition from new entrants in the market who are able to offer the same or superior quality at relatively lower prices, non-tariff barriers imposed by the main markets in form of Maximum Residue Levels (MRLs) and workers welfare among others. These new conditions have been imposed by our major market, the EU and have been accepted by the World Trade Organization (WTO). All fresh produce entering the EU has to be at Zero Analytical Levels for chemical residues. In response to this new development, government institutions and buyer associations have individually developed codes of practice (COP) to be followed in production of all produce destined for this market. The biggest constraint however, is in the enforcement of the COP and the prohibitive costs that go hand in hand with this new development. Seventy percent of vegetable and fruit producers in Kenya are small scale who are scattered throughout the republic. For these farmers to adhere to the COP, they need a lot of support in terms of training, a reliable supply of recommended

inputs and a sure market. The public institutions have been unable to provide adequate support, leaving the private sector with the enormous and expensive task of ensuring that farmers adhere to the regulations. This is an expensive exercise in terms of resources required, time and transaction costs. The risk borne by private companies in such a competitive environment is large. The weak regulatory system has done little to assure exporters that they will reap all the short-term benefits emanating from their efforts. Horticultural crops development authority (HCDA) has developed a code of conduct, which all players should adhere to, unfortunately, these rules are only written on paper but hardly followed in practice. For example, after company A has invested in empowering their contracted farmers with technical information and sometimes even credit, company B can go in and purchase the product without any repercussions. This is a disincentive to those willing to invest in educating and monitoring the production practices of farmers. Buyers are shifting their business interests to larger farms who have the ability to adhere to export market regulations and this of course excludes the small holder farms. It has also been noted that the problem of non-adherence to the COP is a problem in farms producing for spot market sales where there is no follow up or any enforcement. This should be a major concern to all, especially when the produce bears the label of 'Produce of Kenya'.

Dairy production is the other alternative farm enterprise, which smallholder farmers can rely on. Farm budgets done by Tegemeo institute in April-May, 2002 indicate that gross margin from dairy production can range from as low as Ksh12, 400 in Nyeri district to Ksh 38,000 in Kiambu district (see Table 16). Although there is minimal differences in technologies used by smallholder farmers, the differences in dairy production is much dependent on proximity to a major urban center, such as Nairobi. Due to its perishable nature, milk marketing is highly dependent on good road infrastructure. Apart from milk, dairy animals also provide manure, other marketed products such as calves and cullings as well as other intangible benefits such as insurance and status symbol. This makes dairy production an attractive enterprise to most smallholder farmers.

Since the liberalisation of the dairy industry in 1992, new institutional arrangements in milk collection, processing and marketing have emerged. At the farm gate level, informal marketing channels (hawking) dominate. These channels include hawkers, brokers, self-help groups as well as neighbours and business establishments like hotels. In total, the informal market channel is estimated to control 60% of the total marketed milk. Dairy co-operatives, which used to be an integral part of the formal milk collection and marketing, have been relegated to buyers of last resort. Inasmuch as these new institutional arrangements in milk marketing have offered expanded business opportunities and enhanced competition they do offer major challenges to the growth and development of the dairy industry. Although smallholder dairy production contribute over 56% and 70% of total and marketed milk production, respectively the productivity per animal in these farms remains low (Karanja, 2002b). Erratic payments, low farm gate prices and low sales as a proportion of total production especially evening milk, unreliable market outlets and limited access to veterinary and A.I services are all factors that negatively affect productivity and performance of the dairy sub-sector. However, the potential for increasing dairy productivity in the country and especially the smallholder dairy remains great.

The current legal framework ushered in by the new coffee Act, 2002 has removed previous inhibitions on coffee uprooting, planting and inter-cropping. This is a positive development that can enable farmers to diversify and cope with the low prices. However, the foregoing evaluation indicated that, although there are great potential for smallholder coffee farmers to diversify, this potential is limited by various institutional and economic factors. These factors need to be addressed before any meaningful diversification can take place.

7.2 Medium term to long term strategies

Apart from diversification strategies, there is also need for improving the smallholder coffee economy both on the medium and long term. These policies and strategies have to focus on:

- improving efficiency and performance producer organisations (co-operatives and self help groups)
- productivity and cost of coffee production
- innovative coffee marketing in line with global consumption trends

- promotion of domestic consumption and value addition
- price stabilisation/ guarantee scheme
- Regulatory and enabling environment.

7.2.1 Efficiency and performance of producer organisations

The efficiency and performance of producer organisations have a major impact on farmers' access to credit, inputs and the level of returns. As such there is need to address problems such as poor governance, huge debts and structural problems that plague coffee co-operatives. The co-operative Act needs to re-look into with a view of amending those sections that can improve the governance, transparency, and accountability of co-operatives management. For instance, although a performance bond to be signed by elected society officials is alluded to in the Act and the accompanying by-laws, it remains to be implemented despite the rent seeking behaviour prevalent in co-operatives. Co-operatives also need to be de-politicised and be seen as economic entities. Furthermore, the need for training of society officials cannot be over-emphasised. Awareness campaign to sensitise members on their rights and obligations are also equally necessary.

The splits that have been witnessed in the recent past in coffee co-operatives in the country and Murang'a district in particular do not argue well to the long-term interest of the industry. They diminish economies of scale while weakening the capital base of co-operatives leading to escalation of costs and limitations of service delivery. Policies and strategies that encourage amalgamation of co-operatives to bigger economical units are therefore required.

Debts owed by coffee co-operatives continue to be a major problem that needs attention. Although the will to repay these loans still exists, the prevailing coffee economics since 1989 has made repayment almost impossible. Whatever little money comes from coffee proceeds have gone towards servicing the debts, leaving farmers with no income. Any strategy towards the revival of the coffee industry will therefore have to address itself to these debts either by writing them off, offer a moratorium or reschedule them. This can be treated as a developmental issue.

7.2.2 Productivity and cost of production

In order for coffee to remain as viable farm enterprise and become competitive, the twin issue of farm productivity and cost of production has to be addressed. Although production technologies, such as high yielding coffee varieties, fertilisers-use regimes and diseases and pest control schedules, are well researched and documented, their adoption by smallholder farmers remain low due to their costs. All remaining duties and taxes on these inputs should be abolished. The inputs should be treated as raw materials and accorded the same treatment as industrial raw materials. Furthermore, credit schemes to enable smallholder farmers to acquire the inputs should be also a priority. Such credit can be channelled through reformed producer organisation. This will build upon the capacity created through SCIP II and STABEX funded projects.

Adoption of diseases resistant varieties, such as Ruiru 11, should be supported as a long-term measure to lower production costs. Already, a tissue culture facility is being put up at CRF using STABEX funds to ease the constraints in supply of the variety. However, improving the supply of planting material is not enough, the initiative need to be backed by availability of credit to finance farm development and investment. Such a credit facility is currently lacking. The proposed coffee development fund is one avenue through which such a facility can be created. The private sector should be encouraged to play a more significant in provision of extension and advisory services to compliment the dwindling services from the public sector.

It is also recommended that given the current level of coffee prices, farmers in Murang'a and elsewhere in the country will require at least 300–4,000 coffee trees to be able to derive at least 7.5% to 10% of their household incomes from coffee. This number of trees is almost double the number currently owned by smallholder farmers in Murang'a district. As such there is need to promote policies that discourage sub-division of coffee gardens to uneconomical units.

7.2.3 Innovative coffee marketing strategy

Currently, coffee production and marketing in Kenya is geared towards the general global market. This market as indicated earlier is suffering from oversupply and low coffee quality. The niche markets are at the same time growing and offering premiums for good quality coffee. Furthermore coffees sold in some of the niche markets such as shade and organic coffee offer added advantages to smallholder farmers with small farm sizes as they encourage multi-cropping systems. Coffee farmers in Kenya and in particular smallholder farmers produce high quality coffee that qualifies to enter these emerging niche markets. Nevertheless, Kenya as a country lacks a comprehensive coffee production and marketing strategy that is geared towards these markets. Since 2000, there has been an attempt to promote smallholder coffee production for these niche markets through an initiative of Eastern Africa Fine Coffees Association (EAFCA). However, the initiative is very limited in scope as it covers very limited number of Co-operatives in Central Province. Through the initiative an annual competition is held among the participating co-operatives with the co-operative producing the best quality coffee being given an award. Coffee from the participating co-operatives is in turn given preference by coffee buyers who target the speciality markets in USA and EU.

The cost of certification remains one of the major constraints in promotion and marketing of sustainable coffees. Certification from an internationally accredited body such as Organic Crop Improvement Association (OCIA) can cost around US \$ 350 per farm (Sorby, 2002). This kind of cost is beyond most individual smallholder farmers in Kenya. The cost can however be reduced significantly if farmers come together as a group or through their co-operative. The ICO is currently encouraging strengthening of national certification systems and increase in co-operation between local inspection bodies and international inspection and certification agencies.

Case studies in Mexico and Guatemala indicate that local inspection and certification can be achieved quite easily with good results. Farmer organisations in Mexico have established certification departments which function as permanent monitoring system backed up by surprise inspections from international bodies. In Guatemala, a project is being used to subsidise certification at the level of 70% during the first year. The second year, farmer organisations paid for 30% of the costs while environmental organisations paid the rest. After this farmer organisation took full responsibility over the cost of certification, or continue to apply for support from environmental organisations (Sorby, 2002).

For some other niche markets, such as Fair Trade, the certification is free since the importers and roasters have to pay a licence fee to work with Fair trade products. This fee is used to cover the cost of certification. However, producers have to adhere to the seven principles of Fair Trade ranging from fair wages, consumer education and public accountability.

7.2.4 Promotion of domestic consumption and value addition

As highlighted in section 3.2, Kenya's domestic coffee consumption is very low estimated at 50,000 bags equivalent to 2-5% of the national production. This is attributed to consumer preferences based on the tea drinking culture introduced by the British in the colonial days. Nevertheless very little effort has been made to change this culture by promoting domestic coffee consumption. Some coffee lots continue to be sold at US\$ 10 per bag (20 US cents per kg) at the Nairobi auction, a price that cannot even pay for milling charges leave alone the production and other processing costs. The same bag of coffee would definitely fetch more money if roasted and sold locally. Kenya has the added advantage of having a well-developed tourist sector that can be used as a ready market for Kenyan coffee. It is therefore apparent that Kenya will need a comprehensive strategy to promote domestic coffee consumption. Kenya has a lot to learn from Ethiopia, where domestic coffee consumption absorbs about over 1.6 million bags (50% of production). This high level of consumption has been achieved through a promotion strategy that offers various brands made available in social places.

Increasing local coffee consumption will also enhance local processing capacity that can be utilised for value addition. Eventually, the country should be able to export finished coffee products mainly in the COMESA region.

7.2.5 Price stabilisation/ guarantee scheme

Yearly and seasonal variation in producer coffee prices increases the price risks faced by farmers. The price variations adversely affect decision making as far as production, income and expenditure schedules. There is therefore a strong case for an intervention to create mechanisms that can not only stabilise prices but also give a minimum price guarantee to farmers. As indicated earlier, market based mechanism for price stabilisation is being promoted by the ITF and other international agencies. The Kenyan initiative lags behind and there are little effort being made to popularise the initiative among farmers and other stakeholders.

7.2.6 Regulatory and enabling environment

For most of these policies and strategies to be effective, the right regulatory and other enabling environments. This has been lacking in the past. The CBK has been too much involved with coffee marketing thereby paying little attention to regulatory matters. It is hoped that this will change for the better with the new coffee Act, and new government.

8. PERFORMANCE INDICATORS

Table 17 summarises the various indicators that can be used to monitor and demonstrate change in marketing opportunities for coffee farmers in Murang'a district. The monitoring mechanisms are also indicated.

Table 17: Monitoring indicators and monitoring mechanisms

Indicator	Its importance	Monitoring mechanism
New York coffee future prices (US cents/lb.)	A good indicator of arabica coffee prices world-wide. Used as a reference for pricing Kenya coffee. Can be used to predict prices as they are given many months in advance.	Easy to monitor through the internet
Nairobi coffee auction prices (US \$/50kg bag)	Indicates the expected price at the farm level.	Easy to monitor through published auction results by CBK and Marketing agents
Proportion of coffee charges made by co-operatives in Murang'a district and actual payment per kg of cheery	This is the main charge made along the marketing chain and has therefore major impact on prices received at farm level and hence incomes	Can be monitored by selecting a few representative co-operatives in the district. The district Co-operative office can greatly assist.
Coffee production and projections in Murang'a district	To indicate changes in volumes which can be used to arrive at the total income from coffee.	Can be based on CBK production and projections estimates. MOA estimates Production figures from one or two co-operatives.
Maize prices (Ksh/bag) at Murang'a town, Kangema	To indicate the cost of purchased food.	Monthly visits to these markets
Milk prices (Ksh/ltr) offered by processors and informal market traders in selected locations in the district	To indicate income levels from the most important alternative source of farm income.	Monthly visits to the selected market centres.
School fees paid per student in secondary schools	To indicate expenditure in school fees which is a major item.	A sample of the main schools in the district to be made. Visit to the selected schools, three times a year to collect fees structure
School drop-out rate	To indicate the number of children in primary and secondary schools dropping out of schools due to lack of schools fees.	A sample of primary and secondary schools in the district. A visit twice a year to collect information. Records kept by District Education officers can also be used.

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10. ANNEXES

ANNEX 1: Terms of Reference

1. Examine the trends in coffee production, marketing and returns to farmers in Kenya over the last ten years
2. Analyse the impact that specific international trade and marketing agreements as well as domestic policies and regulation had on the above trends.
3. Examine the reality of coffee marketing and determine the proportion of final commodity price which reaches the farmer in Murang'a as compared to the commitment stipulated by government policy.
4. Outline and analyse the Coffee Act of Kenya which is intended to revive the domestic coffee industry and in particular:
 - Determine what necessitated the new regulations
 - Consider what changes will result from the Act in relation to production, marketing and direct income to farmers
 - Why does coffee require greater regulation than other internationally traded commodities like tea and sugar and
 - Who are the key actors in implementation of the Act and what has so far been achieved?
5. Examine and analyse other initiatives to stimulate the coffee industry which have been supported by international donors (e.g. STABEX) and consider their relevance to coffee farmers in Murang'a.
6. Provide recommendations of policies and strategies that would stimulate the coffee industry in Kenya and in particular provide maximum returns to farmers such as those included in the earlier study in Murang'a. Make recommendations about the best options for these farmers in the future, is it to maintain investment or reinvest in coffee or consider investing in direct cash crops.
7. Identify monitoring indicators that demonstrate a change in the marketing opportunities for coffee farmers in Murang'a and advice how these indicators can be monitored over a period of three years.

ANNEX 2: List of people and institutions visited

Name	Position	Organisation
Mr Ndiru	Deputy Director of Agriculture (Crops)	MOALRD
Mr Kimani	Senior agricultural officer (coffee/stabex)	MOALRD
Mrs Dorcas W. Rigathi	Senior Finance officer (co-operatives)	Co-operative bank
Mrs Easter Muiruri	Senior co-operative officer	MOARLD- Murang'a
Mr Gitonga	Head Economics Dept	CRF
Mr P.L Mugambi	Marketing Executive	CBK
Mr Nyaga	Accountant	KPCU
Mr Elius Muiruri	Secretary manager	New Kiriti Farmers CS
John Irungu	Clerk	Rwaikamba Farmers CS
Annington Ngubu	Secretary Manager	Iyego FCS
Mr Irungu	Secretary Manager	Kiawanduma FCS
Mr Hiram Kanguru	Secretary Manager	Kanguno FCS

ANNEX 3: Per capita disappearance (consumption) in Coffee importing countries calendar years 1995 to 2000

	1995	1996	1997	1998	1999	2000
			Kilograms			
TOTAL	4.51	4.64	4.59	4.62	4.69	4.51
USA 1/	3.98	4.10	4.00	4.14	4.24	4.07
European Community	5.33	5.57	5.56	5.51	5.52	5.24
Austria	7.21	7.91	8.06	8.04	8.19	5.46
Belgium/Luxembourg	6.39	6.38	5.69	7.53	5.33	3.76
Denmark	8.70	9.91	8.97	9.57	9.56	8.58
Finland	8.62	10.56	11.00	11.71	11.37	9.88
France	5.48	5.69	5.68	5.39	5.52	5.44
Germany	7.37	7.16	7.22	7.01	7.46	6.73
Greece	2.20	4.19	4.31	3.87	4.06	4.49
Ireland	1.78	1.45	1.59	1.49	2.16	1.33
Italy	4.86	4.95	5.08	5.16	5.16	5.40
Netherlands	8.90	9.84	9.19	7.56	5.71	6.74
Portugal	3.38	3.97	3.85	4.08	4.70	4.36
Spain	4.21	4.49	4.63	4.68	5.15	4.65
Sweden	8.17	8.78	8.46	8.47	8.70	8.00
United Kingdom	2.25	2.43	2.46	2.62	2.30	2.42
Other importing Members	3.33	3.21	3.16	3.22	3.36	3.45
Cyprus	3.53	4.14	3.24	3.92	4.15	5.23
Fiji	0.30	0.15	0.15	0.15	0.22	0.15
Japan	2.98	2.83	2.90	2.91	3.01	3.17
Norway	9.04	9.77	9.18	9.52	10.56	8.85
Singapore 2/						
Switzerland	7.97	7.82	6.03	6.84	7.26	6.95

The data contained in this table are derived from the disappearance on importing Member countries and information on population

1/ Bases on estimates of civilian population by the United States Department of commerce

2/ Re-exports exceed imports in these years

Source: ICO Coffee Statistics

Annex 4: Countries of origin for sustainable coffee

Country/region	Type of coffee		
	Organic	Fair Trade	Shade
Mexico	38.4%	27.4%	27.8%
Central America	58.0	53.0	59.4
Costa Rica	31.4	30.4	32.0
El Salvador	8.1	8.3	8.7
Guatemala	41.1	33.7	39.6
Nicaragua	14.4	13.9	16.4
Others	3.3	3.7	5.7
South America	49.5	45.1	37.4
Brazil	10.8	14.1	8.0
Colombia	22.2	27.2	20.7
Peru	29.3	17.4	16.4
Others	4.1	4.3	3.3
Asia	25.4	15.8	15.9
Indonesia	24.0	15.4	14.7
Others	1.9	0.7	1.6
Africa	7.4	11.7	7.4
Other countries	6.2	5.7	4.5
Unknown origin	8.5	16.3	12.5

Note: the % does not add up to 100 due to multiple sourcing of the 2,098 firms interviewed in USA and Canada.

Source: Giovannucci (2001) p.16.

ANNEX 5

Number of coffee societies and factories and their membership in Murang'a District, 1997-2002

Year	Number of Societies	Factories	Membership
1997	13	62	56,859
1998	18	62	56,073
1999	18	64	58,351
2000	19	64	60,007
2001	19	64	60,932
2002	19	64	61,208

Source: District Co-operative Office, Murang'a

Splits of societies

Coffee societies have been characterised by splitting since 1991/92. With the creation of new districts, some of the societies were curved out into the new district. Since 1993, Kagima split from a giant society with 21 factories into five societies namely: Rwaikamba, Kiriti, Kiru, Gaturi, and Kamacharia. By and by, Kiawanduma has seceded from Rwaikamba and Kaguno from Kiriti. In most cases this splitting follows a legal procedure. In 1997, Mogoiri split into Mirwagi, Mikaya, Wamogoiri and New Kivoi. Mbari Kianjo has since seceded from Wamogoiri. Kaganda has also split from Murarandia. Iyego is currently the largest with 12 factories. However factories within Iyego have started writing to the Co-operative office saying that they want splits.

The societies present at the moment are:

	Society	No. of factories
1	New Gaturi	5
2	Kamacharia	4
3	Kiru	4
4	New Kiriti	3
5	Iyego	12
6	Rwaikamba	6
7	Kiawanduma	1
8	Kanyanyaine	3
9	Kaguno	1
10	New Weithage	4
11	Kahuhia	5
12	Mirwage	4
13	Kari Kianjo	1
14	Wamogoiri	1
15	New Kivoi	1
16	Mikaya	4
17	New Murarandia	3
18	Kagunda	1
19	Kigetaine	1
	Total	64

Source: District Co-operative office, Murang'a

Annex 7a: Breakdown of coffee production cost -Smallholder farms 1999/2000

Cost of production 1999/2000 for smallholder farms					
Item	rate/ha	No./year	Total/ha/yr.	Price/unit	Total cost/ha
Weeding					
handweeding	60trees/MD	2	44MD	100	4,400
Herbicides -Roundup	0	0	0	0	0
-Gramoxone	1lt/ha	1	1litre	500	500
Application cost	600trees/MD	1	2	100	400
Pruning					
main	40trees/MD	1	33Md	100	3,300
Handling & desuckering	60trees/MD	2	45	100	4,500
Fertilizers					
CAN	100g/tree	1	133kg	1,000/bag	2,660
Compound (NPK)	25g/tree	1	33.35kg	1,100/bag	732
Application cost	2bags/MD	2	166.35	100	160
Manures	0.5 debase/tree	1	7980kg	800	6,380
Disease control					
Tank mixtures					
Daconil	0	0	0	0	0
Copper	2.5kg	3	7.5kg	190	1,425
Application cost	Ksh450/round				1,350
Pest control	-	-	-	-	500
Harvesting					
Main picking			220debes	20	4,400
Fry picking	3debes/MD		30debes	100	1,000
Misc. overheads(@5%)					1,500
Interest @ 15%					2,000
Grand Total					35,207
Cost per tonne of clean coffee					Ksh 65,200

NOTE: Cost based on input regime for farms producing 0.4 to 0.5 tonnes of clean coffee per ha.

Source: CRF, economics section

Annex 7b: Distribution of coffee production costs, smallholder farms, 1999/2000

	Management category			Mean
	Low	Medium	High	
(Kg/ha)	< 400	400-800	>800	
Yield /tree (kg of cherry)	1.4	2.1	4.2	2.6
Yield/ha (kg of clean coffee)	266	401	806	490
% representation	46.9	32.7	20.4	
	% of total production costs			
Fertilisers	6.64	15.54	20.42	15.77
Manure	18.30	20.70	18.01	18.89
Fungicides	13.05	12.16	11.61	12.10
Insecticides	2.35	2.12	1.85	2.05
Labour	59.66	49.48	48.12	51.18
Total	100.00	100.00	100.00	100.00

Source: CRF, Economics Dept. data base

ANNEX 8 (CASE STUDY OF FIVE CO-OPERATIVES IN MURANGA DISTRICT)

This annex summarises the information collected from five co-operative societies in Murang'a district that were visited in October 2002. The society managers were interviewed and where available the members of the management committees.

1. IYEGO FARMERS CO-OPERATIVE SOCIETY

Membership

Iyego Farmers Co-operative Society (IFCS) it is the largest society in Murang'a District and has 12 factories with over 10,000 registered members and 8,000 active members. As shown in the Table below the number of active members have been declining since 1994.

Iyego Farmers Co-operative Society Membership 1994-2002

Year	Registered	Active	% Active
1994/95	9,938	7,885	79.3
1995/96	10,184	7,364	72.3
1996/97	10,353	8,007	77.3
1997/98	10,554	8,064	76.4
1998/99	10,678	7,925	74.2
1999/00	10,765	8,049	74.8
2000/01	10,813	7,924	73.3
2001/02	10,844	8,196	75.6

Production

Due to poor world prices the farmers have either reduced or totally abandoned coffee, use of inputs and proper farming methods. This is clearly seen in production of 2,062,914 kg of cherry in 2001/02, the lowest over the last 10 years.

Iyego Farmers co-operative Production and Payments 1994-2002

Year	Cherry production	Sale price Ksh	%	Price paid to farmers Ksh/kg	Mbuni production	Sale price Ksh	%	Price paid to farmers Ksh/kg
1993/94	2,606,919	28.93	75.77	21.92	76,182	67.15	63.74	42.80
1994/95	4,305,822	25.58	71.73	18.35	184,530	55.93	84.06	47.01
1995/96	4,736,518	24.83	48.52	12.05	183,308	39.8	77.36	30.79
1996/97	3,499,602	45.03	72.65	32.71	147,311	51.23	81.16	41.58
1997/98	3,413,261	45.55	71.90	32.75	105,899	36.73	73.52	27.00
1998/99	2,304,010	33.47	68.98	23.09	104,012	25.13	30.55	7.68
1999/00	6,405,362*	19.38	52.95	10.26	299,672	49.9	53	26.45
2000/01	2,962,418	18.00	41.00	7.38	106,783	40	32	12.80
2001/02	2,062,914	16.00	26.00	4.16	85,948			

*Good year in production in the whole country

Poor world prices are reflected in the farmer's payments, which stands at Ksh 4.16 per kilogram. This is the lowest rate recorded in the last decade. The farmers are discouraged and are giving up on coffee production until they are assured of better price.

Loans/Debts

Like other co-operatives IFCS is highly indebted to the tune of ksh.108.7 million. The loan dates back to 1995/96. These debts are from sources such as SCIP II, Murata Sacco and Stabex among others and was for the purpose of development, working capital and inputs. The stabex funds in form of input came at a time when farmers were giving up on coffee production due to poor prices. Some therefore diverted the inputs to other farming enterprises or converted the inputs into cash money which they used for domestic needs. Hence stabex loans may not have had an impact in coffee production. Due to increase debts the co-operative has also retrenched 200 workers and the remaining skeleton staff has not been paid their monthly dues in the last four months.

2. KIAWANDUMA FARMERS CO-OPERATIVE SOCIETY (KFCS)

It's a relatively small but very efficient in loan repayment. It has one factory. It broke away from Ruaikamba in 1998 but did not incur liquidation cost since the members opted not to split the assets with the mother society. It has got 1,382 registered members with 1,104 active members (see table below). the percent active members have declined in the last one-year. This could be attributed to poor prices as some farmers opt to neglect their coffee.

Kiawanduma Farmers Co-operative Society Membership 1998-2002

Year	Registered	Active	% Active
1998/99	1,337	981	73.4
1999/00	1,345	1,107	82.3
2000/01	1,353	1,141	84.3
2001/02	1,382	1,104	79.9

Production

Despite poor prices of Ksh. 5.90 per kilogram farmers in this co-operative have increased production in the year 2001/02. The main reason for increase in production is due to the fact that this is a new society and members are determined to make the society work.

Kiawanduma Co-operative Society Production and Payment 1998-2002

Year	Cherry	Sale price	%	Price paid to farmers	Mbuni	Sale price	%	Price paid to farmers
1998/99	193,569	35.66	45.85	16.35	12,221	36.20	76.39	27.65
1999/00	622,985	17.79	65.75	11.70	29,381	24.06	56.32	13.55
2000/01	435,147	14.31	69.88	10.00	11,517	7.17	38.37	2.75
2001/02	439,800	11.47	51.45	5.90	20,120	*	*	*

*Mbuni not yet sold

Loan/Debts

Unlike other co-operatives, which are heavily, indebted KFCS has been able to repay the loans annually. Currently it has a loan of three million only. See repayment schedule below.

Kaiwanduma Farmers Co-operative Society Loan Repayment-1999-2002

Year	Item	Debt (ksh)	Recovery (Ksh)	Balance
1999/00	Inputs	2,588,613	1,840,000	748,613
	Working Capital	155,544	155,131	413
	Insurance	151,326	150,852	474
	Crop Advance	3,344,484	3,344,484	0
2000/01	Inputs	3,567,507	1,430,672	2,136,835
	Working Capital	419	419	0
	Insurance	474	474	0
	Crop Advance	2,265,734	2,265,734	0
2001/02	Inputs	5,025,631	1,583,992	3,441,638
	Crop Advance	892,029	892,029	0
				3,441,638

Coffee Marketing and milling is done through KPCU.

3. NEW KIRITI CO-OPERATIVE SOCIETY

The society emerged in 1998, from Kiriti, which had earlier split from the giant Kagima. New Kiriti has 3 factories namely Kaiyo, Gondo and Kirimahiga. Gondo wants to split from the society and has not delivered its last harvest to the society. Since 1991, farmers especially Kirimahiga have shifted from coffee to tea production because they are in a transition zone and tea is more profitable.

Membership

The percentage of active members has fallen drastically from 82% (1998/99) to a 57%(2002).

New Kiriti Farmers Co-operative Society

Year	Registered	Active	% active
1998/99	2,971	2,423	82
1999/00	3,026	2,297	76
2000/01	3,117	2,395	77
2001/02	3,138	1,798	57

Production

The production of coffee in the year 2001/02 has dropped drastically from 1.9 million in the year 1999/00 to 0.6.million in the year 2001/2002.

New Kiriti Farmers Co-operative Society Production and Payment

Year	Cherry production kg	Sale price Ksh/kg	%	Price paid to farmers Ksh/kg	Mbuni production kg
1994/95*	1,034,617				54,268
1995/96*	1,436,640				49,049
1996/97*	772,480				30,955
1997/98*	857,350				52,952
1998/99	910,180	19.28	43.80	8.4	21,351
1999/00	1,987,687	16.31	37.69	6.1	116,208
2000/01	1,040,988	23.75	41.40	9.8	31,629
2001/02	638,529	18.50	61.05	11.3**	35,666

*Production excludes Kangunu before the split

** Price relatively high because there were no loan deductions

NB: During liquidation 1998, the cost was estimated to over Ksh 8.5 million. In the year 1998/99, the society had to pay Ksh 3.2 million shillings for liquidation and the remaining Ksh 5 million was paid in the year 1999/00. This was the main reason for the extremely low prices in those two years.

Loans

Most of the loans in the society are on farm inputs amounting to Ksh 30 million. However due to low prices the debts have not been repaid.

New Kiriti Society loans owed to Co-operative Bank.

loans	Ksh
working capital	3,409,846
1998/99	6,159,537
1999/00	10,769,247
2000/01	10,078,209
Total	30,416,838

The Stabex loans were of no great impact to the farmers the amount that got to them was less than 2 million in form of inputs. However most people did not receive any input as the amount due to them went in to reducing their existing debts. The current debts are accruing interests at the rate 17 percent.

Milling and marketing is done through KPCU

4. RWAIKAMBA CO-OPERATIVE SOCIETY

The society emerged from the giant Kagima co-operative. It currently has 6 factories but each of them wants to split into an independent society.

Membership

The percent of active members has reduced from 99.7% (1997/98) to 74% (2002). This is attributed to the current price problems in the sector.

Rwaikamba Farmers Co-operative society Membership

Year	Registered	Active	% active
1993/94	4,704	4,692	99.7
1994/95	4,938	4,884	98.9
1995/96	4,968	4,932	99.3
1996/97	4,979	4,950	99.4
1997/98	5,629	5,611	99.7
1998/99	5,852	5,552	94.9
1999/00	6,712	5,652	84.2
2000/01	6,251	4,692	75.1
2001/02	6,297	4,692	74.5

Production

Rwaikamba Farmers Co-operative Society Production and Payment

Year	Cherry production kg	Sale price Ksh/kg	%	Price paid to farmers Ksh/kg	Mbuni	Sale price Ksh/kg	%	Price paid to farmers Ksh/kg
1994/95	2,308,934	30.5	86.5	26.3	50,027	81.9	84.4	69.1
1995/96	3,926,503	10.4	75.6	7.8	74,296	68.2	58.4	39.8
1996/97	3,993,682	39.8	79.8	31.8	***	***	***	***
1997/98	3,096,903	41.2	75.3	31.0	94,182	36.7	73.6	27.0
1998/99	2,829,156	24.6	50.3	12.3	84,770	23.7	64.4	15.3
1999/00	6,244,085	13.9	46.9	6.5	271,585	27.3	53.4	14.6
2000/01	1,946,920	13.4	22.4	3.0	88,178	13.3	23.6	3.1
2001/02	2,238,646	***	***	***	***	***	***	***

*** Data not available

The price paid to the farmers has shown a drastic fall from Ksh. 31.8 in 96/97 year to Ksh 3.00 in the 2000/01 crop.

Loans

The Stabex loans were given to farmers at Ksh 3.00 per Kg produced in the year 2001/02. It did not really help the farmers. The interest rate was higher than the former CAPS loan, which was given at the rate of 5%. They put more conditions on the loan. The original figure of the loan was 5 Ksh per Kg. 2 Ksh were to be given as input and the remaining 3 Ksh as cash. They are yet to receive the 2 Ksh for inputs.

The current loan in the society amount to 140 million two thirds of this is for farm inputs while the remaining third is on factory loan. The loan has increased from 24 million in 1996 to the current amount.

Milling and marketing is done by KPCU

5. KANGUNO CO-OPERATIVE SOCIETY (Data not very reliable)

Kanguno split from the Kiriti and it has one factory. However since it's in the main coffee zone, it produces more coffee compared to New Kiriti. The number of active farmers is increasing possibly because of the better performance of the society as compared with others in the area.

Membership

Year	Active
1998/99	1,218
1999/00	1,286
2000/01	1,292
2001/02	1,333

Production and payment

Year	Cherry kg	Sale Price Ksh/kg	%	Price paid to farmers (Ksh/kg)
1997/98	785,156	35.95	70.56	25.40
1998/99	878,162	13.00	53.90	7.00
1999/00	1,871,317	13.55	***	
2000/01	1,043,296	13.65	69.13	9.4
2001/02	983,708	10.5	***	

*** Data not available

Loans

The Stabex loan was received by farmers at 4 Ksh per Kg. The interest rate was much lower than that of CAPS. The loans owed are on inputs.

Kanguno Society Loans owed to Co-operative Bank

loans	Ksh
1998/99	10,277,933
1999/00	10,028,535
2000/01	6,836,222
2001/02	1,499,770
Total	28,642,461

GENERAL COMMENTS

The society officials in the five societies expressed some opinions on the way forward and their general feelings about liberalization. A summary is given below.

Suggested Way Forward

1. The government should write off huge loans owned to the banks by the co-operatives
2. Reduce taxes on inputs
3. Allow more marketing agents so as to allow competition which in turn reduces the cost of milling and marketing
4. Set a reserve price for coffee so that the farmers may know the minimum price that they will receive for their coffee – a kind of guaranteed minimum return.
5. Reduce the percent deductions which is quite high
6. Diversify the market for Kenyan coffee
7. Minimize interest rates

General feeling of liberalization

1. Liberalization caught farmers by surprise. They should have been gradually prepared to manage their affairs.
2. The current system is inefficient in payments. Before the reforms the farmers were paid promptly. Now they are never sure about payment
3. Liberalization allowed splits in the co-operative. Splitting is a very expensive exercise, e.g. when Kanguno split from Kiriti the liquidation fee was eight million (8M) which had to be met by farmers. However Kangunu split because it was producing half of the societies production. Even with such costs many factories are agitating for splits.
4. Reduction in cost of control in the union. Most societies have opted out of the union and are now saving on the cost of control checks by hiring cheaper but qualified staff
5. Many option of milling agents has reduced the cost of milling. Despite several millers the few interviewed co-operatives opted to mill at KPCU
