AGRICULTURE AND RURAL GROWTH IN KENYA

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EXECUTIVE SUMMARY

Agricultural growth is important for alleviation of poverty and stimulation of economic growth and development. Sustainable poverty reduction can only be possible through economic growth and development strategies. The industrial development therefore is unlikely to be sustainable unless there is sufficient domestic demand, which essentially calls for raising incomes of the rural people. Despite this importance, support for agriculture through either donor aid or the domestic resources has fallen in absolute and relative terms. The total government expenditure on agriculture dropped from about 11.2 percent in the 80s to about 4.7 percent in 2001. The result has been a slower growth in staples and traditional exports and an increase in poverty ultimately thwarting the efforts to reduce poverty and hunger. To achieve growth with equity and therefore reduce poverty, there is need to place priorities on the policies that enhance incomes of rural households through specific development strategies on crops, livestock, fisheries, irrigation and farmers institutions.

As a result of this and other factors, Kenya's economy has steadily declined over the past three decades since independence. Despite the recession and the oil commodity shocks during the period 1962-74, the economic growth rate averaged 6.6 percent which was then above the average for low-income countries. This initial growth could however not be sustained. Consequently, the rate of economic growth declined steadily in subsequent years to reach a low rate of 1.9 percent in the period 1990 to 2001. Due to its linkages to the whole economy, the performance of agricultural sector mirrored that of the national economy with higher rates of growth early after independence but declining to negative 2.4 in 2000. Similarly the growth of other sectors of the economy like manufacturing, building and industry have been poor except the services sector whose contribution to the Gross Domestic Product (GDP) has increased.

Although the contribution of agriculture to export earnings remains high at about 60 percent of the total exports, the proportion of coffee has declined due to falling production and productivity. However, tea and horticulture have continued to perform well and therefore increased their share of agricultural export earnings mainly due to the private sector participation in horticulture and gradual, well-planned liberalization of the tea industry. The tea industry has also enjoyed increased production and favourable prices in the world market. Tea is therefore currently the leading export crop in foreign exchange earning.

The small-scale farmers continue to be the most important producers of most agricultural commodities. In 1990 for example, it was estimated that there were about 3.5 million smallholdings with a national average farm size of about 2.5 hectares. Smallholder's role in Kenya's agriculture has increased to the extent that they account for approximately 60 percent of the marketed production. In both the cash and food crop production the small-scale production systems pre-dominate. According to the information available in economic surveys 2000,the small-scale farmers control 75 percent of the total area of coffee and tea. Their production however is lower than that of the estates due to differences in the levels of inputs used. The large-scale farmers use higher levels of fertilizers than the small-scale producers. Multinational companies that account for a large proportion of production and market dominate the tea and horticulture industry.

Most of the markets for agricultural exports e.g. tea and horticulture are highly concentrated and limited to European countries. Currently United Kingdom, Pakistan and Egypt accounts for 83 percent of Kenya's export market. Following the poor performance of cooperatives, most small-scale producers are unable to organize production, processing and marketing of their crops. They also cannot access market information. The success of the small-scale production in agriculture therefore relies on organization and efficient management of cooperatives. Small-scale horticultural export production are currently facing major regulatory challenges e.g. imposition and monitoring of the recent EU maximum residue level (MRL) legislation which sets residues at the limit of detection for certain pesticides used in vegetable production. They are therefore likely to exit the vegetable and fruit production if they are not supported to comply with these regulations and others. The small-scale production is also faced by a host of other constraints including limited access to credit, lack of inventory credit, high production costs, poor quality seed and fertilizers all of which exacerbate the cost of production. In addition there is lack of institutional infrastructure inform of efficient producer organizations.

The poor performance of existing agricultural institutions stimulated the debate on market liberalisation since most of the marketing functions in agriculture were dominated by government parastatals. Decreasing or stagnating production and yields of major agricultural commodities reflected the mismanagement of these bodies. Subsequently, in the early 90s, the government implemented the liberalization and privatisation policies. This action also entailed divestiture of the government from the state corporations that hitherto served as the main and the only marketing outlets for agricultural commodities. The reform process also involved privatisation of agricultural market institutions, removal of price controls and the removal of grain movement barriers, privatisation of government services such as the provision of Artificial Insemination and cattle dipping, deregulation of domestic and external trade, decontrol of interest rates, deregulation of exchange rates etc.

The common objectives of these reforms were to enhance productivity, raise the level of production of basic food commodities to their potential and to improve and enhance high economic growth. The reform has however not resulted in the desired economic recovery of agricultural sector and the economy due factors such as unfavourable weather, declining world prices of agricultural commodities, increasing prices of agricultural inputs, creation of institutional vacuum following the rapid withdrawal of government services, misplaced policies, poor sequencing and lack of synchronization with other policies, hurriedly implemented policies, lack of ownership by stakeholders and the reluctance to undertake reform aggravated by frequent reversals, lack of adequate capacity to implement the reform, complex institutional changes expected and the poor response by the private sector due to the unattractiveness of agriculture. Despite the liberalisation, some of the parastatals such as the Pyrethrum Board of Kenya, the National Cereals and Produce Board and others have continued to operate in total disregard of the liberalised market environment.

Poor management and the liberalization of commodity markets weakened producer organizations that supported farmers by providing credit. The High interest rates by commercial banks and the high risks of the agricultural sector inhibited banks from lending to agriculture. Farmers also do not access other services such as extension and market information. Research is poorly funded with most of the allocation paying staff salaries. Support of research by producers of cash crops like coffee and tea has also reduced due to the poor performance of these commodities. Inadequate and poor supervision and regulation of factor markets in the country has resulted in deterioration of the quality of inputs adversely affecting agricultural productivity. As a result of the poor competition in seed development, multiplication and distribution, there is widespread seed adulteration at the distribution level some of which involve sale of local maize seed purporting it to be hybrid.

The government has developed the Poverty Reduction Strategy Paper (PRSP) and the Kenya Rural Development Strategy (KRDS) in response to the increasing poverty and declining productivity. Stakeholders were widely consulted in developing these strategies. The main thrust of the PRSP and KRDS is to decentralize the decision-making and the development of management process at the district levels to improve effectiveness of service provision. The main focus is on increasing competitiveness of local production by reducing the costs of production and increasing access of productive resources to the poor. The implementation of the PRSP so far has not been satisfactory. For example in the last two years, the government budgetary allocations have not reflected the PRSP priorities. There is no increased funding in sectors such as agricultural and rural development that were ranked as top priorities in PRSP consultation process. Similarly, the government has yet to implement key political and economic governance measures including fighting corruption. Monitoring and evaluation of the PRSP process also has not been put in place.

Although KRDS is a comprehensive document on policy for rural development and goes beyond agricultural productivity, it lacks focus, as it does not priorities the interventions necessary to revitalize the rural economy. It does not provide a priority of the items to be undertaken and their budgetary implication. The Strategy also proposes the formation of a Rural Development Trust Fund to oversee the implementation of the strategy.. The success of KRDS is linked to other initiatives like devolution of power; which is a constitution review issue, and the adoption of the report of the land commission. The key factors that encourage or hamper the growth in the economy and the rural sector includes access to productive resources by the poor, supportive policies by the government that facilitate the private sector investments, pubic investment and maintenance of infrastructure. Others are the maintenance of an export led and food security strategy, participation of farmers and other stakeholders to policy formulation and access to credit and other rural finance services, unfavourable taxation systems and high costs of production, HIV/AID pandemic, conflicts and vulnerability to drought.

Recommendations on the way forward for the government and development partners include: - building social capability for the local community to take up responsibilities for development after devolution of power, support producers lobby groups, support to improve market access and develop the agricultural exports further, improving negotiation capacity in international treaties, increase the Ministry of Agriculture's capacity in policy analysis and legal personnel, support and accelerate legal reform, strengthen the management of coffee cooperatives by supporting and financing new management models, support of awareness campaigns to reduce HIV/aid infection and making available the retroviral drugs to those already affected. Others include:- support of an agricultural credit system that is operated in an MSE model, support development and multiplication of seeds and other planting materials because they are key to reducing costs of production, support technology development through encouraging the private sector and the dissemination of technical information particularly by encouraging participation of other providers.

Chapter 1

1.0 Introduction and Background

1. Agriculture is critical to Kenya's economic growth and development and has therefore ultimately remained the largest platform from which growth could be stimulated. The target for economic growth of above 6.6 is required to achieve the twin objectives of economic growth and poverty reduction. Similarly, growth rates above 7 percent per annum are required for agricultural transformation so as to propel the economy to an industrialized status. However, the recent economic performance in Kenya and the projected figures for the near future fall short of these objectives. Agricultural performance in the 90s has erratically fluctuated widely with a declining trend over the period. The status of the agricultural sector mirrors that of the economy whose growth has also been declining. This close relationship between the performance of agriculture and that of the economy obviously imply that agriculture must grow at a high rate for it to spur economic growth. However, for agriculture to grow at the expected rate, it is imperative that quality investments are done in key areas that have potential for growth.

2. In the last three decades or so the government, donors and other multilateral agencies have realized that non-targeted investments in agriculture could be disappointing. Any future investments in agriculture must therefore be focused to avoid such disappointments and achieve the intended objectives. For example, even with the general poor performance of agriculture, few sub sectors such as horticulture and dairy have performed well. Thus investments in agriculture should be targeted to areas that are likely to attain high productivity. In addition, the macroeconomic environment must be conducive to support growth of the agricultural sector.

3. It is therefore with this understanding and the need to appreciate the existing constraints and opportunities within agriculture that DFID is re-examining how economic growth can be achieved in Africa; and particularly the way economic growth could be propelled by agriculture taking cognisance of the existing capacity to deliver growth and alleviate poverty. This process has confirmed that to improve agricultural performance, resources must be directed into areas where there is adequate evidence of potential growth. One may then ask:- What are these areas? How are interventions likely to improve productivity, while working with the poor and thus increase economic growth and reduce both poverty and inequality?

4. DFID Kenya would like to address these issues. Currently DFID is involved in a wide range of activities designed to promote rural livelihoods and incomes such as in agricultural research, community empowerment in the context of local agricultural development, decentralized animal health services development, micro finance initiatives and business service development. However, due to the challenges highlighted above, and in order for DFID to remain focused, there is need to develop a more complete understanding of the processes of rural economic growth in the country. Since DFID takes a livelihood approach to it's programming, there are several areas that have the potential to boost agricultural productivity even though it may be indirectly involved. Such areas may be of equal if not greater importance. They include: - legal, framework development, institutional, and technical matters. The importance of these issues in stimulating growth should be very well understood.

5. It is with this idea that DFID wishes to engage in a discussion within itself and other experts in order to have a better understanding of Kenya's rural economy with a particular focus on agricultural issues and its linkages to the rural livelihoods. The aim is to link the national policy implementation and institutional structures to the livelihood of the rural poor people. And vice versa, identify the changes or interventions at the Macro level through the agricultural sector that could result in the improvements of livelihoods of rural households. With a clear understanding of issues emerging from this discussion, DFID Kenya will be in a better position to review its current programs in support of rural growth and thus consider whether their current portfolio is addressing the principal challenges that are hindering agricultural growth. The intention is to bridge this gap through an interaction between the DFID staff and Tegemeo. The outcome of this engagement will therefore point to the future strategic position of DFID in Kenya.

6. Accordingly, DFID has asked Tegemeo Institute, Egerton University to prepare this proposal to provide the necessary analytical input to the assignment. Tegemeo has been involved in Policy Analysis in Kenya since 1988. It has conducted various specific studies mostly concerned with agricultural market reform and its implications thereof. Recently, the institute was involved in the preparation of the Poverty Reduction Strategy Paper (PRSP) and the Kenya Rural Development Strategy (KRDS). It is also involved in sensitising the stakeholders on various policy issues. At the micro level, the institute has conducted three household surveys in 1997, 1998 and 2000 covering 1500 households in 24 agricultural districts. The institute has also been doing some participatory poverty analysis work with six communities where both the quantitative and qualitative information was gathered.

1.1 Objectives

The objectives of this paper thus are six fold: (i) analyse the status of the agricultural sector and its various sub sectors, their performance and trends; (ii) Assess performance and trends in export earnings and the government budget allocation to the rural sector including agriculture, natural resources, health and education; (iii) analyse the structure of agricultural production and relative roles of the small and large producers their trends and the institutional arrangement; (iv) identify and discuss key legislative issues affecting the rural economy and the key factors that prevent or encourage growth of the rural economy; (v) identify recent government intervention, their objectives and critically assess these interventions in their relevance to poverty reduction and rural development; (vi) identify areas of intervention that could achieve poverty reduction and agricultural growth. The report is divided into 4 chapters. Chapter 1 is the introduction and discusses the need for investing in agriculture for poverty reduction and growth. Chapter 2 discusses the importance of agriculture to the economy relative to other sectors and the structure of production. Chapter 3 discuses recent change in the agricultural sector and identify key factors and institutions including the PRSP and KRDS strategies for poverty reduction and economic growth. Chapter 4 discuses the factors that either prevent or encourages growth of the rural economy and chapter 3 identifies the recommendations and on the way forward.

1.2 Importance of agricultural to rural Growth

1. The importance of agricultural growth to alleviate poverty and stimulate economic growth and development in Kenya cannot be over emphasized. Available evidence reveals that sustainable poverty reduction can only be possible through economic growth and development strategies. This will have to be done through agriculture

because it is the backbone of economic growth, employment creation and generation of foreign exchange. Agriculture has been a major source of the country's food security and a stimulant to off-farm employment. Thus, industrial development is unlikely to be sustainable unless there is sufficient domestic demand, which essentially calls for raising incomes of the rural people. Furthermore, the highest potential for industrialization also lies in the area of agricultural based industries. Even though it is true that industrialization can play a key role in poverty reduction, it is important to keep in mind that industrialization will necessarily have to be supported by agriculture. It is in the rural areas where a large proportion of people lives and depends to a large extent on agriculture. Most of them are poor and live below a dollar a day.

2 Despite the importance of agriculture to economic development, support for agriculture through either donor aid or the domestic resources has fallen in absolute and relative terms. The result has been a slower growth in staples and traditional exports and an increase in poverty. According to the International Fund for Agricultural Development (IFAD) Rural poverty report 2001, real net aid disbursement to all developing countries has fallen from 2.7 percent to 1.4 percent of GDP between 1992 and 1998. Over the same period, the proportion allocated to agriculture, forestry and fisheries has declined from 20.2 to 12.5 percent. In Kenya, the total government expenditure on agriculture dropped from about 11.2 percent in the 80s to about 4.7 percent in 2001. Most of the money is spent on recurrent expenditure rather than development programs.

3 The reduction of funding to agriculture is regressive to efforts geared towards poverty and hunger reduction. Neglect of agriculture in terms of both international development cooperation and domestic resource allocation must be addressed if the challenging targets of poverty reduction, inequality and food security is to be achieved. There are those who suggest that due to low rates of return in investing in agriculture, effective poverty reduction could be attained directly through the process that support the trickle down mechanism of growth. The concept here is to invest outside agriculture in urban areas and industrial sector. The benefits will eventually filter down to rural areas thereby reaching most of the poor. But evidence from developing countries does not support this view. Benefits of urban and industrial development do not appear to have trickled down to the rural areas. Good governance also does not have to come first but is rather a result of, and contributor to, processes of social and economic change (Unsworth, 2001). Urban income growth therefore translates into urban poverty reduction; and does not necessarily contribute to rural poverty reduction..

4 Indeed, overwhelming evidence from experience of developing countries show that rural development has important invigorating effects on overall economic development. In Kenya, empirical evidence shows that a 1 percent increase in agricultural GDP results in a 1.6 percent increase in national GDP (Kimenyi, 2001). Thus, improving the quality of life in rural areas necessarily spills over to the urban centres. To support this view, recent studies have shown that in many developing countries, the largest growth in poverty reduction has occurred as a result of agricultural sector growth (Thirtle, et al, 2001). The implication is that agricultural growth is generally pro poor and that improving farm production helps spur non-farm activities in the rural areas. Such non-farm activities are now seen as crucial to insulating rural families from poverty. In-deed the Poverty Reduction Strategy Paper (PRSP) discussions by stakeholders placed agriculture and rural development at the top of national priorities for action (Republic of Kenya, 2001). This position was influenced by the high priority accorded to agriculture by the district consultative discussions, which also emphasizes how important agriculture is to the majority of the Kenyan population.

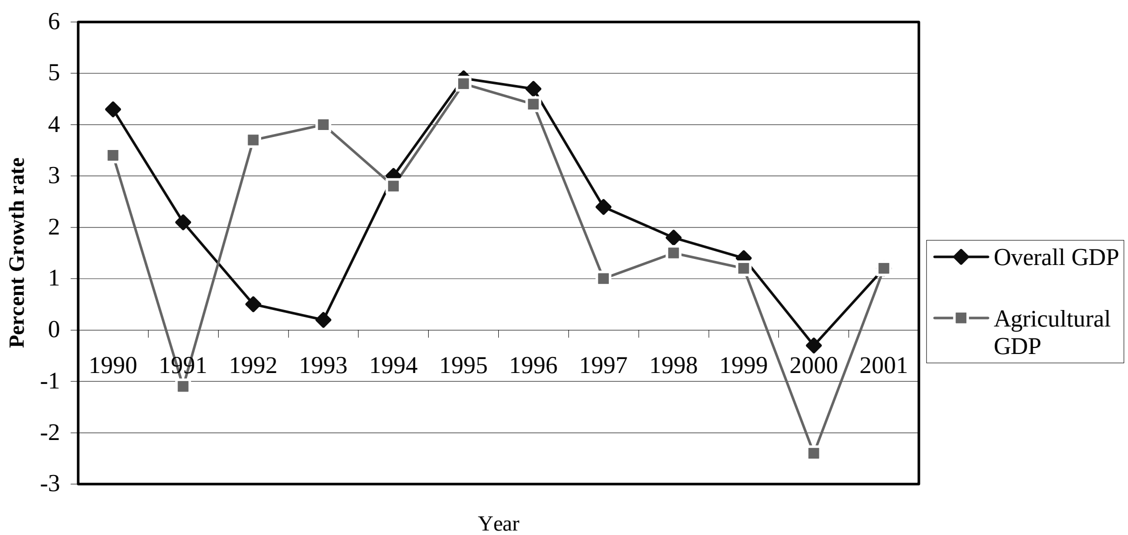
5. It is important to point out that effective poverty reduction requires significant reduction in income inequality in the economy. Poverty reduction thus calls for policies that stimulate growth with equity. In order to improve the effectiveness of poverty reduction efforts, policies that support adoption of new technologies by the poorest and a more equal distribution of assets notably land must be put in place (Kydd, et al, 2001). Currently Kenya is characterized by an extremely skewed income distribution partly because of barriers to access to productive assets such as land and credit. To achieve growth with equity and therefore reduce poverty, there is need to place priorities on the policies that enhance incomes of rural households through specific development strategies on crops, livestock, fisheries, irrigation and farmers institutions.

Chapter 2

2.0 Performance of the National Economy and Agriculture

1. Kenya's economy has steadily declined over the past three decades since independence. Despite the recession and the oil commodity shocks during the period 1962-74, the economic growth rate averaged 6.6 percent which was then above the average for low-income countries. This initial growth was however not sustained and the economic growth rate started to decline steadily in subsequent years to reach a low rate of 1.9 percent in the period 1990 to 2001. In the 90s, the economic growth rate declined steeply (Figure 1) mainly due to political changes, poor economic management and the withdrawal of donor funds. Nevertheless, the economy improved in 1995 as a result of favourable weather and commodity prices. However, recovery was not possible as it fell into recession in 1997 and was negative 2000. This was as a result of poor fiscal management and the slowing down of the market reform process and privatisation of public enterprises. Similarly the expected civil service reform that was expected to continue was stopped. In 1997 the country suffered the Elnino rains that seriously damaged the infrastructure. In addition, IMF lending to Kenya was discontinued due to the concerns regarding economic governance.

Figure 1. GDP and Agricultural Growth Rates



2. In addition to the decline in the overall performance of the economy is the increasing volatility of economic growth as indicated by the performance during the 90s during which time a high growth rate was interspersed with extremely low rate. For example the growth rate has been less than one percent (during 1992, 1993 and 2000 and 2001) and was in deed negative in 2000. The high volatility in economic growth sinks the country repeatedly into down turns and policy crises. The mixture of good and poor performance, with underlying long-term decline is manifested most decisively in the declining standards of living and the increasing poverty among the people. Much of the

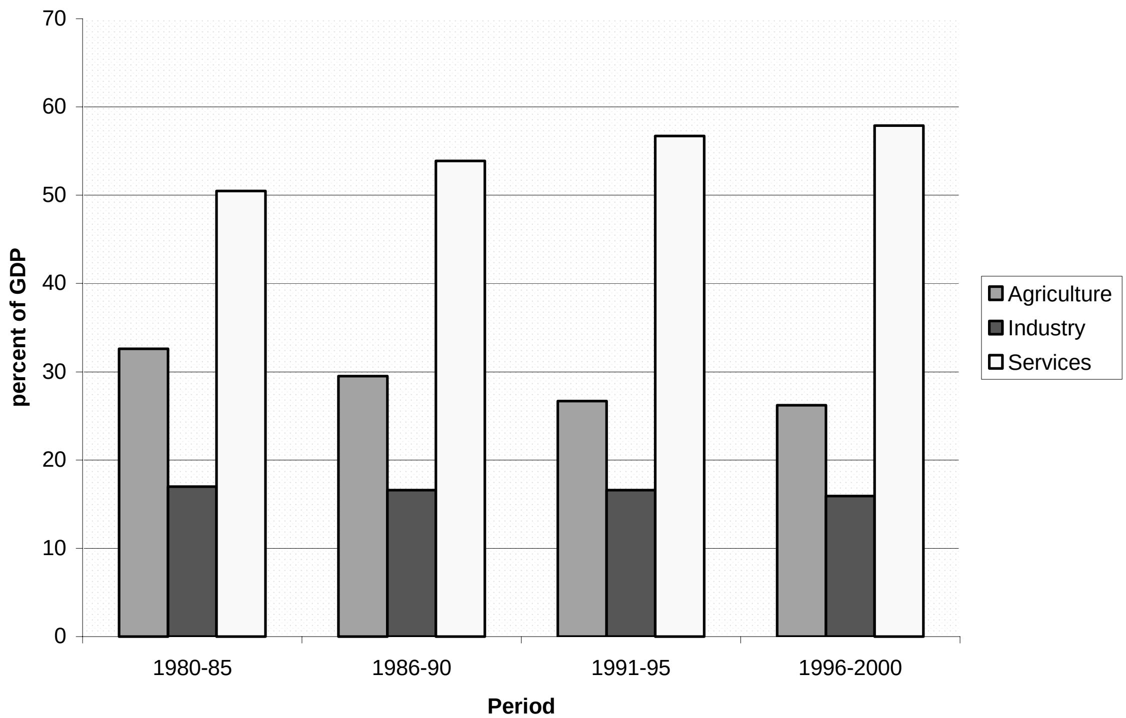
intermittent strengths and weakness in GDP and its growth rates can be attributed to the changes in agricultural performance.

3. Due to the importance of agriculture in the economy, changes in agricultural GDP directly reflect changes in the national GDP. Economic growth is so much dependent on the performance of the agricultural sector to such an extent that, one percent increase in agricultural GDP results in a 1.6 percent increase in the national GDP. Like the national economy, agriculture grew at a rate of 4.7 percent between 1963 and 1975 largely due to area expansion and increases in yields following the adoption of high yielding maize and wheat varieties and agronomic research in tea and coffee. This period was also characterized by the rapid growth of the sector fuelled by heavy government expenditure and donor involvement in provision of subsidized services and inputs. Agricultural growth rate dropped between 1976 and 1980 due to various factors including the oil shocks of 1973 and 1979 and fluctuations in international commodity prices of key agricultural exports like coffee and tea. The growth rate has since then been on a declining trend to the extent that it was about –2.4 percent in 2000. In the 90s, agricultural performance erratically deteriorated. The decline in growth of the Kenyan economy since the mid-90s has been as a result of combined effects of adverse weather conditions, structural constraints, and low investor confidence together with other high costs of carrying out business such as corruption, deteriorating infrastructure, a bloated public sector, frequent droughts and low domestic and foreign direct investment. Effects of weather mainly the rainfall and the level and stability of world prices for key commodities like coffee, tea, horticulture and pyrethrum heavily influenced agricultural GDP. Some analysts have argued that up to 90 percent of the variation in the national economic growth rates from year to year could be attributed to the prices of coffee, tea, horticulture and rainfall (IEA, 2001). This reflects the dominance of just a few commodities and weather.

2.1 Agriculture compared to other Sectors of the economy

1. The three most important sectors in the economy are agriculture, industries and services. Agriculture includes crops and livestock, fishing and forestry. The industrial sector comprises of manufacturing, building and construction, mining and quarrying. The services sector is the largest and consists of finance, real estate and business, transport storage and communication, trade, restaurants and hotels, electricity and water, private households, government, services, water collection, ownership of dwellings among others. Trends in sectoral shares are shown in Figure 2. The proportion of agriculture to the GDP has shrunk from 33 percent in 1980-85 to 26 percent in the period 1996-2000. In 2000, the contribution of agriculture had reduced to 24 percent of GDP. In the first decade of independence, agriculture constituted about 36 percent of the GDP. This is attributed to factors such as poor investment in agriculture, low productivity, poor infrastructure and lack of access to credit. Overall sector activity was marked by emergence of forestry and fishing whose growth rates exceeded sector averages. As a result of the declining performance of the sector, the rural incomes have stagnated over the last decade and have actually declined in recent years. Some farmers have shifted out of certain crops. Off-farm income activities are becoming increasingly important alternative sources of livelihood in the rural areas.

Figure 2. Trends in Sectoral Contributions to GDP



2. The contribution of industry has slightly declined from 17 percent between 1980-85 period to16 percent during the period 1996-2000. The growth was dominated by manufacturing and building and construction during the period 1970 to 80 and thereafter by building and mining and quarrying replacing construction. Manufacturing is therefore a key sub sector of industry. The contribution of manufacturing has remained constant at between 10 and 11 percent of GDP for the period 1996-2000. The growth rate in the manufacturing sector declined gradually from 5.2 percent per annum in 1990 to as low as 1.0 percent per annum in 1999 and was negative in 2000 (Table 1). The poor performance by the manufacturing sector is due to the challenges of liberalization, which has increased competition after enjoying protectionism through explicit import substitution strategy. Ultimately, the sector has realised losses in productivity and international competitiveness. Liberalization thus removed the protective measures over local manufacturing and has subjected it to competition from imports. Other factors that have adversely affected manufacturing are unreliable and high costs of energy and telecommunication, dilapidated infrastructure that adds to marginal costs, high interest rates, high taxes and depressed local demand. Liberalization and regionalization should however be seen as an opportunity to improve the industrial sector due to the increased market opportunities. There is therefore a lot of potential of developing rapid industrialization following the liberalization of the economy particularly the deregulation of exchange rates and the adoption of regional trade blocks like Common Market for Eastern and Southern Africa and the East Africa Community. Improvement in competition by the domestic industries could thus attract more foreign investment and therefore higher potential for growth.

Table 1. Growth Rates in Agriculture, manufacturing, trade, and Finance in percentages

Year	Agriculture	Manufacturing	Trade restaurants and Hotels	Finance, insurance, real estates and business services	Kenyan GDP growth rate
1989/90	3.4	5.2	2.3	6.4	4.3
1990/91	-1.1	3.8	1.3	6.1	2.1
1991/92	-3.7	1.2	1.5	6.9	0.5
1992/93	-4.0	1.8	0.1	7.2	0.2
1993/94	2.8	1.9	6.1	6.1	3.0
1994/95	4.8	3.9	7.9	6.9	4.9
1995/96	4.4	3.7	8.0	7.1	4.7
1996/97	1.0	1.9	4.0	5.3	2.4
1997/98	1.5	1.4	2.3	3.2	1.8
1998/99	1.2	1.0	2.0	2.0	1.4
1999/00	-2.4	-1.5	1.0	0.4	-0.3

Source: Several Economic Surveys

3. The service sector has been marked by relatively better performance. The sector's contribution to GDP improved from 51 percent in 1980-85 to 58 percent during the period 1999-2000. In terms of growth rates, finance, insurance, real estates and business grew slightly from 6.4 percent per annum between 1991 and 1996 but declined thereafter to as low as 0.4 percent per annum in 2000. Between 1994 and 1996, trade, restaurants and hotels grew from 6.1 percent per annum in 1994 to 8.0 percent in 1996 after which it declined to just about 1 percent in 2000. Tourism has suffered in the last 10 years due to a combination of insecurity, poor infrastructure and increased competition from South Africa and other regional attractions. The service sector normally increases its share with growth and development. There is therefore high potential for trade, restaurants and hotels to grow particularly if security concerns are addressed. The banking sector suffered a slump in 1997 mainly because of the imprudent lending practices that increased the level of non-performing loans. New measures were however, put in place to strengthen and improve the efficiency of the entire financial sector. The banking sector however suffered another set back following the enactment of the finance amendment Act 2001 whose objective is to control interest rates. There is therefore potential for growth in the sector.

2.2 Agricultural Export earnings

1. Agriculture contributes a substantial amount of export earnings to the economy thereby providing the much needed foreign exchange. Between 1990 and 2001, this contribution has averaged 60 percent though it varied between 50 and 62 percent depending on the agricultural performance (Table 2). The key commodities contributing to the export earnings are coffee, tea, horticulture, pyrethrum and a few livestock products such as hides and skins. The contribution of agriculture to the national export earnings has been underestimated until 1988. This is because except for the canned pineapples the Central Bureau of Statistics excluded the contribution of

horticulture from the analysis of agricultural exports. The level of export earnings is mainly dependent on rainfall and the world prices of key commodities like coffee and tea as well as the domestic policies affecting production and marketing of these commodities. After an impressive performance during 1985-90 due to favourable world coffee and tea prices, the contribution of agriculture to export earnings dropped during 1990-95 due to the introduction of market liberalization policies and others like weak extension service

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Table 2. Trends of Export Earnings by Commodities 1980-2000 in Ksh Billion

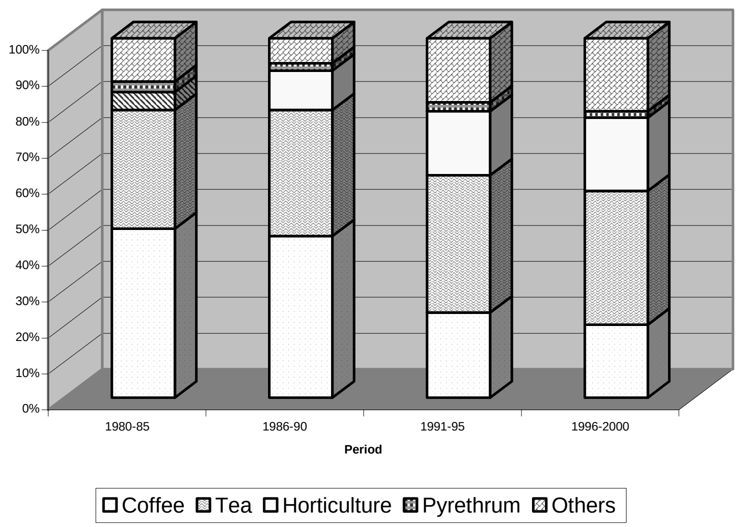
Year	Coffee	Tea	Pyrethrum	Horticulture	Others	Total Agriculture	Total export	% of Agricultural Contribution
1980	2.16	1.16	0.18	*	0.74	4.25	9.75	44
1981	2.19	1.22	0.12	*	0.85	4.38	10.27	43
1982	2.89	1.55	0.19	*	1.02	5.66	10.91	52
1983	3.20	2.47	0.18	*	1.31	7.16	12.66	57
1984	4.07	3.79	0.19	*	1.25	9.31	15.10	62
1985	4.61	3.83	0.19	*	1.28	9.91	15.52	64
1986	7.77	3.46	0.23	*	1.28	12.74	19.16	66
1987	3.89	3.27	0.19	*	1.49	8.84	15.07	59
1988	4.89	3.71	0.23	2.29	0.92	12.03	18.35	66
1989	4.08	5.44	0.33	2.24	0.46	12.55	20.00	63
1990	4.42	6.29	0.38	3.20	0.30	14.59	24.09	61
1991	4.37	7.63	0.64	3.70	0.67	17.01	30.68	55
1992	4.13	9.50	0.73	4.18	0.65	19.19	34.16	56
1993	11.03	18.67	0.99	7.80	1.39	39.89	72.50	55
1994	13.06	16.88	1.57	8.30	1.41	41.22	83.41	49
1995	14.44	17.99	1.33	10.63	1.30	45.69	93.12	49
1996	16.43	22.70	1.60	13.63	1.46	55.82	113.93	49
1997	16.86	24.13	1.37	13.75	9.70	65.81	114.46	57
1998	12.82	32.97	0.72	14.94	8.97	70.41	114.45	62
1999	12.03	33.07	0.66	17.64	9.36	72.75	115.41	63
2000	11.71	35.15	0.70	21.22	9.70	78.47	119.76	66

Source: Various Economic Surveys
** Data not available

2. The contribution of coffee dropped from about 47 percent of the agricultural earnings in the period 1980-84 to 23 percent during the 1996-2000 period (Figure 3). During this period, coffee production declined from a high of 130,000 tons in 1987/88 to about 50,000 ton in 2000. The fall in production is largely accounted for by yield decreases and not a decrease in area. Coffee quality has also been adversely affected such that the proportion of coffee in the prime classes of 1-3 declined while the proportion of inferior qualities increased. World coffee prices have also declined at a time when coffee production costs have been increasing. The Coffee Board of Kenya has also mismanaged the coffee industry and similar other organizations increased transaction

costs and thereby reduced incentives to the producers. Export earnings from coffee thus started to decline in 1998 after stagnating for two years at about 16 billion shillings. Coffee was therefore relegated to the second place by tea as foreign exchange earner in 1990. In 1998, coffee was again overtaken by horticulture. Similarly the contribution of pyrethrum to exports has also declined. Kenya has been unable to tap the full potential of the comparative advantage it has in this industry. Production has fallen by a quarter between 1993 and 2001 mainly because of the mismanagement by the Pyrethrum Board of Kenya that still remains a monopoly in the processing and marketing of the commodity.

Figure 3. Export Earnings by commodities 1980-2000



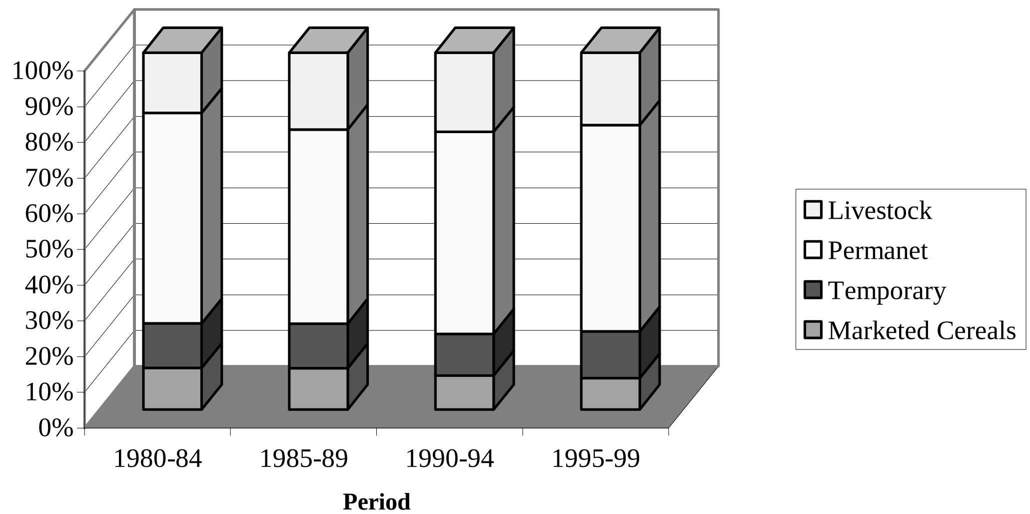
3. Conversely, the contribution of tea to total agricultural exports has increased gradually to reach a high of 35 billion in 2001. This performance is a combination of increased production and favourable prices in the world market. Tea is therefore currently the leading export crop in foreign exchange earning. The liberalization of the tea industry also did not disrupt the tea industry as much as it did the coffee industry because the tea production and processing did not involve cooperatives that had been mismanaged. Horticulture like tea has achieved phenomenal growth and has been able to develop and adapt to changing tastes and market conditions with minimum government interventions. This growth is mainly attributed to the private sector investment. The contribution by other enterprises like hides and skin, wattle, and cotton has declined. Commodities such as the cashew nuts, bixa processing etc that were earning foreign exchange to the country are no longer exported.

2.3 Components of Agricultural GDP

1. The key components of the agricultural GDP are the cereals (maize, wheat, barley, rice and sorghum), temporary industrial crops (sugar cane, pyrethrum, pineapples, tobacco, potatoes, pulses, cotton, oilseeds and horticultural exports), permanent crops (coffee, tea, sisal) and livestock (cattle, dairy products, pigs, sheep, goats, chicken meat, hides and skin, rabbits, camels and honey. The contribution of permanent industrial crops

between 1980 and 2000 has remained constant whereas that of cereals has reduced (Figure 4). The temporary industrial crops' contribution has remained almost constant.

Figure 4. Changes in components of agricultural GDP



2. The reduction in the proportion of cereals is attributed to market liberalization of maize and wheat. Prior to liberalization, most of the two commodities were centrally marketed through the National Cereals and Produce Marketing Board (NCPB). But the liberalization of the markets resulted in increasing quantities of maize and wheat being sold privately and may not therefore feature in the CBS account. As far as the permanent crops are concerned, liberalization has not changed the mode of marketing. Most of the tea and coffee are still centrally marketed.

3. Though the contribution to agricultural GDP by the permanent industrial crops has remained constant around 56 percent over the last twenty years, the individual contribution by coffee and tea has varied (Table 3). After increasing to about 30 percent in 1986, the contribution by coffee declined to 14 percent in 2001. During the same time, the contribution by tea increased from about 20 percent in 1980 to 46 percent in 2000. The decline in coffee has therefore been more than compensated by tea. Pyrethrum is another commodity whose contribution has declined. In 1980, pyrethrum contributed about 3 percent of agricultural GDP. However, this has declined to only 0.9 percent in 2000. The decline of coffee and pyrethrum is attributed to the decline in production of these two commodities.

Table 3. Yearly Commodity Quantities Recorded and Marketed in Percentages

Year	Marketed cereals	Temporary Industrial crops	Permanent crops	Livestock products	Total
1980	10.0	16.2	57.9	15.9	100.0
1981	12.2	15.9	49.0	23.0	100.0
1982	13.3	14.4	51.9	20.4	100.0
1983	14.7	11.4	57.0	17.0	100.0
1984	9.1	8.6	69.9	12.4	100.0
1985	12.0	11.0	60.8	16.2	100.0
1986	11.4	12.8	58.7	17.0	100.0
1987	12.4	14.9	49.5	23.2	100.0
1988	10.5	11.1	53.0	25.3	100.0
1989	11.6	12.6	50.8	24.9	100.0
1990	8.3	13.2	52.0	26.5	100.0
1991	10.8	12.5	50.4	26.3	100.0
1992	11.6	12.3	51.9	24.2	100.0
1993	7.4	9.5	65.0	18.1	100.0
1994	10.2	12.0	57.0	20.9	100.0
1995	9.9	13.3	53.5	23.3	100.0
1996	10.1	13.4	54.6	21.9	100.0
1997	8.9	12.2	58.1	20.8	100.0
1998	8.0	12.3	63.0	16.6	100.0
1999	7.4	14.3	57.8	20.5	100.0

Source: Various Economic Surveys

4. Tegemeo Institute did a decomposition of GDP in 1997 using the 1995 CBS figure in order to highlight how much the agricultural GDP is underestimated. A significant difference emerged in the method used. In 1995 CBS estimated AGGDP to be 5428.79 million pounds. The figures explained by CBS were only 2895.97 million pounds, which was about 55 percent of the total agricultural GDP. This proportion was referred to as Gross Value of Recorded Centrally Marketed Production. The balance of 2895.97 million pounds was not explained and is hopefully supposed to capture the non-recorded non-centrally marketed production. Tegemeo calculations however considered both the central and non-centrally marketed production. The value of the non-centrally marketed production was estimated from production and the prevailing market prices. With this calculation, the agricultural GDP was 3685 million pounds due to underestimation in maize, export and domestic horticulture and livestock. This calculation by Tegemeo explained the difference between total GDP and that portion accounted for by the centrally marketed output.

5. Table 4 compares the decomposition of the agricultural GDP by CBS and that of Tegemeo. Due to the poor actuality of the non-centrally marketed cereal, livestock and some temporary industrial crops, CBS underestimated the importance of cereals, mainly maize and wheat, livestock mainly the dairy and beef animals, and other crops

like potatoes and domestic horticulture. However, CBS overestimates the importance of mainly coffee and tea in their contribution to the agricultural GDP. The differences in these calculations however, do not conceal the importance of key agricultural commodities such as maize, wheat, coffee, tea, and pyrethrum to the agricultural GDP. Thus considering the importance of agriculture in the national economy, development and growth will not be achieved if the productivity of these commodities is not raised.

Table 4. Differences in Decomposition of Agricultural GDP

Category	Proportion Of Agricultural GDP %	
	CBS	Tegemeo
Cereals	10	16
Temporary Industrial crops	13	23
Permanent crops	54	19
Livestock products	23	42
Total	100	100

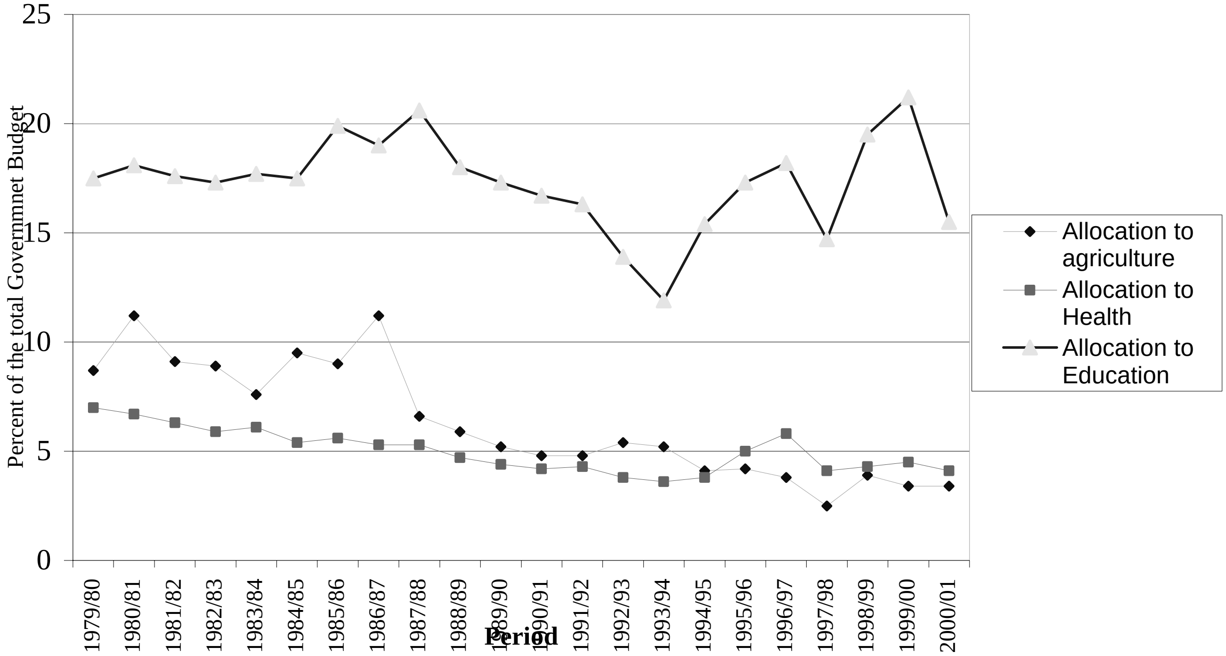
Author's compilation

2.4 Structure of GOK Expenditure in Agriculture and Natural Resources

1. Expenditure in the agricultural sector as a proportion of total government expenditure has declined from an average of 8 percent in the 80s to about 4.0 percent in the 90s (Figure 5). Expenditure in agriculture reached a high of 12.7 percent in 1988/89 to a low of 2.5 percent in 1997/98. This sharp decline was caused by the withdrawal of government funds. The expenditure however started to increase slightly and has stagnated around 3.4 percent. Variation in funding to agriculture during the last 15 years is attributed to the availability of the donor funds. Agricultural funding has been unstable and does not attract local funds to make it sustainable after the withdrawal of donors. Given the importance of the sector to the economy and as a source of government revenue, it is ironical that it should receive only 3.4 percent of the total government allocation. The decline in public funding in agriculture and the unpredictable donor funding are factors, which partly explain the changes in agricultural and hence economic growth. Analysis of the allocation of these funds between recurrent and capital expenditure reveals that a large proportion of the budget goes to the payment of salaries in the ministry and the parastatals within agriculture thus leaving very little money for the operations that are necessary to raise productivity. Bur increasing the funding of agriculture alone is not sufficient to increase agricultural productivity. Instead, increased targeting of the investment is more important.

2. Budget allocation to the health sector has also declined from a high of 7 percent in 1997/98 to a low of 4.1 percent in 2000/2001. As a result, the rural people have suffered from lack of medical facilities. This problem has been complicated by the outbreak of HIV/AIDS pandemic. This has also been the case in the education sector. Although education has a higher allocation than either agriculture or health and has remained so for a long time, it has declined from 17.5 percent of total government allocation in 1979/80 to 16 percent in 2001 although it increased temporarily to 21 percent in1987/88 and 1999/2000. The reduction in budget allocation to these sectors has resulted in minimal access to basic essential services by the poor.

Figure 5. Government Budget Allocation to Agriculture, Health and Education



3 Similarly the allocation to the natural resources is very low. It had an average rate of 0.45 percent of the total public allocation in the 80s. This has however not changed much with an exception of the donor funding in 19884/85 and 1987/88. However, the proportion has increased by about 40 percent since mid 90s to an average of about 1 percent. Considering the importance of natural resources on sustainable development, the allocation to the natural resources department should be increased.

2.5 Structure of Agricultural Production

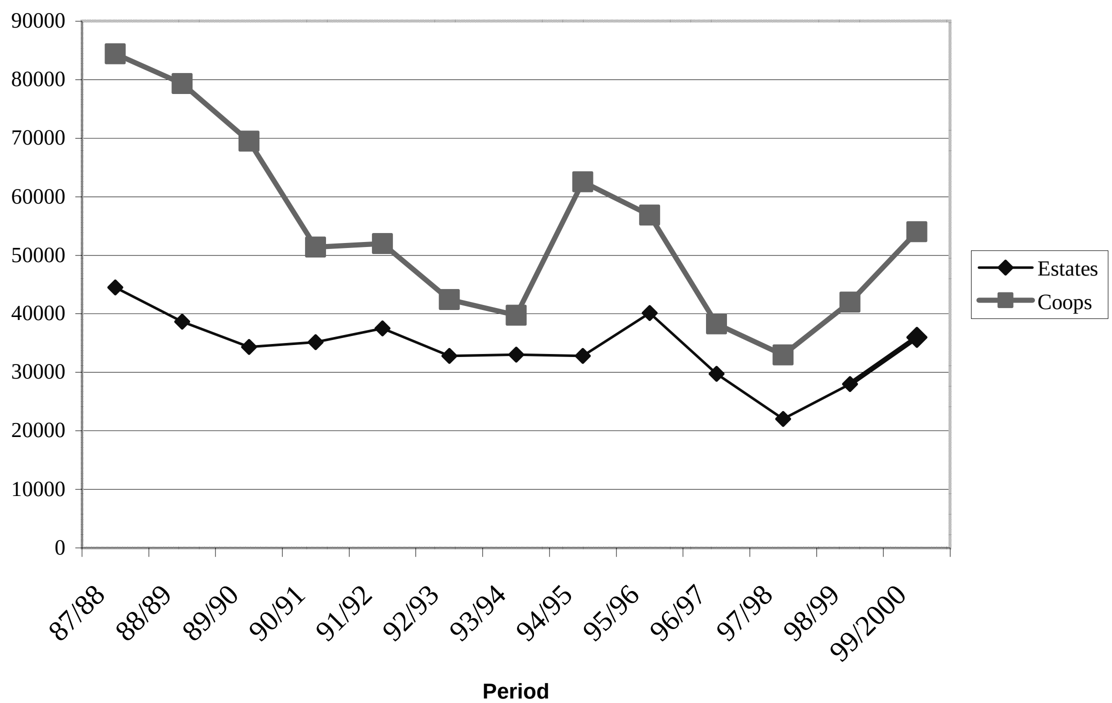
The structure of Agriculture in the country has been transformed from large-scale dominated production systems just before and immediately after independence to one where the small-scale production has almost dominated the production systems. This transformation was caused by the subdivision of the large-scale farms to facilitate the settlement of people. In 1990 for example, it was estimated that there were about 3.5 million smallholdings with a national average farm size of about 2.5 hectares. Smallholder's role in Kenya's agriculture has increased to the extent that they account for approximately 60 percent of the marketed production. In both the cash and food crop production, the small-scale production systems pre-dominate.

2.5.1 Coffee

1. Although coffee was predominantly a large-scale plantation crop, the importance of small-scale production started with the Swynerton plan of 1954 when African farmers were allowed to grow the crop. Information in Economic Survey 2000, points out that there are over 600,000 small-scale producers engaged in coffee production commanding about 75 percent of the total area. This proportion has remained constant

since the 80s. The proportion of small-scale coffee production decreased from 60 percent of the total production to just fewer than 50 percent in 2000. Poor performance may be attributed not just to mismanagement but also the collapse of world coffee prices, now at their lowest level for 30 years. This decline is attributed to decrease in yields rather than a reduction in area. Yield decline reflects reduced use of inorganic fertiliser and pesticides caused by the fall in the profitability of coffee. This has had an adverse impact on soil fertility and increased crop losses from pests and diseases. Currently, coffee yields are about 44 percent of what they were in 1987/88 (Figure 6). The importance of small-scale production therefore cannot be overemphasized. The quality of small-scale coffee is higher than that of the large-scale systems and fetches high prices at the auction markets. The share of multinational production of coffee is low with mainly Sofcinaf Company producing less than 10 percent of the total coffee production. The locals in the small-scale farms and also in the large, medium and small coffee estates therefore dominate the coffee production.

Figure 6. Changes in Small-scale and Large-scale coffee Yields



2. Cost of coffee production in Kenya is among the highest in the World. The production costs have been caused by the high costs of controlling coffee berry and leaf rust diseases, which are prevalent in Kenya. Diseases control alone account for about 30% of the production cost. Kenya coffee is also wet processed, which adds more costs to the production process. However, this adds value to the coffee by enhancing quality. The small-scale producers have also suffered from the poor management of cooperatives thereby reducing coffee payments due to high transaction costs. Coffee farming is also affected by lack of credit by farmers thereby reducing use of fertilizer and pesticides. The small-scale sector is heavily indebted because of poor management

by the cooperatives and investments made when coffee production was declining. Interventions in coffee include:

- **Providing farmers with credit to support the rehabilitation of coffee farms. Although the Stabex funds are available for borrowing by farmers, they are not sufficient. Development of a credit scheme could therefore be necessary in order to revitalize coffee production.**
- **Strengthening the management of coffee cooperatives by supporting management models. Supported new management models should be introduced to the cooperatives. Experience from similar work with dairy cooperatives in some parts of Rift valley have shown that management and efficiency of the cooperatives** could be improved by contracting the management from the private sector.

2.5.2 Tea

1. Similarly tea production is dominated by small-scale production although like coffee it had been established as a large-scale crop. Smallholder producers who are estimated at 240,000 farmers control about 72 percent of the area and account for about 62 percent of the production. The proportion of small-scale tea production has increased from about 38 percent of the total tea production in 1980 to about 62 percent in 2000. Within the same period, the proportion of the area under small-scale production increased marginally from 66 to 72 percent. The tea yields in the small-scale production systems are lower than that in the large-estates because the estates use higher levels of fertilizers than the small-scale farmers. The estates also harvest more leaves than the small-scale farmers which although it reduces their quality, the yields are higher. The quality of small-scale tea production is higher than that from the large-scale production systems mainly due to these better and more selective plucking methods. Data from the Tea Board of Kenya indicates that large multinational farms like Brooke Bond, African Highlands, Eastern Produce, and George Williamson account for about 60 percent of the tea from the estates dominated by large-scale tea production.

2. The performance of the tea industry has been good because of good organizational framework, good world tea prices and a more organized liberation process that did not disrupt production. However, this improvement has provided challenges in congestion of factories thus affecting processing capacity and tea quality. Kenya is the largest exporter of black tea. It is also the biggest black tea exporter in the world and is projected to account for 20-23% of world exports in the next 5 years. Markets for Kenya tea are heavily concentrated. Currently United Kingdom, Pakistan and Egypt accounts for 83 percent of Kenya's export market. With a stagnating or declining demand in traditional markets, significant increases in production might negatively affect prices. Interventions in tea include:

- **Exploring more markets particularly in Middle East and Europe. Modernization of KTDA factories to make them comply with the requirements from the markets particularly the social demands by the Tea sourcing partners of the UK.**

2.5.3 Horticulture

1. Horticulture production like coffee and tea displays a dualistic structure. The domestic horticulture is particularly dominated by small-sale production. Horticultural Crop Development Authority estimate that about 500, 000 smallholder farmers are involved in growing fruits and vegetables for export. Further, the HCDA estimates that small-scale farmers produce 40 percent of exported fruits and 70 percent of exported vegetables. However, due to the capital-intensive nature of flower production and the phytosanitory requirements by importers, flowers and some vegetable production is dominated by large-scale producers. Small-scale horticultural export production is currently facing major regulatory challenges e.g. imposition and monitoring of the recent EU maximum residue level (MRL) legislation (Commission Directive 2000/24/EC) which sets residues at the limit of detection for certain pesticides used in vegetable production. Complying with these requirements is an additional cost to production and thereby reduces profits further. Kenya's advantage in exporting horticultural products to the EU is also threatened by the new requirement in the new EU/ACP agreement that comes in force in 2008 regarding reduction of the preferential treatment that the country currently enjoys. Kenya may eventually face greater competition from Egypt, South Africa, Chile, Brazil and Thailand if the EU liberalizes the imports (Stevens and Kennan, 1999).

2. The key constraints in the horticultural sector include: increasing costs of production resulting from market requirements to comply with the environmental and social conditions such as quality attributes, production standards and safety requirements. Stagnating or declining prices for the exports coupled with increasing production costs reduce profits. A large number of small-scale producers are therefore likely to be marginalized because they are unable to meet these requirements. Markets for Kenya horticultural exports are heavily concentrated in four countries in Western Europe. Currently, United Kingdom, Holland, France and Germany account for over 80 percent of the total volume of horticultural exports from Kenya. The United Kingdom (UK) has been a particularly important destination because of its historic ties with Kenya. Interventions in the horticulture include.

- **Supporting small-scale horticultural producers to comply with environmental, social, quality and safety requirements. This can be done through targeted extension provided directly with the assistance of the exporting companies.**
- **Supporting the formation of small-scale producers' organizations e.g. associations that are easy for the private exporters to contract and can also be the means through which information could be passed on backwards to farmers.**
- **Support a credit scheme organized with a tripartite arrangement between the small-scale farmers, a donor and the exporting company that contracts producers.**

2.5.4 Pyrethrum

1. Kenya is the leading producer of pyrethrum although the production has declined in the recent years. Pyrethrum production, processing and marketing is done under monopoly of the Pyrethrum board of Kenya. Pyrethrum production unlike other commodities is

dominated by small-scale production. It is estimated that about 200,000 small-scale farmers are engaged in pyrethrum production that plants the crop on less than 1 acre. The small-scale producers contribute about 97 percent of the total production. The negligible involvement by the large-scale production is largely because of the labour-intensive nature of pyrethrum production. The recent decline in production has reduced profits for growers and investment in sustainable management practices. Although pyrethrum is produced locally, industrialists are unable to access pyrethrum products for local manufacturing because the PBK prefers to export the flowers to selling locally. Farmers are also unable to access suitable high quality planting materials because the development, multiplication and distribution of the planting materials is done by the PBK under monopoly. Farmers normally use splits from traditionally owned varieties. Yields are therefore very low. Farmers also lack adequate credit facilities for pyrethrum production. Interventions in Pyrethrum production includes:

- **Support of the liberalization of the industry to attract private sector investment.**
- **Support the production, multiplication and distribution of high quality planting materials that would increase yields and thereby reduce production costs.**
- **Support pyrethrum producer organizations that assist producers by providing credit and marketing**
- **Support development of technologies that facilities testing of the pyrethrin content close to the producers either at the farm gate or at the cooperative societies.**
- **Support expansion of an autonomous and elaborate Pyrethrum Research Center capable of dealing with production, processing and marketing issues of pyrethrum. This would enable the industry exploit the potential Kenya has in pyrethrum production.**

2.5.5 Maize and wheat

1. Food crop production like the cash crops is also dominated by the small-scale production systems. About 3.5 million small-scale farmers are involved in maize production producing about 75 percent of the total maize crop. Large–scale farms account for the remaining 25 percent of the production and are estimated at 1000 farmers (Economic Survey 2001). Most of the large-scale farmers are politicians and other old or current civil servants who acquired these farmers with the support of the Agricultural Finance Corporation (AFC). The large-scale farmers are highly mechanized and market between 90 and 95 percent of their production while the small-scale producers market about 60 percent of their total production. The average maize yields from the small-scale production systems are about 10 bags per acres compared to about 18 bags in the large-scale production systems. The difference in yields is due to lower intensity of inputs used. In particular, the rise in the fertiliser: maize price ratio has reduced application rates of inorganic fertiliser. This has increased pressure on soil fertility; particularly among poorer smallholders. The national maize yield of 8.5 bags per acres is low by international standards. Wheat was predominantly produced by large –scale farmers. However small-scale producers have gained importance following the subdivision of the large-scale farms. About 75 percent of the total wheat area is in the large-scale production systems. Due to the highly mechanized nature of wheat production, it is likely to remain dominated by the large-scale production systems. Average wheat yields in the small-scale wheat production systems in Uasin Gishu is 8 bags per acre compared to about 14 bags in the large farms.

2 Overall, changes in the composition of smallholder output have increased pressure on the environment (Appendix 1). Coffee, tea, and pyrethrum are heavy users of soil nutrients but also sources of cash income that allow farmers to finance investments in fertiliser and conservation. Falling producer prices for coffee and pyrethrum have reduced the incentive for farmers to purchase fertiliser and pesticides for these crops, while increased fertiliser prices have meant that maize receives less fertiliser, encouraging the mining of soil nutrients. Similarly, growth in dairy production and horticulture has had environmental costs in the form of overgrazing and an increase in chemical pest control. These environmental factors must be taken into account in any agricultural/rural growth strategy, which must be sustainable over the longer term.

3. The main problem with maize and wheat is the high cost of production compared to imports. . Kenya is therefore unable to supply the bulk of maize for consumption from its domestic production at prices well below the import parity level. The low yields are caused by lack of high quality seed due to poorly regulated seed multiplication, distribution and marketing. Due to lack of confidence by the farmers on the certified varieties, an increasing number of maize farmers use either the local maize varieties or the retained hybrid maize despite the increase in the number of hybrid maize varieties released by the seed companies. Similarly wheat farmers prefer to use retained seeds, which are normally unclean. Lack of working capital has also affected maize production, as farmers are unable to purchase yield-enhancing inputs. Interventions in maize and wheat include:

- **Supporting Kenya Plant Health Inspectorate services (KEPHIS) to improve supervision and inspection of seed and fertilizer quality. The seed and fertilizer companies should also be supported to do self-regulation in seed and fertilizers so that they can appoint their own inspectors. Ultimately, t KEPHIS should be left to supervise the inspectors from the seed companies.**

- **Supporting the establishment of collateralized credit for maize and wheat production through use of the warehouse receipts. This form of inventory credit could therefore reduce the need to sell all the maize after harvest thus spreading out the sales and therefore encouraging storage of maize. Support introduction of credit schemes that are accessible to small-scale farmers through SACCOS and micro financing organizations. Promotion of maize and wheat producer associations is an important factor as well. The inventory credit particularly requires that farmers be organized in institutions.**

- **Similarly access to credit and market information could be facilitated through the producer associations.**

- **Promotion of production of the non-hybrid maize varieties like the open pollinated and composite varieties.**

- **Selection and cleaning of traditional varieties would enable the poor particularly in the Eastern and Western lowlands to increase maize yields and therefore improve their food security.**

2.5.6 Dairy

1. Small-scale production systems dominate dairy production in Kenya contributing about 80 percent of the marketed milk. The smallholder dairy farmers keep between 2 and 3 cows on land sizes of about between 1 and 1.5 hectares. Though the small-scale systems dominate production, they are faced by a myriad of problems ranging from poor quality breeds following the collapse of the government run and subsided Artificial Insemination services and dipping services. The key players in milk marketing are the private milk processors. Currently, there are about twelve milk-processing firms with a total daily intake of about 300,000 Kgs of milk. In addition to the private dailies, there are three cooperative milk processors:- Kenya Creameries Cooperative, Limuru Dairy Processors and Meru Central Cooperative Union. The private processors have tended to concentrate on areas close to the urban centres. As a result, farmers far off in the interior like in parts of Rift valley are unable to sell their milk.

2. The dairy industry though one of the success stories of liberalization is characterized by inadequate producer organizations. Except in areas around Nairobi where the dairy cooperatives are present, they are absent in other areas such as in the Rift Valley and some parts of central. Milk marketing has also developed around the main urban Central. Other areas with poor infrastructure and away from the market have suffered from poor milk marketing. Milk hawking has also become an important system of milk marketing and cannot be ignored. Inteventions in the dairy industry include:

- **Support the Kenya Bureau of standards to assist producer organizations to inspect and supervise feed formulation so as to ensure that feed standards are maintained. Currently, KBS is unable to effectively inspect feeds due to financial and human resource constraints.**

- **Supporting the establishment of cooperatives in areas where they do not exist and also strengthening them where they exist so that they can serve the dual purpose of financing and marketing. Cooperatives should also be supported to improve their management.**
- **Raw milk hawkers should be supported to improve the quality and hygiene of the liquid milk product they handle. Possibilities of linking the raw milk hawkers with the dairy processor could also be explored. The milk processors and the milk hawkers could therefore compliment each other instead of competing.**

2.6 Institutions in Agriculture

2.6.1 Marketing

1. Since independence the agricultural sector was dominated by government parastatals. These organizations were intended to assist producers in processing and marketing of the agricultural commodities. Coffee, tea, pyrethrum, maize, milk etc were run and managed by marketing boards/cooperatives such as the Coffee Board of Kenya, Kenya Tea Development Authority, the National cereals and Produce Board, the Pyrethrum Board of Kenya etc. Besides providing a ready market for the produce, some of these institutions such as the AFC offered crop insurance through guaranteed minimum

returns to farmers. During the period when these organizations were well managed, the agricultural sector performed relatively well and the government heavily supported agricultural research and extension. In addition to the government run parastatals were the cooperative societies. The government also controlled the cooperative societies such that when the economy started to experience poor management, cooperatives were affected.

2. By mid 80s it was already becoming evident that marketing through the government owned commodity organizations could not be sustained. Decreasing or stagnating production and yields of major agricultural commodities reflected the mismanagement of these bodies. During this period, the Kenyan economy was also experiencing adverse conditions. Serious indiscipline had emerged in the financial sectors leading to collapse of a number of financial institutions. As a result, cooperatives, which were banking with these institutions, ended up losing large deposits in the collapsed banks. Corruption and mismanagement of the parastatals led to an increase in transaction costs that inflated marketing costs, ultimately reducing prices paid to the producers. The parastatals also became a major drain of government resources. This increased the government budget deficits that reverberated back into the economy as high interest rates and inability to support development of the agricultural sector.

3. In 1986, the government introduced a sessional paper on Renewed Growth and Economic Management (Sessional Paper 1 of 1986). Under the new policy, the economy was to be liberalized with a view to removing all monopolistic trends, divestiture of government investment in commercial activities and encouragement of the private sector to get more involved in the running of formerly government owned and run parastatal organizations. Subsequently, in the early 90s, the government was forced by multilateral and bilateral donors to implemented the liberalization and privatisation policy albeit reluctantly. This action also entailed divestiture of the government from the state corporations that hitherto served as the main and the only marketing outlet for agricultural commodities. The reform also involved the privatising agricultural marketing, removal of price controls and the removal of grain movement, , privatization of government services such as the provision of Artificial Insemination and cattle dipping., deregulation of domestic and external trade, decontrol of interest rates, deregulation of exchange rates.

4. The common objectives of these reforms were to enhance productivity, raise the level of production of basic food commodities to their potential; improve quality and standards of products and diversify exports and hence high economic growth. The reform has however not resulted in the desired economic recovery of agricultural sector and the economy. To some degree, the poor performance has been caused by factors outside the control of government such as the unfavourable weather conditions, declining world prices of agricultural produce and increasing prices of agricultural inputs. This scenario could also be attributed to internal factors such as the creation of institutional vacuum following the rapid withdrawal of government services without being taken over by the private sector, misplaced policy or less government rather than an optimal one, poor sequencing and lack of synchronization with other policies, hurriedly implemented without much preparation, lack of ownership by government and the reluctance to undertake reform aggravated by frequent reversals, lack of adequate capacity to implement the reform, complex institutional changes expected and the poor response by the private sector due to the unattractiveness of agriculture especially in remote areas and for bulky crops.

5. Despite the liberalization, some of the parastatals have continued to operate in total disregard of the liberalized market environment. The pyrethrum Board of Kenya for example continues to have monopoly in pyrethrum processing and marketing. Similarly until April 2002, the Coffee Board of Kenya continued to market and regulate the coffee industry. The poor management of the coffee industry has resulted in reduced coffee production by more than 50 percent between the late 80s and 2002. In other cases, uncoordinated liberalization like in the case of cotton has resulted in the total collapse of the industry. Abrupt withdrawal of public agencies from marketing arrangements for producers and lack of appropriate regulations for new institutions coupled with slow development of the private sector and farmer based institutions has left marketing of most commodities in disarray.

6. Even in cases where liberalization has been accepted in principle like in the case of tea, poor preparation, lack of effective participation by the stakeholders have resulted in partial form of liberalization. In the case of tea, farmers are still bound to sell their tea through the Kenya Tea Development Agency because their factory owed the government money in form of loans for factory development. Their freedom to choose where to sell their tea is limited. Similarly, the liberalization process in most cases is incomplete because the new acts still give the Minister in charge of agriculture sweeping powers to make changes in these sub sectors without any consultation with the stakeholders. For example in the case of coffee the Minster still retained a lot of powers stating that despite the liberalization of the industry, the Board will act in accordance with the directions of the minister.

2.6.2 Credit institutions

1. The most important public credit institution is the Agricultural Finance Cooperation (AFC). It has a network of 49 branches in the major farming areas. AFC started operations in 1969 with a mandate of enhancing agricultural lending through provisions of short and long-term loans and therefore alleviate the working capital constraints that had been identified as key impediments in agriculture. In particular, it was realized that land resettlement could not occur effectively without extensive credit for the purchase of land and investments thereof. Agricultural Finance Corporation (AFC) is wholly owned and managed by the government. It mostly depended on agricultural resources and support from IDA of the World Bank. AFC was the main source of farm input credit for maize, wheat and dairy farmers mainly provided to large-scale farmers mostly in the politically correct regions.. The organization therefore suffered from high loan default rates due to loan collection problems and poor loan appraisals. Money loaned to farmers as working capital was recovered by NCPB on behalf of AFC when the crops were sold. With this arrangement, AFC was assured of loan recovery. The dairy farmers also sold milk through the Kenya Cooperative Creameries who also recovered loans advanced to them for milk production. However maize, wheat and dairy marketing was liberalized in the early 90s. The private traders were allowed to compete with NCPB in the purchase of maize and wheat. Milk marketing was also liberalized and as a result, private milk processors emerged to compete with Kenya Cooperative Creameries Ltd.

2. Following liberalization, it was no longer possible to guarantee that the credit provided to farmers would be recovered because marketing was no longer centralized. Thus, it

was impossible to continue offering credit to farmers. The private sector was also unwilling to provide farmers with working capital in the absence of guarantee that the output would be sold through them. Cereal producers thus are unable to raise enough working capital to re-invest in food production. Though AFC still exists and possess huge assets in key towns in the country, it has not been able to provide the much-needed credit to the farmers.

2.6.3 Commercial Banks

Except a few commercial banks like the National Bank of Kenya and the Kenya commercial Bank, most banks are privately owned. Notwithstanding the importance of the agricultural sector, lending by commercial banks to the agricultural sector is very small. For example in 1998, this stood at a mere 5.35% of the total lending assets to the private sector[1]. The total incremental lending to agriculture stood at 10.8% compared to manufacturing (17.8%), trade (16.5%), "other activities "(13.9%) and building and construction at 13.3%. Thus the actual direct lending to small-scale farmers is actually minimal. The commercial bank that provides significant in-put finance to small-scale farmers is the Cooperative Bank of Kenya although this is still done through their cooperative societies. This bank is wholly owned by the cooperatives through their cooperative societies. The bank has been adversely affected by the poor performance of the coffee sector. It is estimated that cooperative societies have close to two billion shillings owing to the Cooperative Bank as bad debt. This has therefore hampered the ability of the bank to continue lending to agriculture.

2.6.4 Cooperative societies

1. Cooperatives are wholly owned by the cooperative societies and are regulated under the Cooperative Societies Act. Through the cooperative societies, small-scale farmers are able to cluster together into large groups through which they are able to efficiently utilize their resources and enjoy economies of scale. It is through the Cooperative Societies that small-scale farmers are able to build factories for primary processing of agricultural commodities. The Cooperative Societies provide a large proportion of all in-put financing required by those small-scale farmers. They in turn obtain the financing through commercial banks (mainly the Cooperative Bank of Kenya). The cooperative societies have formed union banking systems and the Saving and Credit Cooperatives societies (SACCOS) through which the farmer's can save and get credit. With the poor performance of the agricultural sector, most of these cooperative institutions have been adversely affected.

2 The total annual turnover of the cooperatives in 2000 was estimated at Ksh14 billion out of which agricultural cooperatives account for about 73 percent (Table 5). There about 3 million holdings that are members of cooperatives 80 percent of which are less than 2 hectares. Their combined production accounts for over 75 percent of the country's total agricultural production and over 50 percent of the marketed production. Most of the production and marketing within the smallholder thus is organized through the cooperatives. For example, in 1963, there were only about 1000 cooperatives; they however grew so rapidly that by 2000, the total number of cooperatives was estimated at 9400 with a membership of about 5 million. The cooperatives contribute to a substantial percentage of gross earnings in agriculture. For example in 1996, of the

[1] Central Bank of Kenya, Consolidated Statistics as at 31st August 1998.

total gross farm revenue, 48 percent was from coffee, 35 percent of that from pyrethrum, 47 percent from cotton and 72 percent from Dairy (Economic Survey 2000). In addition to the agricultural sector, cooperatives cover other sectors of the economy such as handicraft, Jua Kali, transport, housing development, building and construction, consumer services banking and insurance.

3. Due to their crucial role in the country, cooperatives have become an integral part of the Kenyan economy through their contribution to the economic development of the nation. They have contributed to the mobilization of local resources for investment, creation of employment directly through engagement of staff and providing opportunities for self-employment. They also have assisted in income distribution as it allows large sections of population to engage in various income-generating activities and small-scale commercial agriculture. Individual benefits of the producer associations and more particularly the cooperatives includes the collection, transportation, processing and marketing of agricultural produce, mobilization of savings by members, support of agricultural production through provision of inputs on credit, dissemination of technologies, and media for flow of market information.
4. This rapid growth has however not been without problems. Since the beginning of the 90s, producer organizations including the cooperatives have faced increased challenges following the liberalization and privatization of the economy. The inability by these organizations to cope with the challenges have been weakened thus rendering them vulnerable and less positioned to play their roles efficiently and effectively. Among the key factors that have influenced the performance of particularly the cooperatives have been widespread mismanagement, leadership wrangles leading to splits of the cooperatives into small and uneconomic units, lack of transparency and accountability to members and in some cases complete lack of business like drive. As this happens, producers who are members of the cooperatives have become disillusioned thus withdrawing their financial and other types of support for the organization, which has weakened them even more.

Table 5. Types of Cooperative societies and their membership

	Number	Membership '000'	Turnover Ksh Million
Coffee	366	732	7741
Cotton	86	29	43
Pyrethrum	73	70	129
Sugar	112	23	345
Dairy	337	350	1529
Multipurpose	1560	200	129
Farm Purchase	731	76	60
Fisheries	82	14	7
Other Agricultural	1002	60	292
Total Agricultural	**4369**	**1554**	**10275**
SACCO's	3627	3538	3389
Consumer	197	15	9
Housing	468	27	8
Timber and charcoal	47	4	2
Craftsmen	104	20	43
Transport	36	6	26
Other Non Agricultural	526	37	56
Total Non Agricultural	**5005**	**3647**	**3533**
Total	**9443**	**5336**	**14006**

Source: Department of Cooperatives, Ministry of Agriculture and Rural Development

5. Agricultural cooperatives are dominated by coffee cooperatives that are organized into about 1080 factories. The societies process the coffee berries before passing on the same to the millers and subsequently to the market. The coffee cooperatives have in the past combined the role of processing with that of financing production. The liberalization of coffee processing and their mismanagement affected the performance of the cooperative societies leading to agitation for their splits. Dairy cooperatives are second in importance after coffee. Their main function is to deliver surplus milk to private dairies. Limuru, Kenya cooperative Creameries and Meru Central Cooperative Unions have also been registered as milk processors. Although the dairy cooperatives used to provide their members with credit for feed, they are at times unable to recover because of diversionary milk sales by some cooperatives. Others are the sugar, pyrethrum and fish cooperatives that have been assisting farmers by providing them with credit and other services like land preparation for the case of sugar cooperatives. Most of the multipurpose cooperatives are inactive after the liberalization of cereal marketing because they were agents of the National Cereals and Produce Boards.

6. Non-agricultural cooperatives operate mainly in the urban centers. Savings and Credit Cooperative Societies (SACCOs) dominate the non-agricultural cooperatives. Members of SACCOS save and then borrow from their societies. The loans borrowed are guaranteed either by the contributions by the member or by guarantee or the contributions of friends who are also members of the same cooperative. The importance of the housing cooperatives has reduced with time. This could be attributed to the poor performance of the economy particularly in the building and construction sub sector.

7. Crop and livestock sectors that are dominated by small-scale production systems have their own inherent problems that emerge due to the number and size of individual production units. For example, they cannot access market information, extension, and credit and nor can they realize economics of scale. Their access to markets is limited and has to incur huge transaction costs to access them. Thus the role of producer associations such as cooperatives, farmer companies or mere self-help groups becomes necessary. However, producer organizations in Kenya face uncertainties related to the respective commodities. Hence, coffee, tea and pyrethrum cooperatives recently underwent the most volatile time in their history. Many of the cooperatives are burdened by debt and are unable to pay farmers for their produce; further eroding farmer's trust in these institutions. Due to inefficiency in management, corruption and lack of accountability that have characterized the producer organizations particularly the cooperatives, many producers have opted to organize themselves outside the cooperative structure and have formed associations and self-help groups to perform many of the functions cooperatives used to provide. However without organized producer associations, small-scale producers may find it increasingly difficult to access markets and services. Given the predominance of smallholder agriculture in Kenya, it is important to ensure that producers have the choice to organize themselves into groups that will provide them with agricultural services such as market information, extension, and markets. They also must be skilled and empowered to have a greater voice in the markets and hold their organizations accountable for their actions.

2.6.5.Traders

Market reform increased the participation of the private sector in the processing and marketing of agricultural commodities across the entire marketing chain. These operators have included the assemblers, wholesalers, processors, retailers, transporters and transporters. Depending on commodities, there are also brokers and agents involved in the market. Some private sector operators have come together to form associations such as the East Africa Tea Trade Association (EATTA) for tea, the Mild Coffee Trade Association for coffee etc. These associations ensure fair-trading of the commodities. Others such as the Fresh Produce Association of Kenya (FPEAK) represent their members in public, private sector, and international organization. They also promote exports through overseas exhibitions, provide market information, training members on issues of horticultural crops and ensure adherence to established code of conduct in the industry. Most of the members of FPEAK are the fresh produce exporters themselves who because of their financial strength have been able to lobby for changes in the horticultural industry.

2.6.6 Producers

Production of most agricultural commodities is in the hands of individual farmers or farmer organizations. Unlike in many other African countries where the state has invested in the agricultural industry, agriculture in Kenya is in the hands of the private sector. This situation has however changed since independence. At this time, the government was involved in large-scale rice production in Bura and Mwea Schemes. Currently the government still owns the assets in these schemes through the National Irrigation Board. Similarly, the state invested in maize, wheat and beef production in the Agricultural Development Corporation farms (ADC) in competition with the private sector. Most ADC farms have however been subdivided and are no longer in production. In other areas, the assets were transferred to Research institutions like the Kenya Agricultural Research Institute (KARI). Due to mismanagement, state run farms were making losses. This created the stimulus for privatisation. Currently, the state is however involved in agricultural production through the parastatals such as the Tana and Athi River Development Authority (TARDA), Coast, Kerio Valley, and Lake Basin Development Authorities. These parastatals are allocated money through their respective ministries to invest in production. But due to mismanagement and inefficiencies in this organization, the money allocated is wasted.

2.6.7. Extension

1. The provision of extension services has been the monopoly of government mainly through the ministry in charge of agriculture and parastatal organizations. However, there has been some extension service provided by private sector individuals or companies on commercial or contract basis as in the case of barley and tobacco. Other agents involved in extension include farmer organizations and farmer groups, Non government organizations such as the religious groups. Both government and the donors have traditionally funded extension through the government agents. Most of the government funds dedicated to extension go towards paying salaries leaving very little to provide service to the farmers. For example out of the total budget allocation to the Ministry of agriculture, about 60 percent is allocated to the N CPB, the AFC, the ADC and the regional development Authorities like the Coast Development Authority and the Kerio Valley Development Authority. About 95 percent of the remaining allocation goes to the paying of salaries to the employees thereby leaving about 5 percent for

development. Although the staffs are paid their salaries, there is no money left for operating expenses such as stationery and fuel. The extension service in the country has therefore been run almost exclusively through the donor funds.

2. Recently, due to lack of donor funds in extension and following the reduction of government allocation in agriculture, extension services to producers have become increasingly unavailable to farmers. Access to information and new technologies to farmers is therefore poor. Furthermore, the links between research and extension has weakened particularly with the recent funding crisis implying that effective transmission of information from research centres to the wider rural community has been seriously compromised (World Bank, 1998). As a result, farmers, smallholders in particular, use poor production techniques. This is an unfortunate situation given that agricultural extension in Kenya has been found to have a significant positive impact on yields (Evenson and Mwabu, 1998; Gautam and Anderson, 1998). Public extension service in cash crops like coffee and tea has also not been available. These commodities are therefore required to finance their extension. However, with the decrease in earnings from these commodities as a result of low prices and production, institutions marketing these commodities have been unable to fully finance the provision of extension service. As a result of the gap created by the withdrawal of public extension service to the commercial and food crops that depended on the service, the importance of private companies, farmer organizations and non-governmental organizations in the provision of the extension service has increased. The private sector operators in commodities like barley, tobacco and horticulture have provided extension service to producers. Although the costs of such services are not explicitly charged, it is implicitly deducted from the payments to the producers.

3. The producer organizations such as the cooperative societies have also provided extension to their members. Large cooperative institutions like the old Muranga Union used to provide extension to their farmers. The costs of providing this service was met from the farmer's payments and was paid by all the farmer's irrespective of whether they received the service or not. Similarly the role of the non-governmental organizations in the provision of extension serve has increased considerably following the collapse of government's extension program. The NGOs have been forced to provide extension to the communities they have been working with. Sometimes the beneficiaries of extension have complained of receiving contradictory messages due to lack of coordination from and/or between the different agents. The ability of producer organizations to provide extension services to their members has also been adversely affected by lack of funding following the recent decrease in production of key commodities such as coffee and pyrethrum. The limited extension service by the government was provided to the farmers even when they did not request or need it and was therefore wasted. The information was therefore untimely and in some cases irrelevant.

2.6.8. Research

1. Agricultural research in Kenya is dominated by the Kenya Agricultural Research Institute (KARI), which was formed in 1996 to coordinate all agricultural, livestock and crop research. Prior to that individual research stations operated on commodity basis. Agricultural research is funded almost entirely by donors with a meagre 25 percent of the budget coming from government largely in form of recurrent salary cost. Being a huge institution, effective management to ensure that the work undertaken

reflects national priority has proved a major challenge particularly when so much of the funding comes from bilateral and multilateral donors with different interests. In addition, many scientists lack operational funds particularly in the non-donor funded projects. Sustainability of the funding of agricultural research has also been an issue due to this dependency on donor funds.

2. Research on key cash and industrial crops is conducted by commodity based parastatal organizations involved in the marketing of the respective commodity. The Coffee Research Foundation, an organization funded by coffee farmers through the Coffee Board of Kenya, conducts coffee research. Similarly the Tea Research Foundation conducts tea research funded by tea farmers through the Tea Board of Kenya. Farmers through the Sugar and pyrethrum research institutes also fund sugar and pyrethrum research. There has therefore been an increasing trend of moving research of certain high value commodities from the government to farmers through their own financed and managed foundations.

3. There is therefore very limited privately funded agricultural research in Kenya although it has high potential. To some extent, horticulture is the main beneficiary of international private research. Flower and vegetable producers are able to get internationally developed materials through the payments of royalties to the international breeders. Other private organizations that do some limited research include the Kenya Malting Company, which is a subsidiary of Kenya Breweries Limited for barley, and some seed companies. Though there is potential for the privately funded research in Kenya it has not fully been exploited. This is an area where further studies would show how the private sector could compliment the public sector in provision of extension service. The study would also recommend the mode of operation by the private sector.

2.6.9. Local Government

The local government in Kenya has played a very insignificant role in the development of agriculture in the country. This is because the system of government in Kenya is highly centralized with the local authorities having no major role in agriculture. The local authorities however impose commodity cess on key agricultural commodities i.e. 1 percent of the gross value of the commodity. There are obvious difficulties of collecting the money from commodities that are not centrally marketed. The collection of cess therefore has been limited to just a few commodities like coffee, tea, sugar and maize that is sold to the NCPB. The cess money collected from these few commodities is supposed to be used to improve services to producers such as rural access roads and market infrastructure. However, due to the mismanagement of the county councils, the cess money is used to pay salaries for the employees and the payment of allowances to councillors. The rural access roads thus are impassable; the market places are dirty and lack sanitary structures like toilets despite the fact that farmers have been paying the cess.

2.6.10. Input Suppliers

1 The most important input supplier for fertilizers, pesticides, equipment and machinery and seeds in Kenya was the Kenya Farmers Association (KFA), which was formed in 1923 by the farmers themselves. KFA played a very important role in input distribution in the country. KFA has 33 branches distributed throughout the country. It therefore

has the largest number of outlets in form of input stockist in the country. It therefore served as the most important input distribution system in the country. KFA registered as a company limited by shareholding and was therefore entirely owned by farmers. Prior to liberalization. KFA, NCPB and AFC worked very closely to support farmers through a tripartite arrangement where farmers could access inputs in kind from KFA after guaranteeing of the same by AFC. Farmers granted loans by AFC could therefore get inputs from KFA through input vouchers systems. Similarly, because the maize and wheat marketing was done through the NCPB the loans and credit give out could be recovered upfront thus reducing the loan default rates. In this way, AFC made sure that the credit given to farmers was appropriate and could almost certainly be used in farming.

2. In 1984, the government changed KFA to become Kenya Grain Growers Cooperative Union (KGGCU). The main reasons of this change were really political although it was made to look like it was economical. The objective was to control its operations because KFA operated quite independently with minimum government influence or intervention. Due to high level of corruption and mismanagement, the KGGCU became broke and was unable to continue distributing inputs to farmers. Most assets of the union were plundered and the rest auctioned to recover the huge debts owned by the union. In 1996 however, the KGGCU once again reverted to its original form the KFA after it was realized that the union had failed to deliver services to farmers. By this time, the union was broke and was no longer in input supplies. It is no longer important in input distribution. Instead, this role has been taken over by private stockists. The size of stockists varies depending on whether they are wholesalers or retailers. They otherwise play a very important role in the rural areas.

3. Other important input suppliers are those in charge of seed distribution. The most important seed distributor in Kenya is the Kenya Seed Company (KSC). The KSC is a private company but the government owns a majority of shares through ICDC. Prior to liberalization, seed multiplication and distribution by the KSC was done under a monopoly status. KSC with its subsidiary company Simpson and Whitelaw limited have the most elaborate seed processing and marketing facilities. The marketing chain is still managed by their appointed agents and sub-agents. Seed distribution was done by individual stockists, companies and cooperatives who are agents appointed by seed companies. Most of the seed distribution was done by KFA, which also is a shareholder in KSC. KSC was also involved in the maintenance and production of breeder's seed since the subsequent production of hybrid seed is under the monopoly of the company. Liberalization of the seed industry in 1996 encouraged the entry of other private seed companies. However because the KSC was working very closely with KARI in the development of hybrid maize varieties, the KSC claimed the ownership of most of these publicly developed varieties at the exclusion of all the other locally registered seed companies. This exclusive access to the seeds developed by KARI has therefore forced the other seed companies to source their variety development materials from outside the country.

4. Poor supervision and regulation of inputs distribution in the country has resulted in deterioration of the quality of these inputs adversely affecting agricultural productivity. As a result of the poor competition in seed development, multiplication and distribution, there is widespread seed adulteration at the distribution level some of which involves sale of commercial maize seeds purporting it to be hybrid. Seed prices have also been increasing which has acted as a major disincentive to the adoption of the

high quality maize, which together with the decline in quality has adversely affected the adoption of hybrid seeds. Although the adoption of hybrid seeds has remained high particularly in the high potential maize zones, their use has not been as expected. As shown in Table 6, a large proportion of farmers across all the zones used other types of seed in addition to the hybrid maize. Most of these seeds are not certified neither are they cleaned or treated.

Table 6. Types of maize seed used by agro ecological zones

Agro-Ecological Zones	Hybrid seeds	Retained Hybrids	OPVs	Local Varieties
Northern Arid Lands	0	0	60	44
Coastal Lowlands	25	9	14	65
Eastern Lowland	36	6	3	74
Western Lowlands	21	20	2	67
Western Transition	64	5	1	34
High Maize Potential	88	8	1	25
Western Highlands	85	9	5	40
Central Highlands	87	2	5	21
Marginal Rain shadow	37	9	9	22

Source: Tegemeo Institute data and author's Compilation

5. The challenge is therefore to encourage farmers to increase use of hybrid seed. However because a large proportion of farmers continue to use other non-certified seeds, investment in improving the quality of the open pollinated and traditional varieties will increase maize yields of a majority of poor subsistence farmers. It would therefore be necessary to support voluntary certification through decentralized farmer bases approach to seed certification to facilitate the certification of the non-compulsory seeds. NGOs and other agencies interested in these seed would obtain breeders seed from the research institutions such as KARI, and produce the basic seed and distribute the same to individual farmers who would produce the commercial seeds and sell to other farms. The other important institution in input supply is the Kenya Plant Health Inspectorate services (KEPHIS). This organization is established under the State Corporations Act and is therefore a government parastatal. KEPHIS's role includes coordinating all matters related to pests/diseases, monitoring quality and levels of toxic residues in plants, administering plant breeders rights, undertaking inspection, testing, certification, quarantine, control and /description of seeds and planting materials/approves import application for seeds. However it is evident that centralized supervision of seed development, multiplication and distribution is not effective. Support to evolve self-regulation by the seed companies could reduce the load of KEPHIS and therefore enable it to supervise the companies more effectively.

Chapter 3

3.0 Key Institutional and Legislative issues affecting the Rural Economy

1. The most important changes in Kenyan agriculture occurred from the beginning of the 90s when the government started implementing market reforms and liberalization of the economy. The reforms involved the removal of price controls in the product and input markets, dismantling of trade restrictions and transfer of commercial functions from the public to the private sector. Likewise, there was a market reduction in the scope of government in the provision of support services such as credit, extension service, marketing, dipping and artificial insemination services. In the process of gradual withdrawal, the government was expected to encourage the private sector to take up these roles to avoid any disruption in production. Unfortunately, in most cases, the private sector was not ready to take over these functions due to the unattractiveness of agriculture as an investment venture and especially for remote areas and for bulkier crops that required a form of processing before marketing. Such changes did not imply that the government disengage entirely from involvement in the sector. Many important and critical opportunities remained for government to support agricultural development mainly in the provision of public goods like research, infrastructure, market information and provision of a regulatory framework within which the private sector should operate to ensure a competitive environment. The government is also responsible for nurturing a legal framework that ensures that the reforms are legal and that the private sector is encouraged to enter into contractual relationships with producers. In addition, the government expected to provide a stable macro-economic environment in order to enhance the stability of economic incentives.

2. Market reforms resulting from liberalization did not deliver the expected results. Liberalization was poorly sequenced and was not synchronized with other policies. Reforms could not take root because they were initially perceived as donor driven. The government also lacked the necessary institutional capacity to implement and monitor them. Instead, the reforms were hurriedly implemented thus confusing the stakeholders and therefore lacking quick response commensurate with the changes. Liberalization therefore increased uncertainty in the markets thereby undermining the confidence of participants. The uncertainty was aggravated by reluctance and frequent policy reversals that confused the response by the private sector. For example, though maize marketing was liberalized in 1994, import bans and import tariffs were still imposed by the government thus affecting maize importation by the private sector. Similarly, despite the liberalization of the maize markets, the NCPB continued buying maize at prices above market prices thereby distorting the grain markets. The haphazard approach to liberalization of key agricultural sectors like maize, coffee, tea and sugar has eroded Kenya's competitiveness in export markets and depressed rural incomes. Implementation of reforms in agriculture was undertaken without serious analysis of its impact to the other sub-sectors. No studies were undertaken to evaluate the impacts of these reform measures. This has led to conflicts with government goals especially food security and the protection of vulnerable groups.

3. In essence, liberalization resulted in an institutional vacuum in the provision of services as a result of this unrealistic assumption that as soon as the government exits from the market, the private sector would automatically fall in place irrespective of the conditions prevailing. The transition was more complicated than imagined and required appropriate public policy both during and after the transition. A gradual liberalization was therefore

necessary in order to allow the sector to build up competitiveness in a progressive manner. Implementation of reforms required government and donor support to the private sector during the implementation phase. Market reforms were not followed by the necessary legal reforms in order to make liberalization acceptable thereby making many Acts governing the agricultural sector inconsistent and contradictory. Inconsistency in policies and laws and regulation frameworks add significantly to costs of production and offer powerful disincentives to invest and produce. Although the general government policy supports liberalization, the many commodity boards in agriculture continue to intervene in the markets to the detriment of the producers.

4. In the last two yeas, the Ministry of Agriculture has attempted to hasten the process of legal reform by preparing various sessional papers and draft bills for discussion by the stakeholders. The process of policy review in tea, coffee and sugar that have been undertaken within the last two years have been characterized by controversies with the stakeholders and the government. The stakeholders have complained that although the process is made to look participatory, ultimately it does not take into consideration the views of the stakeholders. In the end, laws are changed that mainly reflect the aspirations of the government rather than that of the stakeholders. This has resulted in serious acrimony between the government and the stakeholders. It is also clear that although the intension has been to remove the government from undertaking decisions on commercial activities in agriculture, it has continued to maintain a strong presence in the sub sectors through introduction of clauses that provide the Minister in charge of agriculture with sweepings powers in the management of the sub sectors such as the case of coffee discussed above. This has therefore continued to stifle the participation of the private sector.

5. Undertaking policy changes without clear-cut objectives has hindered sub sectoral growth and has resulted in the formulation of poor policies in agriculture. Objective analysis to evaluate the impact of change and develop implementation strategy that minimizes the negative effects while maximizing on the positive ones has not been done. **Currently, the Ministry of Agriculture lacks adequate analytical capacity to do so. Also, there are inadequate legal personnel to transform the policy issues identified in the sessional papers to bills and Acts of Parliament.** In cases of coffee, tea and sugar, the sessional papers differed from the draft bills thus creating a divergence between the law and policy**. It would therefore be appropriate to support the Ministry's analytical capacity to develop objective policy changes and continuously monitor their effectiveness.**

6. Lack of participation by the stakeholders has also affected the acceptability of the legal reform. In all the cases, the aspirations of the stakeholders have been sought when the sessional papers and the bills are prepared thus leaving limited room for all-inclusive consultation. In some cases, the sessional papers and the draft bills do not change from their original drafts despite the consultation process. The inability to build consensus with the stakeholders at the initial stages of policy review has therefore resulted in protracted arguments between the various stakeholders and between the stakeholders and the government. Such has been the case for sugar where a rift was created between sugar millers and farmers by proposing that sugar be weighed at the farm level rather than at the factory gate. Lack of consensus building thus delays the policy review period. Lack of proper consultation and participation in the review process has impacted negatively on sugar and coffee production and/or productivity. . Similarly, the cooperatives were adversely affected by the new cooperative Act that was hurriedly formulated by the

government. This led to infighting between the members resulting into the sub-division of the cooperatives to small unviable units.

3.1. Efforts by Government to revitalize Rural Growth

The government with the assistance of the private sector has developed both the Poverty Reduction Strategy paper (PRSP) and the Kenya rural development Strategy (KRDS). The objectives of these two initiatives is to have a blue print for development through which resources from the government, that from Development partners and from the civil societies would be mobilized to meet the twin objectives of poverty reduction and economic growth. The PRSP was published in June 2001 and formally launched in March 2002.

3.2 Poverty Reduction Strategy Paper (PRSP)

1. The most important outcome of the PRSP consultation in Kenya was that Agriculture and rural development was top ranked national priority. This is expected because of the importance of agriculture to the national economy in terms of its contribution to the GDP, foreign exchange earning and government revenue and also because a large proportion of the people live in the rural areas and is therefore their main source of livelihood. The consultation process also noted that despite this importance of the sector, has been characterized by poor performance because of low productivity, low incomes, reducing employment opportunities and the poor and social infrastructure. The trends in agriculture militate against poverty reduction and economic growth in the national economy. The strategy in the PRSP is therefore to ensure that the long-term sector targets of about 6 percent would be necessary if agriculture is to contribute to the national growth and poverty reduction. In order to achieve this objective, PRSP process identified the key areas for interventions. These were as follows:-

- Improve the extension service through building an effective and efficient participatory and technology development and transfer systems.
- Encourage other players outside government to participate in the extension services.
- Focus on increasing competitiveness of local production by reducing the costs of production.
- Promote an innovative and efficient rural finance and credit supply system for smallholders and rural processors.
- Decentralize the decision-making and the development of management process at the district levels to improve effectiveness of service provision.
- Develop a national policy to control and eradicate livestock diseases
- Promote the establishment of improved marketing infrastructure and livestock extension service.
- Facilitate the private sector to Improve livestock marketing through setting up of small abattoirs in the producing areas.
- Institute a national early warning and food distribution system.
- Maintain a national strategic reserve and also encourage the private sector to get involved in international grain trade through a more predictable policy and tariff regime.
- Encouraging proper management of water schemes, gazetting water catchment areas;
- Improve policy and legal frameworks needed to restore the forest resources and the promotion of the fishing industry.

2. The PRSP process was participatory and involved extensive consultations of a wide section of the stakeholders. The strategy also confirms the country's commitments to poverty reduction. However, in the last two years, the government budgetary allocations have not reflected the PRSPS priorities. There is no increased funding in sectors such as agricultural and rural development that were ranked in the PRSP consultation process. Similarly, the government has yet to implement key political and economic governance measures including fighting corruption. Without the civil service reform and the privatisation of parastatals it will be difficult to see how PRSP will be implemented. The PRSP process also demanded that a monitoring and evaluation systems is put in place so that the stakeholders can hold the government responsible for lack of implementation of PRPS. If the communities had more of a voice as to how money is spent in their name, the allocation and implementation of projects in their areas would be more transparent and therefore more effective. So far, there has not been a system to monitor and evaluate the implementation of PRSP. Economic growth and poverty reduction is therefore likely to remain s a mirage.

3. 3 The Kenya Rural Development Strategy (KRDS) Situation

1. The KRDS was conceived following the realization that the rural economy has continued to decline thus calling for a rethinking of why this was happening with a view to developing a shared vision and strategy for rural development. It was therefore realized that it was necessary to evaluate the reasons given for success and failure of the past efforts on rural development. It was against this backstop that a new rural development strategy would then be prepared. The strategy is a long term one for a 15 year period guided by short term planning and implementation plans including the PRSP, the national development plan and the sessional papers. If well implemented, the strategy will form a road map guide for the government, private sector, religious groups, NGOS rural communities and their organizations.

2. The strategy paper proposes the following interventions:

- ♦ Develop modalities for devolution of power and responsibilities to the local authorities
- ♦ Strengthening the quality of planting materials, agrochemicals and fertilizers
- ♦ Develop efficient marketing systems for crops and livestock
- ♦ Improve technologies that improve water use efficiency
- ♦ Strengthen Early warning systems and disaster preparedness
- ♦ Establish sustainable funding systems for research
- ♦ Strengthen extension delivery and participation of service providers
- ♦ Develop the rural micro industry
- ♦ Improve capacity of trade negotiations.
- ♦ Improve access to rural finance
- ♦ Develop Tourism and eco-tourism in the rural areas.

- ♦ Implement land Reform policies
- ♦ Increase awareness of HIV aids pandemic
- ♦ Gender equity
- ♦ Enhancing policy, institutional and legal framework,
- ♦ Improvement of the rural sector physical and social infrastructure,
- ♦ Improvement of governance, public security and rule of law
- ♦ Establishment of Kenya Rural Development Strategy Trust Fund (KRDSTF) to oversee the implementation of the strategy
- ♦ Development of Rural Development Co-ordination Unit (RDCU) to be responsible for developing a KRDS implementation and programme.

3. The KRDS is a comprehensive policy on rural development that goes beyond agriculture productivity. It also involved wide stakeholder consultations and can therefore be considered to represent their views and aspirations for growth and poverty reduction in the rural areas. It also benefited from ideas of renowned rural development specialists and local experts. But the strategy lacks focus as promises to alleviate all the constraints affecting rural development and the economy. It would have been more focused if it provides a priority of the items things to be done coupled with their budgetary implication. This strategy should also have phased out the interventions giving priorities to those that may have limited budgetary equivalents and ending with those requiring huge budgetary provisions. The Strategy also proposes the formation of a rural development Trust fund to oversee the implementation of the strategy. It is recommended that members from the private sector, the civil society and the government itself manage the fund. Whereas it may appear feasible because of the difficulties of identifying the parent ministry for the strategy, it adds another bureaucracy to rural development. The idea also seems to copy the Rural Development Fund in the treasury that has been used to divert money meant for the ministry of agriculture to politically correct projects. Once the priorities for rural development under KRDS are identified, the money should be channelled through existing institutions although still there is need to appoint a parent ministry for KRDS, i.e. one that is accepted by all the other ministries.

4. The success of KRDS is subject to other initiatives that are beyond its control or that of the Ministry of agriculture and rural Development. For example, the devolution of powers in order to give the local communities the responsibility of identification, implementation and monitoring of rural development through their local authorities dependent on whether this idea is accepted within the current constitution review. Similarly, the implementation of new land use policies that are identified as necessary for improving agricultural productivity is subject to the work of the Land Commission whose findings have not been made public. The problem with such an arrangement is that without the knowledge of t the outcome of such decisions are, it may be difficult to predict how successful the strategy will be.

Chapter 4

4.0 What prevents or encourages Growth of the Rural Economy

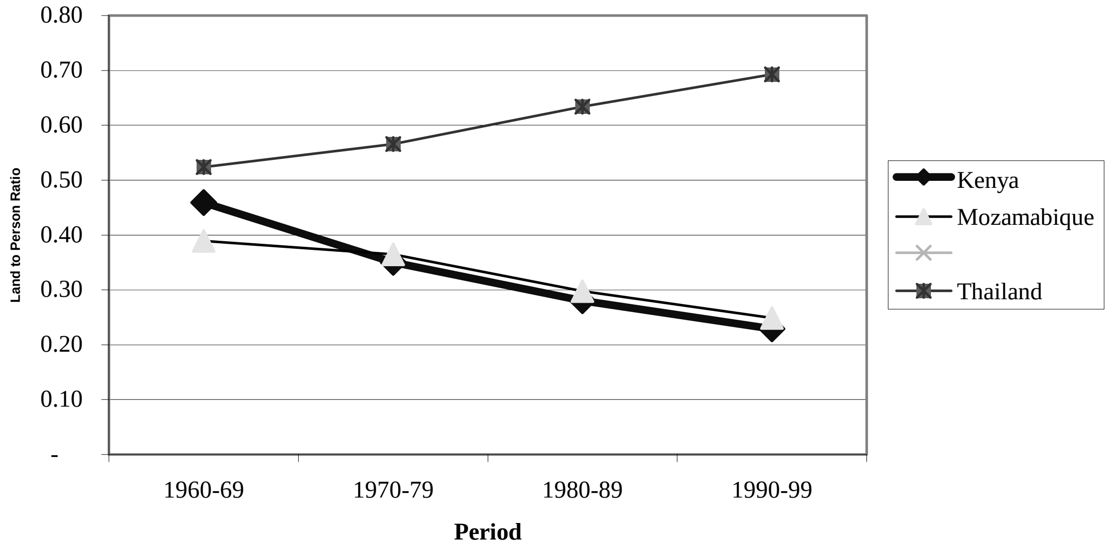
The key factors that encourage or hamper the growth in the economy and the rural sector includes access to productive resources by the poor, supportive policies by the government that facilitate the private sector investments, pubic investment and maintenance of infrastructure, maintenance of an export led and food security strategy, participation of farmers and other stakeholders to policy formulation and access to credit and other rural finance services. These factors are discussed in detail as follows:

4.1 Access to Productive Resources by the poor

1. Access to productive resources is one of the factors that encourage the rural economy. In the first decade of independence for example, agricultural sector grew rapidly at an average rate of 4.9 percent per annum. Similarly, export crops grew rapidly to the extent that they outpaced the growth rate of the overall domestic economy thereby increasing the export revenue. This scenario accelerated the growth of the national economy at 6.7 percent per annum. This agricultural performance spilled over to other sectors of the economy leading to marked improvement in the well being of the population. The rural economy had access to basic social services. The policies adopted within this period were very successful and resulted in a rapidly growing agricultural sector. The growth in the rural sector was attributed to land reform policies, support of agricultural production and marketing, public investments in infrastructure, research, extension and other government services. The poor accessed land through major land reform policies that saw the subdivision of large-scale farms. The government distributed a considerable amount of land to small-scale farmers in the high and medium potential areas, which previously belonged to European large-scale farmers through the million acre schemes, Haraka and jet schemes. By 1976, about one third of the large-scale mixed farms had been officially sub-divided for small-scale farmers (Senga, 1976). The result of the land distribution enabled small-scale farmers to produce commercial crops such as coffee, tea, maize and wheat, which resulted in commercialisation of the small-scale sector.

2 In Kenya, the ratio of land under cultivation to agricultural population, which is a rough proxy for per capital farm size, has been shrinking gradually and consistently. The land to person ratio has reduced by half in the last 40 years (Figure 7). The agricultural labour force is increasing faster than can be accommodated by the existing high potential land because the rural households are unable to leave to find more remunerative employment in the industrial and service sectors. The landless are also engaged in the agricultural related activities. Hence sustained income growth for the rural poor is likely to depend on agricultural growth.

Figure 7. Cross Country Comparison of Land to Person Ration



4.2 Supportive Government Policy

1. A supportive government policy is another factor that encourages growth of the rural economy. The impressive performance of the economy between 1972 and 1974 is attributed to supportive policies by the government that was followed by resource allocation in the prioritised areas. The government put incentive structures whose goal was to promote production of specific commodities in line with the stated development goals and targets. For example, policies on maize production were geared towards attaining self-sufficiency. To support this policy, the government made sure that the domestic production was protected against competition imposed by imports. This goal was attained albeit at high cost. Nevertheless, the policies maintained were consistent. Similarly, the government needs to have supportive policies that could stimulate investment by the private sector. This case has also been exemplified in horticultural sector where minimum government intervention coupled with policies that encouraged allocation of foreign funding to the sector made it realize impressive results at a time when every other sector was declining.

2 The coffee industry is a good example of industries that has fallen because of the poor government policies when compared to horticulture. The performance of the two industries is shown in Appendix 2. Both of these commodities were produced for exports. However, due to minimum interference by the government in the horticultural sub sector and the supportive policies that encouraged the private sector investment, export earnings increased from Ksh 1.1 billion in 1985 to about Ksh 15 billion in 1999. As a result, coffee was relegated to the third position as an export revenue earner. In contrast, the heavy government interference in the management of the coffee industry through the Coffee Board of Kenya and the cooperative societies caused coffee production to decline from about 130,000 tons in 1987/88 to about 50, 000 tons in 2000. Export earnings increased

marginally between 1993 and 1997 and decreased by 30 percent between 1997 and 2000. Detailed reasons as to why horticulture is considered a success story and whether this approach can be adopted in other sub-sectors is shown in a box in the appendices.

3. The government policy direction also needs to be predictable so that the private sector could invest with confidence. Economic reforms undertaken have not been backed by legal reforms. This resulted in disparities between the general government policies on the liberalization and privatisation of the economy and the legal provisions. In such cases, conflict arose hence making the reform policies invalid where such inconsistencies occurred. This implies that liberalized market policies for production, processing and marketing of most agricultural commodities (e.g. maize, milk, coffee and sugar) have been implemented although the laws which previously gave powers of monopoly and control of the sector to public institutions, have not been repealed. Legally, only the state corporations continue to be recognized as bona fide marketing institutions. This in some cases has allowed reversal of policy direction, which has adversely affected investment decisions by the private sector and cooperatives. The liberalization of seed marketing before putting in a legal framework to regulate the seed industry has also resulted in production of poor quality seeds thus adversely affecting crop production. Lack of credibility on certified a seed has forced farmers to use own seed instead of the certified ones. Out of a total of about 65 acts of parliament, on agriculture, the government has only managed to review 4 Acts in cotton, tea, coffee, sugar

4. The government needs to put in place a legal framework that offers security to private investment. In addition, the government therefore need to put in place policy mechanisms that could nurture the political and legal foundations of marketing systems i.e. strengthen mechanisms of specifying and enforcing contracts, raising the costs of contract non-compliance, and more pluralistic procedures for developing the rules governing market activity. A well-functioning legal and political framework for market activity reduces the risks and transaction costs of private trade. These measures are important adjuncts to developing reliable markets, and inherently involve strengthening the regulatory abilities of the state rather than "getting the state out of market regulation". In general, it implies a reorientation of the state from "control" activities to "facilitation" activities designed to reduce transaction costs of inputs, credit, and commodities handled by farmers and traders. **The government needs to be assisted to accelerate the legal reform thereby reducing the backlog of the legislation that is needed to legalize market reforms.**

5. The government policy also needs to support producer organizations to increase their bargaining power, enjoy economies of scale of operation and thus improve individual profits. Kenya benefited from the support of cooperatives initially because they played such a significant role that they at one stage were quoted to contribute about 45 percent of agricultural GDP. Clearly, the impressive agricultural performance recorded between 1960s and 1970s and the associated rural development was largely as a result of complementary policies by government to support producers through various agents.

4.3 Investment and maintenance of Infrastructure

1. To attract private investors and increase returns to government investment there is need to invest in rural infrastructure. During the first decade of independence, the government invested to improve the rural access roads in the coffee and tea production areas. As a result, transportation costs were reduced, farm gate prices improved, crop losses were

minimized and ultimately farm profitability increased. The Kenya Tea Development Authority was in charge of repairing the tea roads to ensure that leaf was collected throughout the season. Similarly, support for agricultural research is necessary to ensure the development of high yielding varieties and related technologies. Such was the case between 1962 and 1974 when agricultural research was heavily supported by the government through the ministry of agriculture which spent about 10 percent of its annual budget on research; approximately 2.05 percent of the value added from agriculture (Heyer and Waweru, 1976). As a result there were major breakthroughs, particularly in the release of new high yielding varieties of maize and wheat. Similarly, research on cash crops such as coffee, tea, cotton and sugar were financed under a special research program by the government through the respective commodity boards. Kenya then had the highest adoption rates of hybrid varieties in Africa. Consequently high maize yields were realized. The government must also invest in effective extension programs in order to disseminate the information from research stations to the farms. In Kenya, agricultural extension expanded very rapidly both in quantity and quality. Within a period of 10 years between 1963 and 1973, the front line extension staff had increased from 3,500 to 4,500. The extension approach also focused on individuals and groups of farm visits. These methods were relatively effective in disseminating farm integrated project management that ensured soil and water conservation and crop rotation. **Although the government may need support to provide extension and fund agricultural research, past efforts by donor, have not influenced the government's additional support for research**.

2. Kenya's inefficient and dilapidated infrastructure discourages new investments and significantly reduces productivity and the profitability of the existing farms and business. The rural areas suffer from inadequate physical infrastructure that therefore hampers growth in the rural economy. Poor infrastructure hinders rural development because poor road network adversely influence agricultural productivity. Most roads in agricultural areas are impassable, especially during the rainy season. As a result, the potential in a number of high rainfall areas remain untapped. It also results in heavy losses due to wastage in the farms and deterioration of quality of the produce during transportation to the market. Furthermore, poor road network increases transportation costs for inputs and the produce thereby reducing the margins to farmers. Besides leading to wide regional price variations within the country, poor road network adversely affects the competitiveness of Kenyan produce in both the local and the international market. Telecommunication services also are inadequate, expensive and unreliable. This has hampered quick and efficient flow of information to farmers, traders, and other investors in the rural areas. Even where this is in place, it is out of order most of the time rendering it useless to investors. Similarly, electricity supply in the rural areas is inadequate thus limiting agro processing in these areas.

4.4 Export Led Food Security Strategy

It is necessary to raise incomes from export crops in order to make investments in agriculture. The high population growth rates and the fragmentation of agricultural lands to small parcels therefore call for investing in high value commodities that will facilitate the growth of household incomes. The linkages between the cash and food crops are such that a more productive agricultural export sector will spur economic growth thus contributing to improved incomes and employment. Similarly, increasing agricultural productivity of food crops will ensure that the bulk of food to the consumers is provided from local sources at prices comparable to those of imports. This ensures that cheap food is provided to the majority of the population and therefore guarantees trade without threatening the livelihood of most producers who also are consumers of the same food they produce. It is important to maintain a balanced food and cash crop production policy for both the food security and agricultural growth objectives. Recommendations of possible areas of intervention are discussed in section 2.6 under each commodity.

4.5 High participation of stakeholders in decision-making

Participation of stakeholders in decision-making including the investment decisions and implementation of the identified projects encourages growth of the rural economy. This is because most often than not, centralized planning and resource allocation leads to poor planning, budgeting, allocation of resources and implementation of development programs and projects. Capacity building and empowerment of the rural folk has been inhibited due to limited devolution of power. The resulting policies and projects do not address the key problems affecting development in specific communities. In essence, some policies such as liberalization and privatisation of some public services have been hurriedly formulated and implemented with serious consequences on producers and consumers. Among the sub-sectors and services that have been affected by the inadequate stakeholder consultations during policy formulation and subsequent abrupt withdrawal of public agencies are maize, cotton, coffee, tea, artificial insemination and livestock clinical services. Of the target groups, women, the youths and populations in ASAL areas are the most vulnerable and have been consistently left out of decision-making despite the key role they play in agriculture, food security and rural development. **Capacity for the local community to take up responsibilities for development has been quoted as one of the fears of devolution of powers. Support by the donor and building of social capability at the community level is important in ensuring the success of this process**.

4.6 Access to rural finance

Access to rural finance particularly credit to producers, processors, traders and transporters is necessary to encourage rural development. This is because the period between planting and harvesting is long. Sometimes it is in excess of one year like in the case of coffee. Providing the producers with working capital in the short run enables them to purchase yield-enhancing inputs. Similarly competition amongst traders has also been affected by lack of adequate working capital because of lack of credit. This has reduced competitiveness in commodity trading. Rural financial institutions encourage savings in those areas and stimulate off farm activities. **But the medium and small enterprise programme has been able to reduce the working capital constraints of most of the traders. Support of an agricultural credit system that is operated in an MSE model but one that considers risks in agriculture could alleviate some of the working capital constraints by producers,**

4.7 Unfavourable Tax

Kenya has a higher tax burden than most other African countries. The high tax burden restraints capital formation, employment and output (Wagacha, 1998). It reduces the current and future output, employment and standards of living. In agriculture inputs such as fertilizers, seeds and machinery are not taxed. However, high taxes on inputs including machinery, fuel, spare parts etc make agriculture less competitive internationally. High taxation also is ant- poor. It is also inadequately targeted; actually penalizing the very poor people. Kenyan food producers must content with tariffs on imports like wheat, maize and sugar done in pretext of protects domestic producers. Most smallholders even in major agricultural areas are net maize buyers throughout the year and are directly hurt by higher maize process. In 22 districts examined, 52 percent of farmers were net maize buyers and only 32 percent mainly in Kitale regions are net maize sellers. (Jayne et all, 2001). In reality, the tariff on imports penalizes consumers most of whom are farmers while it protects inefficient high costs producers.

4.8 High Costs of production

1. Domestic costs of production of key agricultural commodities are high compared to similar commodities from other countries. The production costs of maize, wheat, sugar and other food commodities are high because of low yields, high input prices, deteriorating infrastructure, high taxation systems on inputs like fuel, tyres, machinery and spare parts and inefficient markets. For example, in 1990, the cost of one bag of fertilizer was the same as one bag of maize. But by mid 90s, this ratio had become one bag of fertilizer costing three bags of maize thus making fertilizer use unprofitable for many farmers. In response to the high fertilizer prices, farmers applied sub optimal levels of fertilizer that combine poorly with hybrid maize varieties.

2. High domestic food production costs compared to imports create a "classic food price dilemma." This policy protects sellers of cereals -a relatively narrow segment of the rural population -it penalizes consumers who have to pay high food prices and is also inconsistent with international and regional agreements (Nyoro et al 2001). The high food prices also hinder the transfer of resources from food systems to other parts of the economy as it takes more resources from non-food sectors to purchase a unit of food. In addition, high food prices force consumers to demand higher wages, which makes industries and manufacturing less profitable and competitive internationally.

3. On exports and other commercial production, high domestic costs of key crops like coffee, pyrethrum, tea and export horticultural commodities have hampered the translation of the long-term comparative advantage into a competitive one. Traditional markets for these commodities are now being faced with stiff competition from other producers whose costs are lower. Where markets are not entirely lost, high production costs juxtaposed by declining world commodity prices have squeezed profits, ultimately rendering the production of these crops unprofitable.

4. Due to high domestic costs of production, the agricultural sector may not be fully prepared to cope with competition in the international trade although the government has signed the EAC, COMESA and WTO treaties. High costs of production in the domestic scene reduce the country's ability to compete in the international markets. There is therefore need to focus on increasing competitiveness locally by reducing the costs of production of a range of commodities including maize, wheat, rice, coffee and tea. Lack of a competitive edge in regional and international trade hampers the country's ability to make use of the extended Common market for Eastern and Central Africa and the East African community. Kenya's trade is 70 percent more than the trade of EAC combined while the total intra-COMESA trade is 50 percent more than of any other member country (Duarte and Neal, 1998). Kenya is also the dominant economy and the largest trader in the IGAD region. There is need to ensure that the factors influencing the costs of production are addressed to make Kenya tap the potential in the region.

5. Specific opportunities provided by AGOA and ACP-EU is opening up international market for the Kenyan products such as the preferential treatment accorded through the African Growth and Opportunities Act (AGOA). However the Cotonou ACP-EU is likely to affect the preferential treatment that Kenya enjoys on horticultural exports to the EU. There are fears that should this treatment be removed, Kenya is likely to face stiff competitions from countries in North Africa and Asia, which are more strategically positioned to the European market**. Support to improve market access and develop the agricultural exports further may be required if Kenya is to make full use of these opportunities.**

4.9 HIV Pandemic

HIV/AIDS pandemic threatens Kenya's agriculture and business sectors. It is estimated that 90 percent of HIV positive adults in Kenya are between the ages of 15 and 49; the age group that constitutes the majority of the labour force. The already declining level of agricultural production is threatened by the pandemic. Adverse effects of the disease include loss of labour supply due to deaths and absenteeism and a decline in productivity due to ill health, treatment costs and funeral expenses. In addition to direct costs, associated with the management of this disease is the related opportunity costs in foregone production; mortality and morbidity from the disease will likely result in labour shortages for both farm and domestic work and thus a decline in agricultural production. Declining food production and increased poverty are bound to follow in the wake of HIV/AID scourge. **There is need for support of awareness campaigns to reduce the rate of infection. Similarly, making the retroviral drugs to those already affected to could reduce the mortality rate. In the medium term, training additional people could be a strategy to replace those lost.**

4.10 Conflicts

Conflicts among population groups over political participation and resources have been critical to agricultural development. The infamous land clashes have left many casualties and displaced farmers. As a result, many people have abandoned productive activities. Such conflicts are destructive and aggravate poverty conditions in these areas. The government therefore must guarantee security and protection of property in order to spur agricultural productivity.

4.11 Vulnerability to Drought

Most of Kenyan agriculture is almost exclusively rain fed with very limited areas under irrigation. Drought has become a recurrent phenomenon in the country and the region; occurring once after every three to five years. Drought lowers agricultural production; depletes livestock herds, degrades rural incomes and thereby retard economic growth. Significant monetary and human resources are expended in response to drought. There is therefore need to develop an early warning system and quick response mechanism to reduce the negative effects of drought. Mechanisms of refinancing agriculture such as restocking and seeds need to be put in place as a strategy for recovery. Support in early warning systems and disaster preparedness could reduce the damage caused by these calamities. There is also need to make provisions for flood and drought relief supplies.

Chapter 5

5.0 Recommendations on the Way Forward

Rural development has important stimulating effects on overall economic development of the country. Improving the quality of life in rural areas therefore spills over to the urban centres. But at the same time, past investments in agriculture has been disappointment. Donors, multilateral agents have therefore reduced finding in agriculture. This has been regressive to the poverty reduction and economic growth. To overcome the disappointments in investing in agriculture, the investments need to be targeted to areas where there is evidence of potential growth. This section dissection discusses possible areas of intervention in the agricultural sectors.

5.1 Cross Cutting Interventions

- Build capacity for the local community to take up responsibilities for development has been quoted as one of the fears of devolution. Support of the process by the donor and capacity building at the community level is important in ensuring the success of this process.

- Support producers lobby groups such as the national farmer's unions or commodity specific groups that could link up with other private sector initiatives to advocate for change in the agricultural sector.

- Support to improve market access and develop the agricultural exports further may be need if Kenya is to make full use of these opportunities. This includes improving the negotiating capacity in international treaties.

- Increase the Ministry of Agriculture's capacity in policy analysis to increase the objectivity of policy changes and reform in agriculture. Similarly, there is need to support the ministry to hire legal personnel to assist to transform the policy documents and sessional papers bills for tabling in Parliament.

- Support the process of the legal reform to accelerate it thereby reducing the backlog of the legislation that is needed to make market reform legal.

- Strengthening the management of coffee cooperatives by supporting and financing management models. Support of such management models could be introduced to the cooperatives for a period. To improve their management. Experience from similar work with dairy cooperatives in some parts of Rift valley have shown that management and efficiency of the cooperatives_could be improved by contracting the management from the private sector.

- Support of awareness campaigns to reduce HIV/aid infection in the rural areas. Similarly, making the retroviral drugs to those already affected to could reduce the mortality rate. In the medium term, training additional people could a strategy to replace those lost.

- Support of an agricultural credit system that is operated in an MSE model but one that considers risks in agriculture could alleviate some of the working capital constraints by producers.

- Support development and multiplication of seeds and other planting materials because these are key to reducing costs of production.

- Support Technology development through encouraging the private sector participation.

- Support dissemination of technical information particularly by encouraging participation of other providers.

5.2 Specific sector intervention include:

- Providing coffee farmers with credit to support the rehabilitation of coffee farms.
- Exploring more markets particularly in Middle East and Europe.
- Modernizing KTDA factories to make them comply with the requirements from the markets particularly the social demands by the Tea sourcing partners of the UK.
- Supporting small-scale horticultural producers to comply with environmental, social, quality and safety requirements. This can be done through targeted extension provided directly with the assistance of the exporting companies.
- Supporting organization of small-scale producers into producers associations that are easy to be contracted by the private exporters and are also means through which information could be passed on.
- Support a credit scheme organized with a tripartite arrangement between the small-scale farmers horticultural producers, a donor and the exporting company that contracts producers.
- Supporting of the liberalization of the industry in to attract private sector investment.
- Support the production, multiplication and distribution of high quality planting materials that would increase yields and thereby reduce production costs.

- Supporting pyrethrum producer organizations that assists producers by providing credit and marketing
- Supporting development of technologies that facilities testing of the pyrethrin content close to the producers either at the farm gate or at the cooperative societies.
- Supporting Kenya Plant Health Inspectorate services (KEPHIS) to improve supervision and inspection of seed and fertilizer quality. The seed and fertilizer companies should also be supported to do self-regulation in seed and fertilizers so that they can appoint their own inspectors so that KEPHIS is left to supervise the inspectors from the seed companies.
- Supporting the establishment of collateralized credit for maize and wheat production through use of the warehouse receipts. This form of inventory credit could therefore reduce the need to sell all the maize after the harvest thus spreading out the sales and therefore encourage storage of maize Support introduction of credit schemes that are accessible to small-scale farmers through the SACCOS and micro financing organizations. Promotion of maize and wheat producer associations. The inventory credit particularly requires that farmers be organized in organizations.
- Supporting promotion of production of the non-hybrid maize varieties like the open pollinated and composite varieties.

- Supporting the Kenya Bureau of standards to assist producer organizations inspect and supervise feed formulation to ensure that feed standards are maintained. Currently, KBS is unable to effectively inspect the feeds due to mainly financial and human resource constraints.
- Supporting the establishment of cooperatives in areas where they do not exist and also strengthening them where they exist so that they can serve the dual role of financing and marketing. Cooperatives should also be supported to improve their management.
- Raw milk hawkers should be supported to improve the quality and hygiene of the milk they sell. Possibilities of linking the raw milk hawkers with the dairy processor could also be explored. The milk processors and the milk hawkers could therefore compliment each other instead of competing.

Appendix 1 Government Expenditure on Agriculture in Ksh Million

Year	Agriculture	Education	Health	Overall
1979/80	1,352	2,741	1,089	15,626
1980/81	2,174	3,526	1,306	19,441
1981/82	2,050	3,958	1,423	22,486
1982/83	2,114	4,129	1,394	23,814
1983/84	1,876	4,401	1,526	24,849
1984/85	2,810	5,190	1,596	29,665
1985/86	2,963	6,594	1,854	33,115
1986/87	4,689	7,930	2,205	41,770
1987/88	2,940	9,136	2,363	44,396
1988/89	3,498	10,662	2,780	59,334
1989/90	3,377	11,299	2,887	65,263
1990/91	3,919	13,739	3,458	82,127
1991/92	4,240	14,444	3,800	88,897
1992/93	6,618	17,096	4,645	123,339
1993/94	9,270	21,393	6,541	180,154
1994/95	7,532	28,276	7,016	184,111
1995/96	7,731	31,813	9,115	183,592
1996/97	6,963	33,483	10,568	183,741
1997/98	7,775	46,226	12,884	315,137
1998/99	9,466	47,225	10,450	242,741
1999/00	7,696	47,493	10,054	223,643
2000/01	11,097	50,739	13,501	327,410

Source: Various Economic Surveys

Appendix 2 Horticulture and Coffee Production and Exports

Year	Coffee Export (Tonnes)	Coffee Value Ksh. Billion	Horticulture Export Volumes (000 Tonnes)	Horticulture Value Ksh. billions	% Export Contribution of Coffee	% Export Contribution of Horticulture
1980	80,066	2.16			22	
1981	86,108	2.19			21	
1982	100,968	2.89			26	
1983	90,444	3.21			25	
1984	96,902	4.07			27	
1985	104,668	4.61	85	1.06	30	7
1986	123,044	7.77	110	1.32	41	7
1987	107,067	3.89	137	1.54	26	10
1988	77,509	4.89	152	1.90	27	10
1989	100,684	4.08	134	2.24	20	11
1990	121,217	4.42	189	3.20	18	13
1991	98,964	4.37	169	3.70	14	12
1992	84,714	4.13	153	4.18	12	12
1993	84,714	11.03	151	6.44	15	9
1994	87,587	13.06	65	4.94	16	6
1995	79,518	14.44	72	6.40	16	7
1996	113,729	16.43	85	7.70	14	7
1997	83,360	16.86	84	9.00	15	8
1998	48,358	12.82	78	14.94	11	13
1999	71,581	12.03	99	14.20	10	12
2000	86,982	11.71	99	13.89	10	12

Source: Various Economic Surveys

Box 1.Horticulture Success Story

The growth of export horticulture in Kenya is an example of a successful and contrasts control and liberalization of markets. In a recent survey of experts asked to identify success stories in Africa by IFPRI, horticultural exports in Kenya was third most common cited success case. This is because the sector has recoded tremendous growth over the past 20 years.. For example, fruits and vegetable grew from US $ 17 million in 1974 to US $ 155 million in 1999. Similarly export of cut flowers to Europe has grown to such an extent that between 1995 and 1999 exports of cut flowers from Kenya to the UK increased from 11 to 20 percent of the total flowers exported to Europe within the same period. The biggest questions been why export horticulture has been so successful in an economy where the performance of most other commodities like coffee, pyrethrum, sugar, maize etc have actually been poor. Can the success lesson from export horticultural case be copied to other commodities or is this just an isolated and unique case? This has been a key concern by both government and donor agencies. This section identifies the factors behind this success

First, the horticultural sub sector has not been subjected to the type of controls that other commodities were subjected. The horticultural Crops Development Authority, which was established in 1967, did not play a direct role in the buying and selling of the horticultural crops like was the case for most other commodities. Most of these other parastatals were often granted a legal monopoly in the marketing of commodities they dealt with. Fortunately for horticulture, HCDA played a mere regulatory and facilitative role that coordinated the various players in the industry. It is therefore noted that the fact that HCDA did not attempt to directly manage and control horticultural trade probably allowed the sector to develop more rapidly) Kimenye (1995).

This policy environment attracted both the local private and international companies. In 1968, for example, Del Monte, the Kenya canners entered the local market to produce canned pineapples. Similarly, large flower production firms like the Home grown, Salaams, Osererian Development Company Limited, entered the market to invest in the large-scale flower production. This therefore stimulated the foreign capital investment at a time that other agricultural commodities were depending on increased government investment. According to HCDA, as at 2001, multinational companies controlled about 64 percent of the flower and vegetable markets. There was also an increase in the local investment in export horticulture staring from the mid 70s. The local investment was mainly from the prominent politicians and senior civil servants who could be cushioned from the investment risks. The entry of the prominent local investors who also were involved in policy decisions stimulated the need for maintains the freedom of investors. During the era of foreign exchange control, horticulture was favoured and was therefore allocated the foreign exchange to buy capital, import planting materials and other related inputs. This preference stimulated further the investment in the sub sector. Developments in the international market also stimulated the development of horticulture in the local market. The exodus of the Asians from Uganda to the UK contributed to the growing Asian community thereby increasing the demand for Asian vegetables. Kenya offered several advantages as a source of Asian vegetables because this could be available throughout the year. Similarly, the Asian Community in Kenya meant that there were family and social ties between Asian traders in London and those in Nairobi thus reducing risks and transaction costs in expanding this trade.

Export horticulture also benefited from the development of Nairobi as a regional hub and an important tourist destination due to the growing tourism industry. The southbound passenger planes increased that air freighted the fresh produce using the cargo capacity of passenger jets, which was cheaper than chartering planes for this purpose. The other advantage of export horticulture was in the promptness in payments. The turn round time between harvest and payment is short compared to other commodities like coffee and tea that requires processing before they are ready for the market. The fresh exports can reach the markets 48 hours after the harvest and payments can be made within 5 days pf the harvest. This thus facilitated financing by commercial banks due to reduced risks compared to other crops.

Lessons leant.

- Lack of government intervention private investment
- Facilitation by government in the provision of research, extension and encouraging self-regulation
- Attraction of direct foreign investment compared to donor aid
- Maintaining explicit policies that encourage a variety of private institutions to develop.
- Prompt payments
- Flexibility and promptness in taking opportunities in the markets including shifting tastes strictness in requirements in shape, width, length, colour, degree of ripeness, texture and flavour of fruits and vegetables like in the case of Asian Vegetables and flowers.

Specific Terms of Reference

Macro Economic Structure

Discussion paper 1: Macro structure of agriculture in the Kenyan economy. Main issues to be covered are:

- Components of GDP, sector, contribution and trends;
- Components of agricultural GDP, sub-sectors and trends;
- Contribution of agriculture to export earnings and GOK revenue sub sector and trends;
- Identify the key government, semi governments and private agricultural institutions, including identification of the key players, their value, contribution and ownership and how their roles have changed over time. Such organizations must include those that are dealing with credit, marketing, trading, production, research, extension, local government issues, input suppliers and stockists among others.
- Structure of agricultural production: relative roles of small and large producers in agricultural production (exports and staple crops)
- PRSP Priorities
- KRDS situation
- Identify and discuss the key institutional and legislative issues affecting the rural economy and highlight how these have changed in the recent year and possible impacts of such changes
- Discuss the GOK expenditure in sectors such as Agriculture and Natural Resources.
- Identify the key factors that either prevent or encourage growth of the rural economy. Example from past experiences of growing or falling examples should be provided
- Identify constraints to agricultural growth and where possible prioritise such constraints according to their direct or indirect impacts to poverty alleviation

8. Discussion paper 2: Micro Foundation of the Rural Economy

Based on existing work and research,

- Identification of who the poor are in the rural areas.
- How do they live?
- What do their livelihoods consists of?
- Balance between agricultural and non-agricultural based work
- Identify their food economy
- Connections between micro foundations and macro/institutional issues?

9. Seminar on DFID Programming

Together with the DFID staff and based on the Macro and Microanalysis above and in a workshop setting we shall endeavor to:

- Identify the practical priorities for actions that will clearly lift people out of the existing poverty and increase the rural people's incomes.

- Identify the short, medium and long-term actions that need to be undertaken.

- Identify the role donors can play to achieve the poverty reduction/income growth objectives.

- Identify what other donors are involved in this process.

- Taking cognisance of the programs that DFID is involved in, identify whether this programming fits in within the priority actions already identified.

- Based on this, identify and recommend whether the existing actions by DFID are a priority and whether they should be continued/widened or deepened. A recommendation will also be made on the programs if any that should be discontinued or identity any new programs to be started.

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