Facilitating Equitable Agriculture Development

The case of Kenya

Facilitating Equitable Agriculture Development in sub-Saharan Africa

The Case of Kenya

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AFC	Agricultural Finance Corporation
AgGDP	Agricultural Gross Domestic Product
ALRMP	Arid lands Resource Management Project
ARD	Agriculture Rural Development
ASALs	Arid and Semi Arid Lands
ASCU	Agriculture Sector Coordination Unit
ASDS	Agricultural Sector Development Strategy
ASIP	Agriculture Sector Investment Programme
ASPS	Agricultural Sector Programme Support
CAADP	Comprehensive African Agriculture Development Programme
CBOs	Community Based Organizations
CBK	Coffee Board of Kenya
CKDAP	Central Kenya Dry Areas Programme
CRF	Coffee Research Foundation
CoDF	Coffee Development Fund
COMESA	Common Market for Eastern and Southern Africa
DANIDA	Danish International Development Agency
DFID	Department for International Development
EAC	East African Community
GoK	Government of Kenya
GTZ	Germany Agency for Technical Cooperation
HCDA	Horticultural Crops Development Authority
HDP	Horticultural Development Programme
IFPRI	International Food Policy Research Institute
IFAD	International Fund for Agriculture Development
ILRI	International Livestock Research Institute
IMF	International Monetary Fund
KAPP	Kenya Agricultural Productivity Project
KARI	Kenya Agriculture Research Institute
KCDA	Kenya Cotton Development Agency
KEPHIS	Kenya Plant Health Inspectorate Services
KEPSA	Kenya Private Sector Alliance
KFA	Kenya Farmers Association
KIHBS	Kenya Integrated Household and Budget Survey
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KPCU	Kenya Planters Cooperative Union
KRDS	Kenya Rural Development Strategy
KSC	Kenya Seed Company
KTDA	Kenya Tea Development Authority
MENR	Ministry of Environment and Natural Resources
MoA	Ministry of Agriculture

MoCDM	Ministry of Cooperative Development and Marketing
MoL	Ministry of Lands
MoLD	Ministry of Livestock Development
MoFD	Ministry of Fisheries Development
MoRDA	Ministry of Regional Development Authorities
NALEP	National Agriculture and Livestock Extension Programme
NARC	National Rainbow Coalition
NASEP	National Agricultural Sector Extension Policy
NCPB	National Cereals Produce Board
NFNP	National Food and Nutrition Security Policy
NEP	National Extension Programme

1. Introduction

In the discussion of the role of agriculture in economic development, a question is how agriculture contributes to economic growth, and especially to pro-poor growth. There seems to be a paradox in the role of agriculture in economic development, because as it is, in most developing countries, the share of agriculture contributing to gross domestic product (GDP) is declining (World Development Report (WDR), 2008). Hence most observers today now agree that the agricultural sector contributes to economic growth, but that economic growth reduces the role of agriculture in terms of GDP (Meijerink and Roza, 2007). In most developing countries where agriculture is still significantly contributing to GDP, employment and food availability, it is argued that it can significantly contribute to economic growth and subsequent development.

The importance of agriculture in Kenya cannot be uderestimated. The sector directly contributes 23 per cent to the GDP and 25 per cent indirectly, down from 38 per cent at independence (1963). The sector also accounts for 62 per cent of the total national employment with 630,000 formal sector jobs and 3.7 million small and micro enterprise sector jobs either in agro-processing and agricultural services, and more than 7 million farmers constituted by smallholders, subsistence and commercial farmers. The industry directly supports 80 per cent of the rural population for their subsistence. The development of agriculture is also important for poverty reduction since most of the vulnerable groups like pastoralists, the landless, and subsistence farmers also depend on agriculture as their main source of livelihoods. Rural poverty in Kenya appears to be deeply rooted and associated with agriculture and land, whereas urban poverty is more linked to how incomes are generated. According to the recent statistics from Kenya National Bureau of Statistics (KNBS) and Kenya Integrated Household Budget Survey (KIHBS) of 2007, poverty in Kenya can be attributed to low agricultural productivity and poor marketing; unemployment and low wages; and inaccessibility to productive assets, particularly land and poor infrastructure among others. Growth in the sector is therefore expected to have a greater impact on a larger section of the population than any other sector and as such, the performance of the economy is always related to the performance of the agricultural sector even though its contribution in the economy has reduced by 15 percentage points in the last 4 decades. Therefore, whenever agricultural GDP declines, overall GDP for the whole economy correspondingly declines and vice versa (Figure 1.1) (ASDS, 2009).

Furthermore, the sector is very important for ensuring not only food security but also food availability and plays a major role in stabilizing food prices. In the recent years, however, Kenya has failed to meet its food requirements largely because of low productivity, lack of redistributive mechanisms from areas of surplus to areas of shortages, as well as poor marketing and poor infrastructure (Otieno, 2011), with the most severe shortage being in the months preceding July and August 2011 when many died as a result of drought in the northern parts of the country. As a result, for the past decade the country has relied on food aid in order to meet its shortages. Kenya is also a net importer of food especially from the nearby region – specifically, Tanzania, Uganda, Malawi and South Africa.

The poor performance of the agricultural sector and particularly its declining productivity has been identified as an important determinant of poverty in Kenya. Suri *et al.* (2008) show how the source of income has really mattered for poverty over the decade. For example, in their econometric analyses they find that among other factors, the main source of cash income being farm *kibarua* (casual work) is negatively correlated with poverty. They find that cultivating more land, using fertilizer, belonging to a producer group, and having access to credit remain important..

Declining agricultural productivity in Kenya has led to food shortages, underemployment, and low income from cash crops and poor nutritional status, which has further reduced labour productivity (Odhiambo *et al*, 2004). A 2005/2006 nation-wide survey, the KIHBS found that 46 per cent of the total Kenyan population is absolutely poor, whereas 49 per cent of the rural population is absolutely poor (KNBS, 2007). Kenya still depends on agriculture and livestock directly for 26 per cent of its GDP; 67 per cent of livelihoods in the rural areas. Moreover 80 per cent of agricultural production is done by low-income small-scale farmers providing livelihoods directly and indirectly to numerous rural folk. The agricultural sector is therefore one of the most crucial sectors for rural livelihoods and consequently for development. More so, this is important for Kenya's transition process during which the relative importance of agriculture to the overall economy declines as industry and services grow. However, this is not possible unless agriculture itself grows rapidly to provide investments and effective demand for rural non-farm goods and services (Karugia *et al.*, 2010).

From the foregoing, we can say that in Africa agriculture development has the potential to substantially contribute to inclusive and broad based growth, as well as poverty reduction; however, for this to happen the following conditions need to be met:

- Increase in productivity and production to generate "marketable surplus"
- Requisite infrastructure and trade facilitation measures to transform the "marketable surplus" into "marketed surplus"
- An enabling environment for healthy interaction between farmers, the private sector, investors and traders.

All the three conditions are important and should be addressed holistically. National governments and their development partners are giving attention to the first two conditions above, however the third condition often remains neglected. Productivity-enhancing initiatives would improve the "endowment set" of a farmer-household but in order to make use of that and to improve the corresponding "entitlement set"; "positive terms of trade between the farmers, investors and traders" need to be improved and hence the gist of this study entails this third element, which is identifying and promoting elements of an enabling environment for positive interaction and equitable terms of trade among farmers, investors and traders that can lead to inclusive agricultural development in Kenya.

1.1 Agriculture Sector in Kenya: An Overview

1.1.1 Trends in Agricultural growth and Economic growth

During the early post-independence period (1964-1973), there was impressive economic growth rate of 6.6 per cent of GDP which was largely driven by agriculture through the expansion of cultivated area; increase in yields following the adoption of high yielding maize and wheat varieties; and agronomic research in tea and coffee and heavy government investments. This was followed by a period (1974-79) characterized by lower average economic growth rate of 5.2 per cent (Odhiambo *et al*, 2004). This was matched by a plummeting agricultural growth rate due to various factors including the oil shocks of 1973 and 1979;

fluctuations in international commodity prices of key agricultural exports like coffee and tea; poor implementation of projects by the government; as well as the collapse of the East African Regional Agreement in 1977 (Ibid; Gitau *et al*, 2008).

The period starting from 1980s was characterized by the implementation of Structural Adjustment Programmes (SAPs) which pushed for liberalization, privatization and deregulation saw the dismantling of agricultural support systems such as marketing boards and cooperatives resulting in a decline in average economic growth to 4.1 per cent (see Nyangito and Karugia, 2002; Karanja *et al*., 2003). The period 1990-1993 even saw a further declining in both economic and agricultural growth - typically 2 per cent due to liberalization where foreign exchange and interest rates were liberalized, input and commodity prices were deregulated, trade barriers removed, and some state-owned enterprises sold. In addition, maize meal prices were deregulated, subsidies eliminated and in 1992, all price controls on food and agricultural inputs were removed (Nyangito and Kaurgia, 2002). These were coupled with poor economic management that led to high inflation and interest rates (Mwega and Ndung'u, 2002). Economic growth improved in the period 1994-1997 as a result of favourable weather conditions, favourable commodity prices and a buoyant world demand for agricultural products. However, this recovery was not sustainable - there was a downward growth trend after 1996 reaching a low of negative 2.4 per cent and 0 per cent respectively in year 2000. In the period 2003-07, a new government came in place with a commitment to improved economic and political governance. During this period, the economy grew from 1.8 per cent in 2003 to 6.1 per cent in 2006. Similarly, the agricultural sector registered an improved growth rate of 5.4 per cent in 2006 from 1.5 per cent in 2003. These gains were however reversed following the 2007/8 post-election violence and the financial crisis in 2008 which saw a negative growth of -2.5 per cent, followed by a slight recovery in 2009 that registered a growth rate of 1.9 per cent (Figure 1.1)

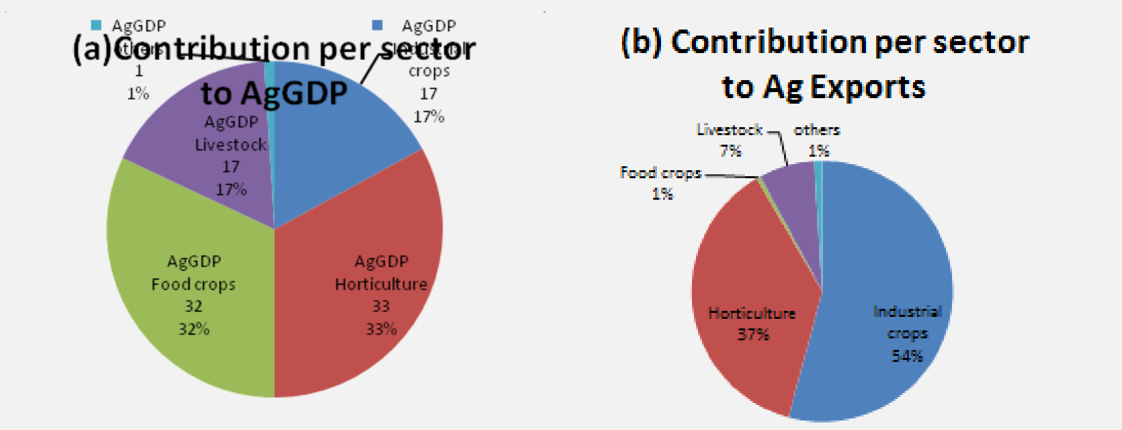
Figure 1.1: Trends in Agricultural and Economic growth in Kenya (2001-2009)

Source: Economic Survey, various issues

1.1.2 The Agricultural sub-sectors and their relative contribution to GDP

According to the Ministry of Agriculture, the sector comprises of six subsectors—industrial crops, food crops, horticulture, livestock, fisheries and forestry—and employs such factors of production as land, water and farmer institutions. Figure 1.2 (a) and (b) shows the contribution of the subsectors to Agricultural Gross Domestic Product (AgGDP) and agricultural exports. Industrial crops contribute 17 per cent of the AgGDP and 55 per cent of agricultural exports. Horticulture, which has recorded a remarkable export-driven growth in the past 5 years and is now the largest subsector, contributes 33 per cent of the AgGDP and 38 per cent of export earnings. Food crops contribute 32 per cent of the AgGDP but only 0.5 per cent of exports, while the livestock subsector contributes 17 per cent of the AgGDP and 7 per cent of exports. Livestock and fisheries subsectors have huge potential for growth (ASDS 2010).

Figure 1.2: Contribution of Agricultural Sub-Sectors to Agricultural GDP and Agricultural Exports (2009)



The agricultural sector in Kenya is dichotomised into large and small production systems. Overall, the small-scale sector contributes about 75 per cent of the country's total value of agricultural output and about 85 per cent of the total employment in the agricultural sector. It is estimated that there are about 3 million smallholder farms with an average of about 2 hectares in the country. Available statistics also show that the small-scale sector accounts for about 70 per cent of the total marketed output and provides most of the employment in the sector.

1.1.3 Poverty, Employment and the role of Agriculture in Food security in Kenya

About 80 per cent of Kenya's population lives in rural areas and relies on agriculture for most of its income. Nearly half the country's 40 million people are poor, or unable to meet their daily nutritional requirements. The vast majority of poor people live in rural areas. Although in some respect conditions have improved since the early 1980s, the poverty rate has remained steady at about 46 per cent in the past five years (Otieno, 2011). The causes of poverty and food insecurity in Kenya include high population growth rates, low agricultural productivity, inadequate access to productive assets (land and capital), inadequate infrastructure, limited well-functioning markets, high population pressure on land, inadequate access to appropriate technologies by farmers, effects of global trade and slow reform process. In addition, poor policies and subsequently poor planning results in available resources being directed to interventions that do not give sustainable impact (IFAD, 2011) especially in the agricultural sector and when issues of food security are concerned. In addition, the effects of climate change are undermining an already fragile resource base and have contributed to declining agricultural yields over the past decades. In recent years, drought has become a perennial problem in parts of Kenya. Episodes of drought in 2009 and 2011 generated food emergencies, while flooding in 2010 affected parts of the country severely. Rural women are a particularly vulnerable category because they do not have equal access to social and economic assets. Subsistence farming is the primary – and often the only – source of livelihood for about 70 per cent of these women.

1.1.4 Land Resource base and Tenure

Kenya's agriculture has a dual character as defined by altitude which dictates the amount of rainfall received. About 16 per cent of the country's total landmass is classified as having a medium to high agricultural potential on the basis of receiving at least 750mm of rainfall per annum (Irungu *et al.*, 2009). This potentially arable land is dominated by commercial agriculture with cropland occupying 31 per cent, grazing land 30 per cent, and forests 22 per cent. The rest of the land is used for game parks, urban centres, markets, homesteads and infrastructure. The rest of the country (84 per cent) constitutes the arid and semi-arid lands (ASALs). In the medium and high agricultural potential areas, agriculture is dominated by high value crops and exotic livestock breeds. While these areas experience minimal production risk, adverse weather conditions (e.g. long dry spells and hailstorms) occasionally constrain production. The more-or-less stable weather conditions result in more stable farm incomes and guarantee more secure livelihoods in these areas relative to other parts of the country. However, there is a high dependency on subsistence farming even in these areas as only about 30 per cent of agricultural households sell their farm produce (KIHBS, 2005/6). The size and distribution of land varies in different areas, with the arid and semi-arid lands having as low as 2 persons per square km, and high potential areas having as high as 2000 persons per square km. The rural–urban balance also stands at 78 to 22% per cent respectively (GoK – 2009: Kenya National Land Policy).

Land tenure in Kenya is classified into three broad categories, namely: communal land, government trust land, and the private land (owned land by individuals, groups or companies). Production is carried out on small land holdings averaging 2-3 hectares mainly for both dairy and beef subsistence and commercial purposes. Large-scale farming is practiced in Kenya on farms averaging 50 hectares and above, and accounts for 30 per cent of marketed agricultural production mainly covering tea, coffee, horticulture, maize, and wheat; as well as keeping livestock for commercial purposes. Over the years, Kenya has pursued a land tenure system in which ownership of land has evolved from customary land to individual and private ownership. Under the individualized tenure system, land is privately owned by individuals and this has led to fragmentation of land to very small uneconomical portions, especially in the medium to high potential areas, and a dominance of production by smallholdings. The average of about 4 million farms has been reduced to less than an acre due to fragmentation. These small holdings are uneconomical and hence have led to low yields in the high potential areas (Otieno, 2011).

1.2 Agricultural Economy, Production and Trade

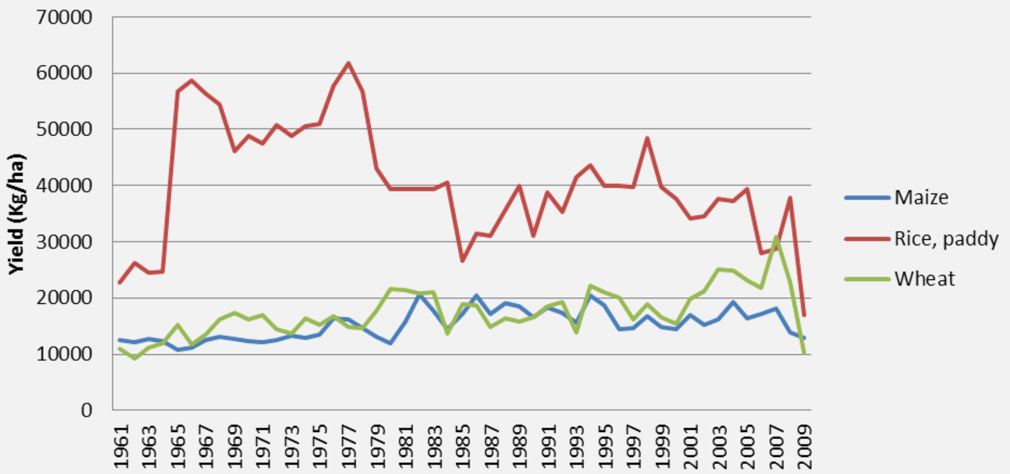
According to ASDS 2010, Kenya's agricultural economy is mainly based on 3 'types' of farming systems: smallholders, medium-scale farmers and large-scale farmers. Smallholders constitute more than 6 million farms ranging between 0.25-3 ha. Medium scale producers are more commercially oriented with farms ranging between 3-50 ha producing either for exports or for the domestic markets. Large scale producers have farms ranging between 50-6000 ha and the subsector accounts for

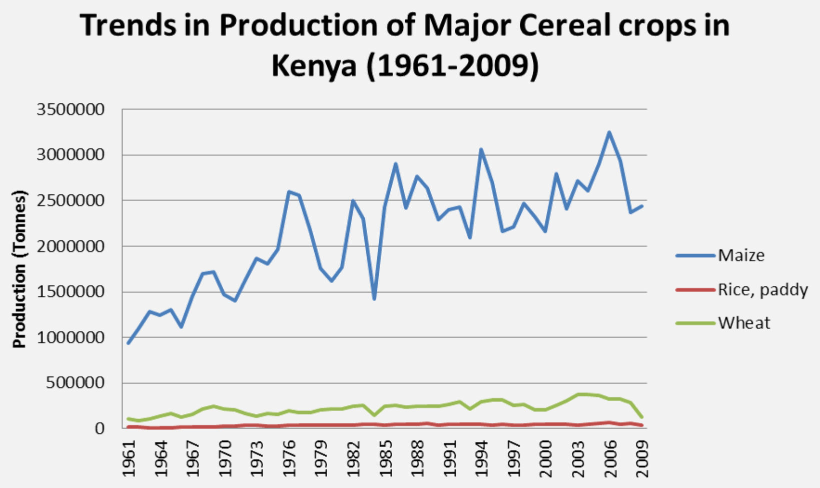
30 per cent of marketed agricultural produce, mainly involving growing crops such as tea, coffee, maize and wheat in addition to keeping livestock for commercial purposes. The use of improved technologies and better farm management has resulted in increased productivity per land unit in all categories of farming.

1.2.1 Major food crops

Kenya's agriculture is dominated by primary production of a few commodities namely cereals (maize, wheat and rice), traditional food crops (pulses, roots and tubers, millet and sorghum), industrial crops (sugar, pyrethrum, cotton, tobacco and sisal) some of which are also exported, exports crops (tea, coffee and horticulture) and livestock (milk, meat and eggs). Since 2002, most food crops have recorded increased production. Figure 1.3a and b give an overview of the trends in productivity and trends in production for major cereal crops maize, wheat and rice since 1961. Figure 1.3a shows that productivity in terms of yields in kg/ha has not increased over the years. In the past, this was attributed to the slow adoption of new production technologies and the failure for Kenya to adopt the green revolution. On the other hand, figure 1.3b shows that production has remained fairly constant for wheat and rice which indicates that the area under production for these two crops has not increased significantly. However, for maize the production has increased steadily over the years.

Figure 1.3 (a) and (b): Trends in Productivity and production of major cereals in Kenya (1961-2009)





Source: FAOSTAT Database

Maize production increased from 2.4 million tonnes in 2002 to 3.2 million tonnes in 2006. This reduced to 2.9 million tonnes in 2007. Maize production was affected by the post-election violence in 2008 which led to a drop in production by about 7.8 per cent and a marginal increase by 3.2 per cent in the year 2009/10 (figure 2.1). Wheat production has declined gradually over the years dropping from 4.1 million bags in 2005 to as low as 2.4 million bags in 2009 attributed to climatic conditions, unpredictable producer prices and high input prices. The production of rice almost doubled from 437,628 bags in 2006 to 844,036 bags in 2007 due to a 30 per cent increase in the area under cultivation, but this saw a drop in production levels in 2009/9 due to climatic conditions as well (Economic surveys, various issues)

1.2.2 Major Industrial crops

The industrial crops consist of traditional export crops and plantation crops which were introduced by settlers during colonization, and they are: tea, coffee, sugar cotton, pyrethrum, sisal, and sunflower. However, the major ones are tea, coffee, cotton and sugar.

- ***Tea and Coffee Subsectors***

The tea industry is one of the greatest successes in Kenyan agriculture. Tea planting and production have expanded rapidly since independence in 1963 from 18,000 tonnes and 24,448 hectares (in 1963) to 294,000 tonnes and 131,000 hectares in 2003. Tea production increased to 370,200 tons in 2007, while the value of exports increased from Ksh 34.3 billion to Ksh 47.3 billion in 2006, decreasing slightly to Ksh 46.8 billion in 2007. The value of coffee exports increased from KES 6.5 billion to KES 8.7 billion over the same period.

Figure 1.4 (a) and (b): Trends in productivity of tea and coffee

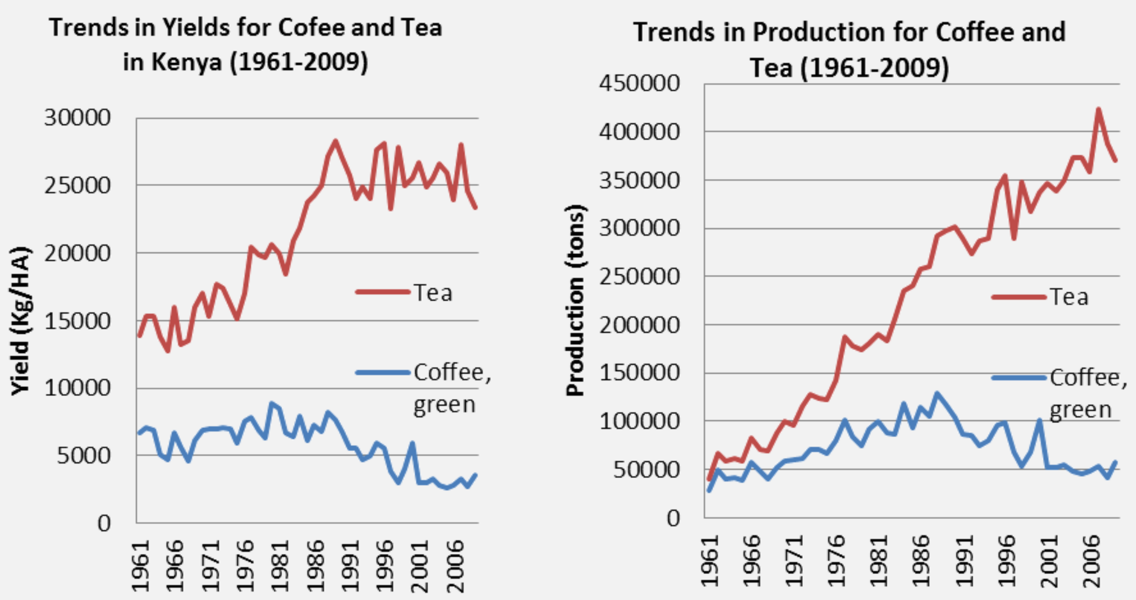
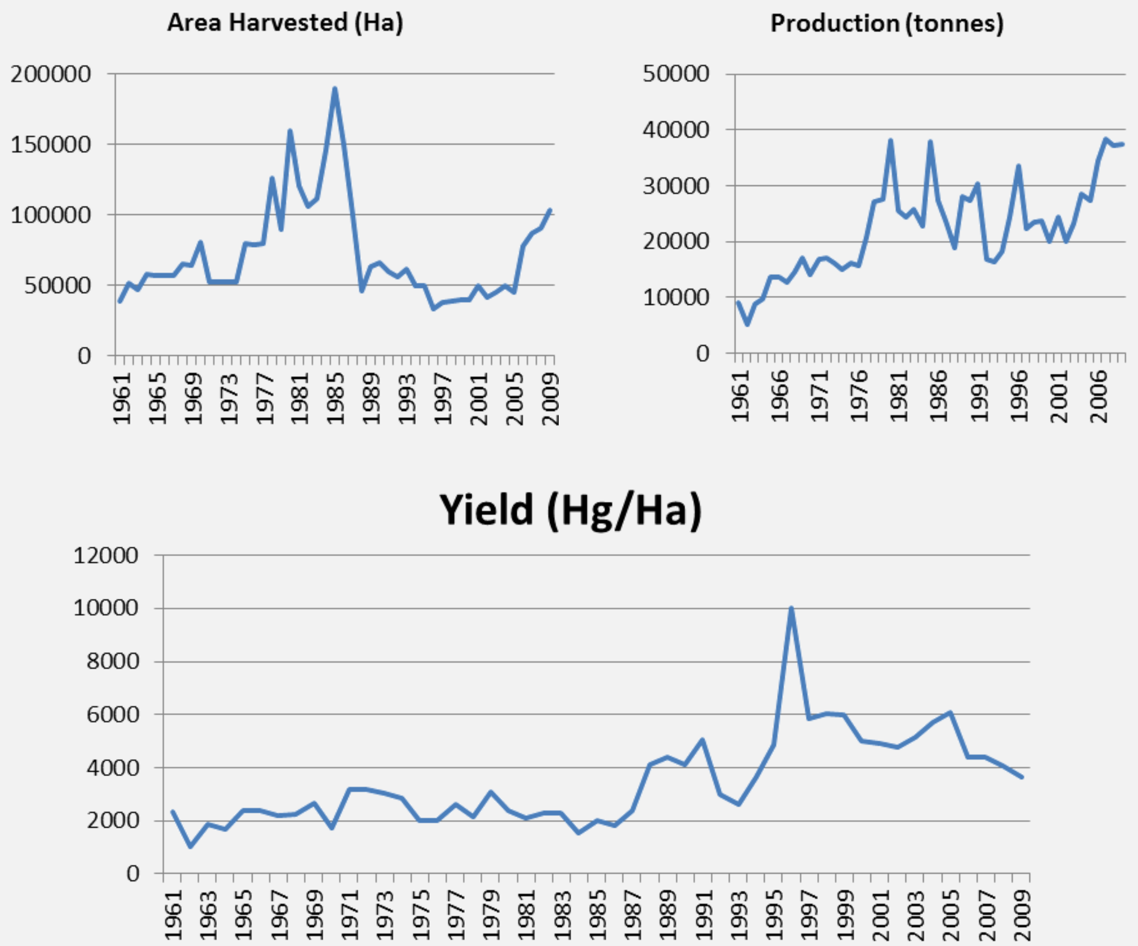


Figure 1.4 (a) and (b) give the trends of both production and yields which show that in the early years, the two crops were at the same level for both production and yields but over time, tea has been increasing in both yields and production while coffee has been declining in both yields and production. This was in part due to the government's concerted efforts in promoting tea production and investing heavily in tea sector through Nyayo Tea Zones since the mid 1980's which saw a marked increase in area under production as well as yields. The coffee sector has also declined due to poor investments in the sector, declining world prices, and abandonment of the crop in favour of horticulture which picked up in the early 1990's.

- ***The sugar subsector***

Sugarcane is a major cash crop whose performance has declined. Kenya produces about 400,000 tonnes of raw sugar annually while annual consumption is 600,000 tonnes, which necessitates importation to meet the demand. The main producers of sugarcane are smallholder farmers in Nyanza, Western and Rift Valley Provinces. Local sugar cannot compete with the imported one. Trends in the sugar sub-sector indicate an increase in area harvested and an increase in production over the years but a gradual reduction in yields, which means that poor technology as well as poor varieties may be a major cause of low yields. Despite the increase in production, sugar sector was largely neglected in the last few decades leading to many farmers abandoning sugar production. This was mainly a result of the government's poor investment in the sector as well as mismanagement of the sugar factories which saw some of them closed and/or put under receivership. Figure 1.5 (a) and (b) gives trends in productivity of the sugar subsector.

Figure 1.5 (a) and (b): Trends in productivity for sugar sector (1961-2009)



Source: FAOSTAT

Kenyan sugar is uncompetitive in international markets and the sector only survives as a result of tariffs which protect producers but put retail prices considerably above the world price. The problems the sector faces are representative of problems seen elsewhere in the Kenyan economy. Some of them are due to distortions and mismanagement that were enabled by import substitution policies and other protective practices. Protection provided a cover under which it was possible for the sector to continue functioning despite production being located in an inappropriate agro-ecological zone and despite bad management and corruption. This resulted, over the long term, in the indebtedness of both the out-grower institutions and mills, and low levels of production and processing efficiency.

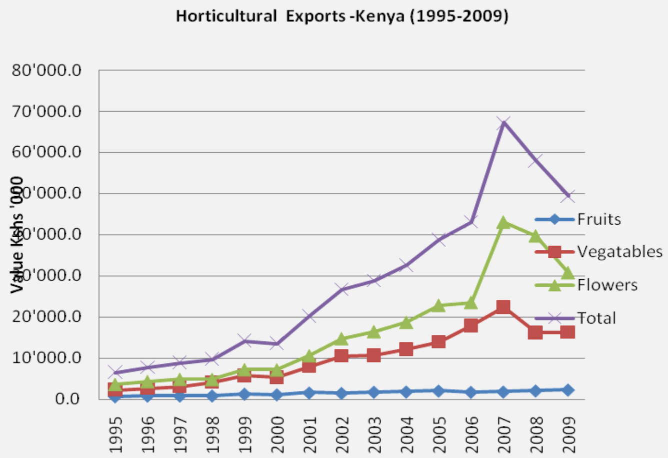
- ***Cotton Subsector***

The Cotton textile sub-sector was well established and grew tremendously in the era of import substitution in the 1960s and 70s when cotton and lint production was also at its peak. However, due to import liberalization in the 1980s and 1990s, there was an influx of imported textiles and garments (both used and new) which led to low demand of locally produced cotton products. This led to sector wide effects, which saw a reduction in cotton and lint production as well as local textiles and garments manufacturing, and closure of several key industries in the sub sector. It is estimated that about 70,000 jobs were lost by the year 1999 and many poor farmers lost their livelihoods - as is evident by a sharp decline in the area under production. Efforts to revive the sector in the last decade saw an establishment of the Cotton Development Authority (CODA), the renovation of some ginneries and resumption of production in some areas. Figures 1.6 (a) (b) and (c) give the productivity trends in the sector.

- ***Horticulture Sub-sector***

In Kenya, horticulture plays a vital role in development given the adaptability of a wide range of crops to different weather patterns in the country. It is an important source of livelihoods (including incomes and employment) for over 2.5 million people either directly or indirectly. Of this total, farmers engaged in semi or commercial horticultural production are in the order of 70,000 who produce both for the domestic and export markets. The sub-sector is a major source of income having generated products locally valued at 3.5 per cent of the overall GDP. It also contributes appropriately 13 per cent to the agricultural GDP. Despite the often sluggish overall economic growth in the last two decades, horticultural production has continued to show impressive growth trends – approximately 6 per cent per annum in the past 20-30 years – and has subsequently become one of the most important agro-food sectors to provide incomes to small-holders in Kenya. Trends in horticulture sector exports show a steady increase over the years and a slight decline in the year 2008 largely attributed to the post-election violence (Figure 1.7).

Figure 1.7: Trends in Horticulture exports by value (1995-2009)

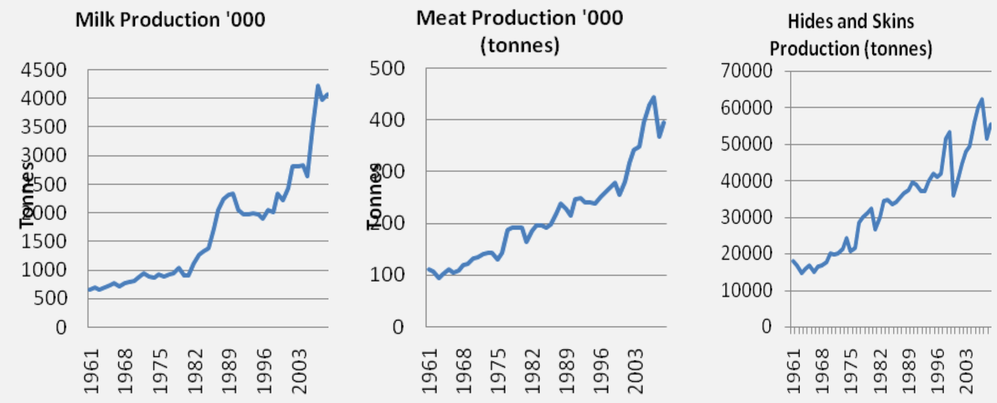


Source: HCDA

- ***Livestock sub-sector***

The livestock sub-sector contributes about 10 per cent of GDP and accounts for over 30 per cent of farm gate value of agricultural commodities. Livestock production is a major economic and social activity for the communities that live in the high rainfall areas for intensive livestock dairy production and in the ASALS for meat production. The population of major livestock species in 2003 is estimated at 9 million zebu cattle, 3.5 million exotic and grade cattle, 9.9 million sheep, 11.9 million goats, 895,000 camels, 415,200 pigs, over 25 million chicken and 470,000 rabbits. The hides, skins and leather industry is one of the key agricultural sub-sectors with a high potential that can contribute towards achieving economic growth through an expansion of the export market for both semi-processed and finished leather goods embracing the value addition initiatives. The hide, skin and leather industry depends largely on the locally available livestock resource-base which is large. The major players in this industry are livestock farmers, tanners, exporters and traders. Figures 1.8 (a) (b) and (c) give trends in production of meat, milk and hides.

Figure 1.8 (a), (b) and (c): Trends in Production in the Livestock Sector 1961-2009

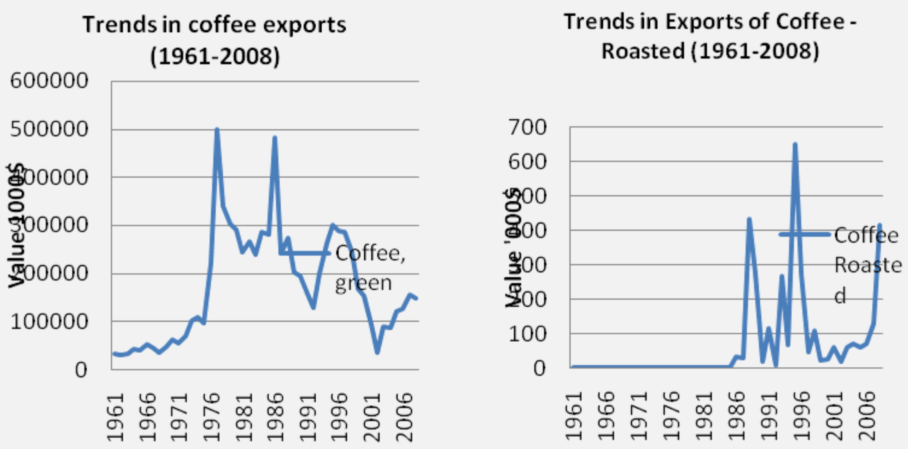


Source: FAOSTAT

1.2.3. Overview of Agricultural Trade

Kenya's exports are principally agricultural in nature. Tea, horticulture, coffee and articles of apparels and clothing accessories were the leading exports, collectively accounting for 50.5 per cent of the total domestic export earnings. Earnings from tea exports rose by 7.8 per cent in 2009 compared to 36.5 per cent in 2008, accounting for 21.3 per cent of the total export earnings in 2009. Horticulture, which has been the leading export earner, recorded a decline of 8.4 per cent in export value to stand at KSh 65,220 million in 2009. Despite the decline, horticulture was the second leading export earner, contributing 20.2 per cent of the total export earnings. Export earnings from coffee rose by 51.2 per cent from KSh 10,126 million in 2008 to KSh 15,309 million in 2009. The share of coffee earnings in total export earnings increased to 4.7 per cent from 3.1 per cent in 2008. Export earnings from articles of apparels and clothing accessories declined by 20.1 per cent, while its contribution to the total domestic exports declined by 1.1 percentage points. Export earnings from essential oils increased markedly from KSh 6,427 million in 2008 to KSh 8,231 million in the review period. Export values of animal and vegetable fats, beer made from malt, medicinal and pharmaceutical products and, meals and ours of wheat also increased in the review period. The following figures 3.7 and 3.8 give an overview of trends in exports for Kenya's top 3 agricultural exports, i.e. tea, coffee, & horticulture (Figure 1.9)

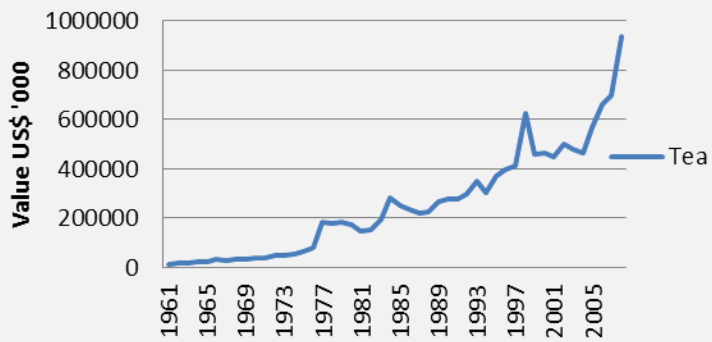
Figure 1.9 (a) and (b): Trends in Coffee exports- Green and Roasted



Source: FAOSTAT

Trends in coffee exports indicate a sharp rise in the 1970s, followed by a dip and rise again in the 1980s and a gradual decline in the 1990s after liberalization. More recently, the coffee exports are picking up again due to concerted efforts by the government to revive the sector. As for tea, the exports have been steadily rising over the years and tea has become one of Kenya's most important export crops.

Figure 1.10: Trends in tea exports (1961-2008)



Source: FAOSTAT

Principally, agricultural imports consist mainly of cereals – maize, wheat and rice and sugar. Expenditure on imports of maize rose five times from KSh 6,665 million in 2008 to KSh 33,945 million in the review period while the import value of wheat more than doubled to reach KSh 1,525 million in 2009. Other notable growths in imports values were recorded for rice and essential oils and perfumes which rose by 26.5 and 24.9 per cent respectively.

1.3 Study Objectives, TORs and Outline

The Study aims to identify and promote elements of an enabling environment for positive interaction and equitable terms of trade among farmers, investors and traders that can lead to inclusive agricultural development in Kenya. Main objectives of the country study include:

- To examine the relationships existing between the agriculture policy makers, farmers, investors and traders in the country as well as their role/contribution to the policy formulation and implementation;
- To identify both the positive and negative elements in the relevant legal and institutional policy and regulatory framework that either facilitate or hamper positive interaction and equitable terms of trade among farmers, investors and traders;
- To encourage and promote dialogue among farmers, investors, traders and policy makers through inclusive research methodology (i.e. regular feedback to and from relevant stakeholders that will encourage dialogue among farmers, traders, investors and policy makers); and
- To generate a set of practical recommendations directed at all relevant stakeholders which will be the basis for advocacy for farmer-friendly and private sector-led agricultural development in the country.

The TORs, therefore, involve reviewing policies related to agriculture in the country and its implications on the farmers, investors and traders, while investigating the roles of and constraints faced by famers, investors and traders in agriculture development in the context of existing policy and non-policy issues. The study also aims to establish linkages and relationships among stakeholders in the agriculture sector with focus on identifying both the positive and negative elements and instances of interaction and terms of trade among farmers, investors and traders, and consequently identify and clearly articulate the elements of an enabling environment for farmer-friendly and private sector-led agricultural development in Kenya.

1.4 Methodology

The Methodology used for this study is fairly simple and straight forward. First a literature review is done to expand and annotate research questions; this is subsequently followed by data collection, fact finding and testing of hypotheses through FEAD National Reference Group (FNRG) consultations, other meetings, on-line collaboration with national, regional and international experts and partners, field visits, targeted surveys, and focused group discussions; and finally through consultation with the FEAD Project Advisory Committee (PAC) and CUTS research team.

The methodology places emphasis on creating synergies and ensuring domestic buy-in and has the following key elements:

- Inclusivity: involvement of relevant national stakeholders through regular reporting and feedback to members of the country FNRG;
- Cross-fertilization of ideas and experiences: regular information exchanges among country researchers and with international experts through CUTS GRC and members of the FEAD Project Advisory Committee (PAC); and,
- Grassroots-based: collection of primary data through field visits, surveys and focused group discussions.

2. The Agriculture Sector in Kenya

2.1 Agricultural Sector: Nature and Challenges

2.1.1 The Agro-ecological zones and livelihoods

Kenya has a great variety of agro-ecological conditions broadly correlated with altitude and aspect, ranging from arid pastoral rangelands to tropical alpine conditions. Over fifteen major ethnic groups practice farming in Kenya, with population densities ranging from 12 persons/km square in parts of Northern and North Eastern Kenya to over 1000 persons/km square in Central Kenya (Government of Kenya, 2010). Infrastructure development varies considerably, and farm sizes range from less than one acre in the densely populated areas to over 6000 acres (Government of Kenya, 1993), largely affected by the agricultural potential of these areas. This diversity in agro-ecology, ethnicity, population density and infrastructure expresses itself in the various farming systems in the country. Moreover, the agricultural systems in Kenya are shaped by agro-ecological zones (AEZs) (Appendix 1, Figure 2). These AEZs range from humid, sub-humid, semi-humid to arid, semi-arid, very arid to lakes. Due to the AEZs, there are different production systems/livelihoods which are dictated by the weather conditions (rainfall and temperatures) as summarized in appendix 1 (Figure 1). These production systems include high potential areas around central and eastern Kenya where mixed farming is predominant, and where there is farming of crops such as horticulture, fruits and vegetables, tea, coffee and dairy farming. The other high potential areas to be found in Rift valley are mainly predominantly cereal (maize, wheat and barley) and dairy producers. The rest is predominantly pastoral communities, and main economic activities consist of livestock keeping. Most of the high potential agricultural land is found in the Rift Valley, Central, Eastern, Nyanza and Western Provinces. The bulk of agricultural activities are concentrated in these areas, although this category comprises only 12 per cent of the country's total land area. About 60 per cent of the total area in the high to medium potential land category is used for crop cultivation; the rest is for grazing and forest. Six distinct farming systems are in general identifiable, namely: shifting cultivation, fallow system, leys and dairy systems, arable irrigation farming, perennial crop system and grazing systems. Mixed farming and intercropping are also common practices.

The agricultural economy usually does not depend on the agro-ecological zones, but rather depends on land availability and the level of commercialisation . In the high potential areas, for instance, population pressure coupled with other factors have led to land fragmentation which has been going on since independence, and this has seen a reduction of farm sizes by an average of 300 per cent - making them more and more uneconomical for production.

2.1.2 Production Scale and characteristics of different categories of producers

- ***Small-Scale Farming***

According to the ASDS 2010, Kenya's agriculture is predominantly small-scale farming mainly in the high-potential areas. Production is carried out on farms averaging 0.2–3 ha, mostly on a commercial basis i.e more than 60 per cent output is for sale. However, adoption of improved inputs such as hybrid seed, concentrate feeds, fertilizer, safe use of pesticides and machinery by small-scale farmers is relatively low. There is a huge potential for increasing productivity amongst this category of farmers with the adoption of modern farming practices, and this is also essential for improved livelihoods. In the rangelands, the small-scale livestock production system mainly features pastoralists. Livestock herd sizes are considerably large because of communal grazing accompanied by low use of purchased inputs like feed, drugs and artificial insemination. Production is mainly for subsistence rather than market oriented. Diseases and healthy nutrition are major constraints to increased livestock productivity in this system.

Small-scale farmers are predominantly small family farms who produce mainly for subsistence and generally sell the surplus. Production is mainly done by women with the help of their family members and children, as men tend to prefer off - farm labour in small towns. They often use low technology and rudimentary farming practices; they lack access to credit, and are in dire need of extension services and market information. Smallholders producing for commercial purposes and exports are often organized in producer organizations and/or cooperatives as is exhibited in the horticulture, tea and coffee sectors. Through their respective producer groups, they are able to access market information, credit and even pool their productive resources for certain functions such as marketing and transport in order to achieve economies of scale. They are usually linked to the markets by intermediaries such as middlemen, private exporting companies and local agro-processing firms.

- ***Medium-Scale Farming***

Farmers in this category are receptive to technology and practice commercial agriculture by investing in inputs, marketing produce and borrowing credit for farm development. An average of about 2-3 per cent of agricultural output comes from medium-scale farms. Medium-scale farming is characterized by commercially oriented farmers who are slightly better educated and/or informed and have the capital necessary not only to acquire land, but also technology such as tractors, farm machines and pick-up trucks. They often employ labour in their farms and have access to credit – because they often have collateral in form of title deeds or savings. They mostly employ modern farming techniques, and are generally profit oriented. They do their own value addition sometimes and carry out tasks such as sorting, grading, and packaging on their farms. They often have contracts with companies into which they supply produce, and are therefore guaranteed better prices for their produce.

- ***Large-Scale Farming***

In Kenya, large-scale farming is practiced on farms averaging about 50 ha for crops and 30,000 ha for livestock ranches. The large-scale farming subsector accounts for 25-30 per cent of marketed agricultural produce, mainly involving growing crops such as tea, coffee, maize and wheat in addition to keeping livestock for commercial purposes. Large-scale commercial farmers have huge capitals and technological resource-base, and are mostly registered as companies. They have their own agro-processing industries where they add value to their produce and package for sale either locally or internationally. The number of employees range between 1000-7000 both as farm labourers and/or labour employed in the agro-processing industries. They have access to the latest technology and are profit oriented. In addition to that, some of these farmers buy produce from smallholders (through their respective producer groups) for processing in their factories, especially in the dairy sector, horticulture sector, tea and coffee sectors.

2.2 Policies, Legal frameworks and subsequent outcomes

Agricultural policies in Kenya have evolved over a long period of time. A number of chronological phases exist over the entire colonial period from the initial settlement through the agrarian revolution of the 1950s to independence in 1963 and further on to the successive independent governments (Smith, 1976). Kenya's agricultural sector has undergone a series of policy shifts depicted in three major periods of policy change starting from post–independence period to the liberalization period and Structural Adjustment Programs (SAPs) and finally the post liberalization policies.

2.2.1 Policies during colonial period

Pre-independence policies were mainly colonial and oriented towards maximizing production and utility by the European settlers and through provision of exclusive rights to land ownership alienated from Africans, control of labour supply through poll tax and development of residence labour (squatter system) (KEPCO, 2010). In addition, there were settler crops which only Europeans were allowed to grow (coffee, sisal, wheat, dairy cattle). The colonial government used pricing, marketing and credit policies to subsidize settler activities. The implications for Kenyans was that the agricultural system was controlled by the colonizers and African workers provided labour to the colonialists in exchange for a small piece of land where the labourer was allowed to grow some food for subsistence and a temporary accommodation.

2.2.2 Post Independence Policies (1964-80)

After Independence, the first set of policies for the period 1964 to 1980 emphasized government intervention in nearly all aspects of agricultural production and marketing (Smith, 1976). The immediate concern was Africanisation of land ownership with financial support sought from various sources, resettlement of the landless and selection of suitable forms of organization. A range of agricultural parastatals were set up to support production and marketing of major crops such as coffee, tea, sisal, pyrethrum, cotton, sugar, rice, maize, wheat as well as livestock products such as milk and beef. Cooperative societies were formed to market crops produced on small holdings. Inputs were supplied through the Kenya Farmers Association (KFA), and credit through the Agricultural Finance Corporation (AFC).

There were strong political and socio-economic reasons for newly independent African governments to establish parastatals. The governments were suspicious of the private sector and markets, and thus, actively intervened to direct the economy to achieve both productive and welfare objectives. The government had control on almost all the institutions involved in agricultural development. Kenya inherited several statutory marketing institutions from the colonial regime including the Sisal Board of Kenya, Coffee Board of Kenya, Tea Board of Kenya, Pyrethrum Board of Kenya, Kenya Dairy Board (KDB), the Cotton Board of Kenya and the Kenya Meat Commission.

During this period, smallholders were organized under cooperatives for their respective sectors to assist in the procurement of production inputs and in the marketing of produce. A majority of these co-operatives were affiliated to the Kenya National Farmers Union (KNFU) which was an umbrella body for farmers. The agricultural sector was protected from imports and prices were set based on parity prices to discourage export surpluses when Kenya was a net exporter of wheat and maize. Subsidized agricultural credit was availed through the AFC, Land Agricultural Bank (LAB) and respective producer Cooperatives.

Research Policy focused on development of technologies appropriate to Arid and Semi-Arid Lands (ASALs) such as low cost approach to irrigation, small-scale and use of gravity in water flow. Smallholder mechanization projects that involved the use of locally manufactured hand and ox-ploughs to ease labour bottlenecks among the smallholder farmers were supported by the Government. These policies were implemented through a number of programmes such as Smallholder Production Service Programme (SPSP) and the Integrated Agricultural Development Programme (IADP).

Overall, agriculture grew very rapidly at a rate of 6 per cent to GDP, with the export sub-sector outpacing the domestic one until 1978 when the former virtually stagnated. The policies responsible for this performance were land reforms, agricultural pricing and marketing, public investment in research, extension and other agricultural services. Despite this growth, agricultural growth started to decline in the 1970s due to limited expansion of smallholder farming; limited adoption of new technologies, and deteriorating infrastructure compounded by the economic crisis caused by oil shocks in 1970s.

2.2.3 Policies in the Era of Liberalization and Structural Adjustment Programs (SAPs) (1980-90s)

During this period, there was a major shift from government controls to liberalized markets. The shift meant that the government had to reduce its control of agricultural production and marketing, and provide a free market to reduce distortions. Market liberalization policies started from the 1980s under the SAPs of World Bank and International Monetary Fund (IMF), and were conditionality for disbursement of loans by these institutions (Nyangito & Okello, 1998). These adjustments meant that the government's role was limited to providing an enabling environment for private sector to participate in the agricultural sector. This period saw the removal of price controls for all agricultural commodities, decontrol and relaxation of fertilizer import licensing systems, price decontrol and removal of obstacles in the marketing and distribution system.

In addition, the *Sessional Paper No. 1 on Economic Management for Renewed Growth* (Kenya, 1986) spelt out reforms which led to a shift towards open market operation and a removal of government support (subsidies) on most investments and services, and a corresponding shift towards privatization and cost-sharing. Emphasis switched to integrated rural development projects that took up poverty-alleviation and food-security objectives through area development activities that involved a complex of infrastructural, social, and productive investments. The District Focus for Rural Development (DFRD) programme introduced in 1983 shifted the responsibility for planning and implementing rural development from ministries' headquarters to the districts. Each district, through its District Development Committee (DDC) was responsible for rural development planning, coordination, project implementation, and management of development resources. During this period, the government prepared the *Sessional Paper No. 2 of 1996 on Industrial Transformation to the Year 2020* and the eighth National Development Plan (1997-2001) aimed at laying the foundation for transformation of the country from an economy with agriculture as its backbone to a Newly Industrialized Country (NIC) by 2020. All the sectors of the economy were called upon to play a complementary role towards this key objective.

The decline of the sector was imminent from this period forward. This period saw the disbanding of many cooperatives, and many smallholder farmers were left to sell their produce at market prices which were largely dictated by forces of demand and supply. Simultaneously, this period was characterized by the introduction of multi-party politics which also contributed to patronage on maize, milk and tea sectors with negative effects on coffee and sugar sectors which were largely seen to be commercial crops of the opposition (KEPCO, 2010). During the first period of implementation of these reforms (1980-90), growth was averaging about 3.5 per cent per annum. This growth was followed by a steady decline in the second phase ranging from minus 0.4 per cent in 1990-91 to the lowest level of minus 4.1 per cent in 1992-93.

This imminent decline was largely attributed to the SAPs, deteriorating terms of trade between agricultural exports and imports, rapid population growth, and a decline in public investment in agriculture (Nyangito and Kimenye, 1996). The liberalization of the sector and subsequent removal of price controls also saw a surge in the participation of the private sector which resulted into two conflicting outcomes: while the reforms bolstered participation of private firms and private sector investments in agriculture, a case pint was the dairy subsector which saw the introduction of private milk processing plants which resulted in an increase of production which boosted many smallholders in this subsector. There was also an insurgence of cartels who controlled the import of vital commodities such as rice, sugar and maize and who operated clandestinely in controlling prices by hoarding products and creating artificial shortages in the economy, thereby increasing prices and making abnormally high profits, a practice which has persisted to the present day. This practice saw the subsequent decline of the sugar, maize and cotton sectors as farmers could not compete with cheap imports.

Another distinct characteristic of this period (and the previous one) was that policy making was not consultative, and despite liberalization, the private sector did not have the capacity to take up the roles where the government exited. In addition, there were not enough incentives for the private sector to take up these roles. In some sectors, liberalization was done too hurriedly (as a result of Aid conditionality) without establishing enough structures to support the systems after the government withdrew.

2.2.4 Post Liberalization Policies (2000-to date)

- ***The Strategy for Revitalization of Agriculture 2004-2014***

The decline of the agricultural sector throughout the 1990s saw a realization within the government of a need to revitalize the agricultural sector. Consequently in the year 2003 after a regime change, there was a move to institutionalize policy formulation by appointing qualified technocrats to positions of policy making and giving them autonomy to do so. This saw the emergence of Economic Recovery Strategy for Wealth and Employment Creation (ERSWEC) which was a 10 year strategy for revamping the Kenyan economy. Within this strategy, the agriculture sector was recognized as one of the main drivers of the Kenyan economy and a specific strategy was drawn for it. Thus, the Strategy for Revitalization of Agriculture (SRA) was prepared in response to various policy deficiencies in the agricultural sector. The SRA addressed policy issues in the agricultural sector and was developed through widespread stakeholder consultations with parliamentarians, donors, trade unions, professionals, financial institutions, industrialists, farmer umbrella bodies and their representatives amongst others.

This strategy gave a 10 year plan that emphasizes a sector-based approached implemented by 3 ministries – Ministry of Agriculture, ministry of Livestock and fisheries and Ministry of Cooperative Development. The SRA provided an umbrella legislation to replace the existing pieces of laws and legislations (Otieno, 2011). The SRA recognizes low productivity as the key constraint in Kenyan agriculture and seeks to sort this by addressing 3 main components: extension, research, and economic and financing problems. The extension problem manifests in the lack of awareness or use of existing productivity enhancing technologies, while the research problem as laid out in the SRA refers to non-existence of appropriate productivity enhancing technologies. The economic and financing problem is manifested by the fact that farmers are aware of, but are unable to meet the costs of available productivity enhancing technologies. This is attributed to some of the poor services they receive in terms of the policy. The summary of the document included rationalizing roles and functions of agricultural institutions, strengthening extension services, and increasing smallholder access to credit, and revamping the cooperative movement. Critics of this strategy were quick to point out that even though it outlined the importance of agriculture in contributing to overall growth of the country, it failed to indicate exactly where this growth would come from. This strategy also failed to indicate the linkages of agriculture with other sectors and the importance of the overall macro-economic environment for fostering agricultural growth (Gitu, 2004).

- ***The Kenya Rural Development Strategy (KRDS) 2002-2017***

This came as a longer-term framework document outlining a broad range of strategies for improvement of rural Kenya. The process of developing this framework saw the participation of various stakeholders such as the government, private sector, civil society (religious groups, NGOs, rural communities, CBOs) and other development partners. Several policy actions and interventions were proposed within the KRDS framework to facilitate the process of rural development – with agriculture providing the stimuli, resources and markets. Agricultural growth was to serve as the catalyst for the broad-based economic growth and development. Through forward and backward linkages to the non-farm economy, agriculture would generate raw materials, employment, income, larger markets, and growth in the rest of the economy (Gitu, 2004). This strategy recognized the backward-forward linkages of agriculture with the rest of the economy, but did highlight the missing elements in agriculture such as adoption of technology, irrigation and financing that would spur growth in the agricultural sector.

- ***Agricultural Sector Development Strategy (ASDS) 2010-2020***

The ASDS has recently been formulated to position agriculture as the key driver for delivering 10 per cent annual economic growth rate envisaged in the vision 2030. The strategy recognizes the problems facing the agricultural sector as related not only to low productivity, but also related to deficient policy and institutional frameworks as well as budgetary allocation and investments in the sector. The strategy also recognizes the importance of livestock and fisheries sectors as strategic for reduction of poverty, and places emphasis on irrigation, value addition and agri-business.

According to this strategy, the overall growth and development of the sector is anchored in 2 strategic thrusts: increasing productivity, commercialization and competitiveness of the agricultural commodities and enterprises; and developing and managing key factors of production. The strategy also realizes the importance of linking trade with agricultural production and food security, and hence outlines key measures the government will take in order to improve trade in agricultural sector, such as, 1) simplifying trading procedures, especially protocols related to cross border trade; 2) improving farmer capacity to add value to produce, thereby making them more competitive whilst increasing farmer's incomes; 3) improving infrastructure systems such as roads and railways to reduce costs of transportation and to enable produce to move smoothly from areas of surplus to those of deficit; 4) increasing private sector participation in agricultural production, thereby making agriculture a profit-driven venture; and 5) facilitating and organizing cooperatives that would benefit smallholders. These measures would be undertaken in tandem with enabling factors that are external to the sector but nevertheless very important, such as macroeconomic stability, taxation, governance, infrastructure, education, training and technology, and human and social development.

Institutional frameworks are clearly provided for in this strategy through the Agricultural Sector Coordination Unit (ASCU) established in 2005 to spearhead the implementation of the SRA. ASCU is to link sector players and provide an enabling environment for sector-wide consultations along various levels of implementation as well as monitoring and evaluating the ASDS. Through the ASCU, the private sector, NGOs, cooperatives, farmer organizations, research institutions, development partners and other stakeholders would participate in the Thematic Working Groups (TWGs)[1]. The strategy also pursues agricultural development in line with the Comprehensive African Agricultural Development Programme (CAADP)[2] launched in Kenya in 2005.

[1] Thematic Working Groups include: Legal Regulatory and Parastatal Reforms; Research and Extension; Agribusiness, Value Addition and Marketing; Inputs and Financial Services; Food and Nutrition Security Policy and Programmes; Environment; and Land and Natural Resources.

[2] CAADP is a common strategic framework for agricultural policy and development in Africa.

3. Stakeholders' Roles and Relationships

3.1 The Farmers

Kenya's agriculture sector has a host of various stakeholders which can be classified into three main categories: (i) Grassroots - the farmers (ii) the Private sector and agro-processing industries which form a basis for the market for farmers as well as an investment base (iii) Government Institutions and parastatals – which basically deal with policy, regulation and various support systems provided to the sector through various institutions.

The main role of farmers in Kenya is to produce food. Depending on their categories and scale of production, some produce for subsistence while others produce exclusively for commercial purposes and may be involved in some forms of value addition and/or processing. As already discussed in the previous section, farmers in Kenya are classified into 3 main categories based on their farm sizes and their levels of output.

3.1.1 Smallholders

Many smallholders produce for subsistence and then sell the surplus, while large and medium scale farmers are commercially oriented. Despite favourable trends in market development drivers like increase in population and emerging urban dietary preference, most smallholder farmers remain poor. Most of the farmers depend on village or local markets as outlets for their produce. They sell their produce individually and in raw form at the farm gate to market intermediaries – main intermediaries being the middlemen, local supermarkets and agro-processors. The nature of produce, low quality and quantity of the supplies combined with their low bargaining power translates into low price for the produce which amplifies rural poverty.

Smallholder farming in particular is dominated by women. Women are not only producers but are also the primary economic actors as the labour force of smallholder farming. According to the proposed *National Census of 2010*, women head 38 per cent of agricultural operations in Kenya. Men dominate the formal and modern sectors of the economy and where men are involved in agriculture, it is predominantly in the cash crops and export sectors of horticulture, tea, coffee, wheat, sugarcane and pyrethrum. Thus, although women are the dominant actors in smallholder farming, they have less access to inputs and extension services much to the cost of the entire agricultural sector. Given that agriculture is Kenya's primary economic activity, its decline and neglect have consequences for the entire economy. It is estimated that if women farmers received similar extension information to that availed to men, their yields would increase by a factor close to 10 per cent.

Major challenges for smallholders therefore include:

- Low levels of production due to inadequate skills; lack of access to extension services; lack of information & finance to exploit market opportunities
- High post-harvest losses estimated at 50 per cent of produce (this is more severe in the cereal sector) due to lack of post-harvest technology and infrastructure.
- Weak position in input/output markets

- Over dependence on rain-fed agriculture and effects of drought leading to losses
- Food deficit and rural poverty exacerbated by rural-urban migration, youth agro-phobia and feminization of agricultural work.

In order to overcome some of these challenges, smallholders are organized in producer groups such as: Producer Organizations (POs), Agricultural cooperatives; and commodity-based associations and federations. These organizations also vary in terms of their geographical dimensions and may be local, sub-national, national or regional. At times, several POs are joined together to form a commodity specific organization or federation at the national or regional level (Figure 2.1). Local POs are then joined together to form commodity-specific associations or regional-specific farmers cooperatives at a sub-national or national level. At the sub-national level, associations also represent the medium and large-scale producers and private sector agro-processors and exporters.

Local POs consist (on average) of 30 members growing the same crop and found within the same locality. Some of these groups are either informal or formally registered as Community Based Organizations (CBOs). Through these groups, farmers pool their resources to obtain extension services and information, and market their produce to intermediaries such as middlemen, agro-processors and exporters. They use their respective groups to bargain for prices or contract terms, and often through these groups, they may access credit either individually or as a group.

3.1.2 Medium and Large scale Producers

These two groups of farmers are mainly commercially oriented and produce predominantly for profit. They also form part of the private sector because their roles involve not only crop production, but also value addition and/or processing in some cases with integrated production systems[3]. They generally have a large capital base with mechanized production, and have access to information and credit. They also depend on rural labour force in their farms, and mostly employ women and youths. They have linkages with smallholders who in some cases, sell their produce to the farmers. They also have linkages with supermarkets or overseas markets where they export their produce.

Constraints faced by these farmers mostly include:

- Poor rural infrastructure
- High costs of production due to high costs of inputs, high costs of energy and labour
- Barriers to trade such as international trade regulations (e.g. standards) or barriers to regional markets
- They belong to commodity-specific associations through which they articulate their issues related to policy and lobbying for various needs to government ministries of trade and agriculture.

3.2 The Private Sector

Agriculture is largely a private sector4 enterprise made up of subsistence smallholders at one end of the spectrum, and corporate owned plantations at the other. The Agriculture sector in Kenya is no different. It is characterized by small and medium-sized farming and processing operations which are the major employers for about three quarters of the rural population. Farmers and processors of agricultural produce generate roughly half of the country's gross national product, as well as 65 per cent of its export earnings. This definition, however, does not capture the private sector

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[3] Integrated production systems involve, production, processing and packaging within the same firm and/or locality.

[4] According to the business dictionary the private sector can be defined as *'The part of national economy made up of private enterprises. It includes the personal sector (households) and corporate sector (companies) that are run for purposes of profit making, and is responsible for allocating most of the resources within an economy*

participation in agriculture within the Kenyan context. For the purpose of this paper, the private sector is expanded to include major service components of support for the main agricultural activities such as input suppliers, agri-business and value addition, financial institutions, and risk mitigation – which are mostly provided by the private sector and are the most critical components for the development of the sector.

In Kenya, the private sector in agriculture therefore includes:

- *Farmers* – comprising of large-scale integrated producers, medium-scale commercially oriented farmers and smallholders who produce for commercial purposes or subsistence and sell the surplus.
- *Input suppliers* – these include the developers and distributors of seeds, farm machinery, fertilizers and pesticides, e.g. Kenya seeds company, and CMC motors, amongst others
- *Middlemen and brokers* – these also act as distributors and may link farmers to markets, and in some cases, even add value (such as sorting, grading and packaging) to produce before selling to distributors and traders
- *Processors* - they add value to agricultural produce and may consist of medium to large industries that depend largely on the agricultural sector for their raw-materials
- *Traders of agricultural produce and products* – ranging from small village market vendors, to large urban retailers and supermarkets
- *Financial institutions* – which provide banking and credit to producers, processors, and traders amongst others. These also include risk mitigation institutions that provide insurance
- *Marketing and information support institutions*
- *Infrastructure support/providing institutions*
- *Capacity building institutions*

Other ways in which the private sector can participate in the agricultural sector is through Public Private Partnerships (PPPs) in which the principal is the state (or other "public" actor) and the agent is the private sector company, partnership or consortium that the state contracts with. The state wishes to harness the capacity (human and investment), entrepreneurship and innovation of the private sector "agent" to achieve public policy goals, but has to recognise that 1) private sector "agents" have their own objectives, and 2) will only enter into deals if they think that these will in some way be furthered by implementation of the PPP agreement. Specifically, firms will only enter into PPP agreements if their expected "utility" from concluding the deal exceeds what they could obtain from directing the same resources to alternative uses, i.e. the opportunity cost of these resources.

Due to liberalization and privatization, the agricultural sector in Kenya has undergone many changes in its organization. Previously, farmers relied on marketing boards and cooperatives for their inputs and for their markets. Farmers received subsidized inputs – seeds, fertilizers and pesticides from the government. Extension services and information was provided by the government's agricultural extension officers and farmers were trained in farmer schools which were located in their proximity. Farmers sold their produce through their respective cooperatives and had a guaranteed market, and credit was readily available through the AFC which was again owned and run by the government. Following liberalization of the sector and the SAPs, the marketing boards, cooperatives and agricultural extension services were done away with, and most of the services provided by the government were taken up by the private sector.

In addition to this, the trends in local and global agro-food business and the proliferation of supermarkets have (both locally and globally) changed the landscape of the agro-food systems and how producers (both large and small) are participating in these production chains. Global food standards have increasingly shaped the agro-food chains through their requirements for quality, safety and traceability - making them more and more vertically integrated. These vertical forms of coordination require close monitoring from the private sector and provision of necessary support in order to meet the fore-mentioned global food standard requirements. Furthermore, agri-business relationships have now evolved from the previous spot markets to contract relationships between producers, processors and supermarkets so as to ensure consistent produce standards in terms of quality and quantity. These new developments have led to an emerging role of the private sector not only in providing market linkages to farmers, but also playing a major role in providing inputs, training and technical support, and even credit and related support to enable farmers to participate in export chains.

3.2.1 Private Sector in Input Provision: the case of Maize Seed in Kenya

The maize seed sector has become critical for the country due to the fact that maize is grown in 30 per cent of Kenya's arable land and constitutes 3 per cent of the country's GDP. The sector has evolved in the past decade especially after liberalization. Previously, the Kenya Seed Company, which was fully government owned, provided seeds to farmers on credit, provided they pay back for the seeds upon harvest of their produce. However, many Kenyan smallholders used (and still use) informal system of seed acquisition, which involved selecting viable seed from their own farms and storing using traditional methods for future use. The formal market system has been gaining ground in recent decades. Kenya liberalized the seed industry in 1996, converting the government-run Kenya Seed Company (KSC) into a private seed company. This allowed newly formed private Kenyan seed companies to join the field along with international corporations. KSC has continued to dominate the market, however, and 15 years after liberalization, more than half of the company's shares continue to be held by the government (Mabaya et al, 2009).

The Kenya Agricultural Research Institute (KARI) conducts most maize seed variety development within Kenya. The release of new varieties is regulated by the Kenya Plant Health Inspectorate Service (KEPHIS). KEPHIS holds National Performance Trials to test the quality of each new variety before it is released for sale on the national market. Because breeding research and development is time consuming and costly, most local private companies have not invested in this aspect of seed production. When new varieties are under development, KARI makes arrangements with private companies to pass on breeding rights. The companies then take the new varieties through performance trials, and once the varieties are released, begin multiplying the seed for sale to Kenyan farmers.

Most seed companies use farmers with large land holdings to grow the seed they sell. Because all seed sold in the formal sector must be certified by KEPHIS, this agency is involved at every step of the preparation process. To achieve certification, seed companies must submit forms, pay fees, and request visits by KEPHIS inspectors at different stages in the growing, harvesting, and packaging cycle. The seeds reach smallholder farmers through agricultural supply retailers, called stockists, who are located within town centres. In addition to selling seeds these stockists also sell fertilizers, pesticides, and livestock supplies. Seed companies may also sell directly to large farmers that are growing maize for the commercial market, NGOs that distribute seeds to program participants, or to institutional buyers such as schools or prisons.

Kenya Seed Company currently controls a large share of the maize seed market although many other private sector companies are also emerging to take part of that market share (Table 2.1). More recently foreign seed companies such as Monsanto are also gaining prominence in the maize seed sector in Kenya with recent introduction of *Bt* maize into the country which is still on trials by KARI, it is estimated that by the year 2017 the multinationals could control at least 35-50 per cent share of the maize seed market if famers are to adopt GMOs. Many smallholders who cannot afford to buy seed still rely on community based informal seed systems where they select and produce seed based on their own criteria and standards which they have agreed upon.

Table 2.1: Maize seed market shares in 2009

Company	Market Share
Kenya Seed Company	90.00%
Pioneer Hi-bred Seeds	3.00%
Monsanto	2.00%
Pannar Seeds	1.75%
Western Seed	0.75%
Oil Crops Development Ltd	0.50%
Freshco	0.25%
Others	0.10%

Source: Mabaya et al., 2009

3.2.2 Market Information Dissemination: The Kenya Agricultural Commodity Exchange (KACE)

The lack of market information represents a significant impediment to market access especially for smallholder poor farmers: it substantially increases transaction costs and reduces market efficiency. For any one crop, the marketing chain consists of multiple middlemen; each taking a margin at every stage of the chain, and due to the cyclic nature of agricultural produce markets, price variations in space and time are often large and erratic. In the past, Kenyan farmers relied on marketing boards to provide market information and to link them with markets, marketing boards even bought farmers produce at a predetermined price and hence farmers were assured of good prices for their produce as well as guaranteed market access. However since liberalization and subsequent removal of marketing boards, farmers are now facing markets which are neither competitive nor transparent, and they are greatly disadvantaged, especially those in remote rural areas. They have no incentive to increase the level of their production and productivity which would subsequently alleviate the poverty in which many live (Mukebi, 2004).

In order to fill this gap, private sector in Kenya has come up with many ways in which Information technology is applied in order to provide market information for farmers especially smallholders. As such the Kenya Agricultural Commodity Exchange Limited (KACE), a private sector firm, was launched in Kenya in 1997 to facilitate competitive and efficient trade in agricultural commodities; provide reliable and timely marketing information and intelligence; provide a transparent and competitive market price discovery mechanism; and harness and apply information and communication technologies (ICTs) for facilitating trade and information access and use in Kenya. KACE is a limited liability company with a Board of Directors which manages its operations in accordance with its established Rules and Regulations.

The main objective of Kenya Agricultural Commodity Exchange is to facilitate linkage between buyers and sellers, exporters and importers of agricultural commodities in trade. Through its market information system (MIS) it provide farmers and market intermediaries such as traders, and consumers, with information about market, and other services that enhance their bargaining power and competitiveness in the market place. It also provides a transparent and competitive price discovery mechanism through the operations of the exchange trading floors and applies information and communication technologies for rural value addition and empowerment.

Mukhebi 2004, outlines the various components of the MIS designed to link the farmer to market outlets at different levels of commodity value chains, from other farmers to traders, commodity dealers, processors and even exporters and importers. The components of the KACE MIS are:

- *Rural market based Market Information Points (MIPs)* – basically consisting of an information kiosk located at a rural market centre where farmers go to sell and traders to buy produce. A MIP serves as a source of marketing information and intelligence, and also as a trading floor to link buyers and sellers of commodities in a transparent and competitive manner. Information is prominently displayed on bulletin and writing boards at a MIP. MIPs are operated by KACE staff. There are currently 11 MIPs country-wide.
- *District-level Market Information Centres (MICs)*- A MIC is established to manage and service a number of MIPs which are located in rural market centres which do not have electrical power supply and/or fixed landline telephone service to enable internet connectivity. A MIC is established at a District Headquarter. It is equipped with Information and Communication Technologies (ICTs): landline and mobile phones, fax and computer with email and internet connectivity. They are directly linked to the KACE headquarters for information exchange.
- *Mobile Phone Short Messaging Service (SMS)* - consist of text messages sent and received with mobile phones. KACE is harnessing this technology to disseminate market information and intelligence. KACE has developed an SMS market information service branded as SMS Sokoni in partnership with a leading mobile phone service provider. A farmer anywhere in the country where the Safaricom mobile phone network exists can in easy steps access market information like commodity prices in different markets, who is buying or selling what commodity, at what prices, where and when, as well as access extension messages using their Safaricom mobile phones. The user receives and pays for the SMS messages to the Safaricom Ltd. Each SMS message received currently costs the user KSh 7, paid to Safaricom Limited.
- *Interactive Voice Response (IVR) service* - KACE has, in collaboration with an IVR service provider (the Interactive Media Services Ltd.), also developed and branded the Kilimo Hotline, where a user calls the 0900552055 hotline telephone number to access market information in voice mail. Any mobile phone or digital landline can be used to call the Kilimo Hotline number. This service is available in both English and Kiswahili and a caller follows an easy step-by-step pre-recorded voice prompt menu to choose the language and access the information. Commodities currently covered by this service include: maize, beans, potatoes, tomatoes, and cabbages. Each information call currently costs KSh 20 paid to the IVR service provider
- *Internet based database system* – this basically involves KACE an internet based Regional Commodity Trade and Information system (RECOTIS) for dissemination of market information. RECOTIS is an electronic database of clients interested in buying, selling,

importing, exporting or distributing agricultural commodities. KACE collects and disseminates marketing information on commodity offers, bids and prices through RECOTIS as frequently as it compiles the data, sometimes several times a day. Information recipients can dialogue back with the KACE information technologists for more information.

- *Mass media (radio)* - KACE in conjunction with the Kenya Broadcasting Corporation (KBC) radio - the national radio service which serves about 5 million listeners daily; began (in September 2004) disseminating price information on a limited number of commodities in selected markets daily except Sundays. The information is aired both in English and Kiswahili languages from Monday to Saturday at 9.10 am and 6.45 pm.

It is thus imperative that relevant and timely market information packaged and delivered by low-cost ICTs can improve the competitiveness of smallholder farmers in the market place for better prices, and provide a level playing field in the market place, not only between smallholder farmers but also for consumers as well. This move by KACE has therefore effectively blocked out various components of transactions between farmers and middlemen in relationships that are often exploitative especially to smallholders. While KACE has received funding initially from development organizations, its long term sustainability is guaranteed from the fees they charge for their services.

3.2.3 Linking Smallholder farmers to export markets: Contract Farming in Kenya's Horticulture sub-sector

Kenyan horticulture exports often serve as an example of agricultural export success in Africa. Horticulture constitutes one of the largest earners of foreign exchange in agriculture, with over 50 per cent of proceeds being generated by smallholders. According to Minot and Ngigi (2009), the key factors behind the Kenyan horticultural success were: (i) a real exchange rate aligned with its equilibrium value; (ii) macroeconomic stability; (iii) an enabling investment climate; (iv)solid infrastructure in horticulture production areas; (v) links with European markets, and (vi) deliberate efforts to facilitate cooperation between farmers and exporters. These factors were complemented by training and support for farmers on matters relating to the export market requirements such as standards.

That notwithstanding, the export markets for horticultural produce is riddled with many barriers to entry and high transaction costs. Barrier to entry arise from the numerous quality, health and safety requirements as a pre-requisite for market access. More recently there is also the requirement for traceability of produce from farm to fork, all of which imply numerous initial investments as well as recurrent costs on the part of the producers. This poses a challenge especially for smallholders who do not have the technical and financial capabilities to comply with these requirements and participate in these export markets. Furthermore government support in line of these requirements is minimal and most often smallholders are at a risk of exclusion from these markets.

In order to overcome these problems exporters in the sector have adopted contract farming as a way of ensuring consistent supply of produce to their overseas markets while at the same time supporting farmers by various means and in the process guaranteeing them markets. Eaton and Shepherd (2001) define contract farming as 'an agreement between farmers and processing and/or marketing firms for the production and supply of agricultural products under forward agreements, frequently at predetermined prices'. The arrangement often 'involves the purchaser in providing a degree of production support through, for example, the supply of inputs and the provision of technical advice'. For this arrangement to work the farmer commits himself to 'provide a specific commodity in quantities and at quality standards determined by the purchaser'. The company on the other hand agrees to 'support the farmer's production and to purchase the commodity'. In other words contract farming can be regarded as an agreement between agri-business companies and farmers (Strohm & Hoeffler, 2006).

Several large integrated exporting companies[5] in the horticulture sector in Kenya often have contracts with smallholders through their respective producer organizations. Private enterprises run schemes that are used to reach thousands of farmers. These schemes follow two main models: formal written contracts annually (these are legally binding) that specify price, quantity and quality requirements either with groups of farmers or individual farmers; or informal contracts with groups of farmers that specify quality, price and quantity requirements (Figure 4.1). The exporters provide inputs (seeds, fertilizers and pesticides) on credit. They also support (on credit) initial investments for the required standards such as building of a grading shed and initial and annual costs for auditing by third party certification bodies. These are then deducted from farmers' income after the harvest. The company strictly regulates the input supply and through its presence on the ground provides extension services more often. Furthermore, grading centres for horticultural produce are managed and sometimes even financed by the export company. Field extension workers from the export companies also provide training and capacity building to groups of farmers on various aspects of production and related standards. In return the farmers 'agree' to produce a particular product of a particular quality and quantity at an agreed price, which guarantees them a market for their produce.

[5] Firms interviewed included Oserian, Home grown, Frigoken and Sunripe Kenya Ltd

3.2.4 PPPs in provision of financial services to farmers: the Micro Enterprise Support Programme Trust (MESPT)

In the period before liberalization financial services for the agricultural sector was dominated by Kenya's Agricultural Finance Company which provide loans to farmers at cheap affordable rates – AFC accepted land and produce as collateral and farmers could also apply through their respective cooperatives. However after liberalization in the early 90's and subsequent disbanding of the finance company farmers could only get loans from banks at commercial rates and these banks did not accept produce as collateral. This led to there was a huge gap in the sector and for a long time farmers had no option until several programs were set up by the government of Kenya and several donor agencies, one such program is the MESPT.

MESPT is a wholesale microfinance institution founded by the Government of Kenya and the European Union in the year 2003.MESPT works with intermediaries that provide financial services to improve the performance of enterprises. MESPT provides credit to financial institutions that already have a micro-finance lending programme. The activities of MESPT are organized under three main components:

- *Financial Services Component:* that makes loans to financial intermediaries for on-lending to enterprises.
- *Business Development Services (BDS) component:* that offers non-financial services to enterprises through intermediaries in areas such as product development, technology adaptation, market access and linkage, skills acquisition and productivity improvement.
- *An Institutional Support and Capacity Building Component:* that strengthens the

ability of providers of financial services and BDS intermediaries to offer efficient and effective services.

MESPT through its Agricultural Business Development (ABD) Program provides loans to institutions delivering financial services to the small holder agriculture sector in selected Arid and Semi-Arid Lands (ASAL) of Kenya. MESPT will provide loans to selected institutions whose activities are in line with its objectives and priority areas. MESPT works in partnership and collaboration with a full range of financial retailers such as commercial banks, building societies, NGOs, companies, Saccos, CBOs, FSAs, farmers associations, or any organization that makes loans to business oriented small holder farmers and viable agri-based micro and small enterprises in the target districts. The organizations must be Kenyan entities legally constituted in complete compliance with the laws of Kenya governing such entities. However, the Trust also works with financial intermediaries that have been operating efficiently for at least two years and have a minimum of 300 active clients. The approved financial intermediaries are required to provide acceptable security.

The ABD loans are available in Kenya shillings for a period of 1-3 years depending on intended utilization of funds and include a grace period of up to 3 months on the interest and up to 6 months on the principal amount. Loans will be available at competitive rates of interest under the following credit lines:

- Farm production credit to finance agricultural inputs such as seeds, fertilizers, pesticides, labour, and transport; and
- Agri-business equipment such as honey centrifuge, posho mills, milk coolers and processing equipment, juice processing and canning, fruit drying and packaging, and purchase of dairy cattle and goats.

The intermediaries and financial organizations such as banks Saccos, CBOs and other private companies then give loans to farmers and smallholders through their respective organizations which have to be registered and legally recognized. The group members provide joint collateral for each other and sometimes the financial organizations will liaise with a private firm which is responsible for buying the produce from a certain group to provide collateral based on their produce or earnings from produce. Other financial organizations have also come up with financial product suited specifically for agri-business oriented firms and farmers including smallholders, for instance Equity bank gives agricultural loans to farmers for purchase of inputs or equipment. The government of Kenya also runs a program called Kilimo Biashara which is funded by the Alliance for Green Revolution in Africa (AGRA) (a not for profit organization) and this funding is also disbursed through the government to equity bank.

These new developments have improved access to finance and credit for farmers by over 300 per cent in the past 3 years, and this has en improvements in productivity especially for target project areas (ASALs). Moreover the outreach has increased and coverage is now spread all over the country even to previously marginalized areas like the ASALs.

3.2.5 Private Sector in Agro-processing and Manufacturing

Kenya has a large agro-processing industry, reflecting the importance of the agricultural sector in the Kenyan economy. The majority of the pioneering industries during the colonial period were agro-based. A wide spectrum of agro-industries exists today, ranging from processing staple food and fruits, to beverage and tobacco production for both the domestic and foreign markets. Food processing is thus one of the key activities in Kenya's agro-processing industry. Farm-agribusiness linkages in dairy, cereals, traditional cash crops and horticulture have in the past been influenced by government policies towards agriculture. These policies include the general as well as the more sub-sector specific policies that have in the past been targeted towards the development of sub-sectors of special interest to the government, often through commodity specific marketing agencies.

- ***Agro-processing in the dairy sub sector***

In the dairy sub-sector, the policy effectively prohibited development of private sector based processing companies. This policy was implemented through the Kenya Dairy Board (KDB), whose major function still remains as that of regulating the industry by controlling private sector entry into dairy processing and marketing. Through these policies, the Kenya Cooperative Creameries (KCC) emerged as the main dairy processing and marketing body in Kenya and dairy cooperative societies as focal points for small-holder milk collection were established. A few of these cooperative societies later developed into dairy processing organizations. This policy changed in 1993 when private sector involvement in dairy processing was allowed, while the licensing role in the hands of the KDB was retained. The implementation of this policy also coincided with the collapse of the KCC, thereby providing a viable opportunity for private sector entry and development. By 2000, the number of registered private processing plants in Kenya was about 40, with a total employment of about 4 500.

- ***The Beverages sub sector: Tea and Coffee***

Tea Production and Processing

Historically, the tea industry is one of the greatest successes in Kenyan agriculture. Tea planting and production have expanded rapidly since independence in 1963 to date. Currently, about 62% of the total crop in the country is produced by the smallholder growers who process and market their crop through their own management agency, Kenya Tea Development Agency (KTDA) Ltd., which is the largest single producer of tea in the world. The balance of 38% is produced by the large scale estates, which are managed by major multinational firms associated with tea in the world. The leading districts in production include Kericho, Bomet, Kiambu and Nyeri.

Traditionally Kenyan tea has been sold to the market in bulk form and is much sought after by leading tea companies to blend and add taste to the most respected tea brands in the world. However, encouraged by Tea Board of Kenya, there is emerging a vibrant value-added sub-sector, led by the Tea Packers Association, which aims to provide consumers worldwide with pure Kenyan branded teas, blended at source. The main buyers of Kenyan tea are Pakistan who imports about 23% of the total exports followed by the United Kingdom, Egypt and Yemen. However Kenya Tea Board in conjunction with other players in the industry are exploring new markets in East

Africa, West Africa, North Africa apart from Egypt, Middle East and Eastern Europe.

Currently there are about 18 companies/ managing agents in the tea industry with over 90 factories. The companies are involved in production, trading and value addition. There are also many intermediaries including 12 brokers, over 100 buyers and associate buyers, 19 warehouse members and 62 packers all of which are privately run. Some of the leading packers include Kenya Tea Packers (KETEPA), Unilever Tea and Kikuyu Highlands Tea Company. Kenya currently hosts a number of multinationals dealing in the tea sub-sector including Unilever Tea Kenya Ltd, James Finlay Kenya Ltd. The sector still has a huge potential for growth especially if most of the value addition is done within the country.

Coffee sub-sector

The coffee producers are mainly small-scale farmers with farms of less than 5 acres while the estates have farms of over 5 acres. The small-scale farmers form cooperative societies who market and distribute their produce. The co-operatives and the estates send their produce to commercial millers for milling and grading. The commercial millers then send the graded coffee to marketing agents who prepare, classify the coffee, prepare catalogues and put a reserve price. The sample of the coffee is then sent ten days before the weekly auction to the buyers/dealers for evaluation before the actual auction day. The licensed coffee dealers buy coffee at the auction for export and for local roasting for the domestic market. Almost 99% of Kenyan coffee is exported and the domestic market only consumes less than 1% of the total coffee produced in Kenya.

The major players in the coffee industry in Kenya are Kenya Planters Co-operative Union (KPCU), which is involved in almost all the processes of coffee production and marketing. KPCU currently holds a packer's license, a warehouse license, a coffee auction license, management agent certificate and a miller's license. There are currently 57 trade license holders, 19 roasters, 19 packers, 3 commercial coffee millers and 2 private coffee millers all involved in value addition in the sector. A number of multinationals also exist in the coffee sector including Nestle. The sector has a very high potential for growth especially due to the fact that Kenya coffee is regarded as the best quality in the world.

- **The Horticulture sub-sector**

Horticultural development in Kenya has been characterized by less presence of government, despite the existence of the Horticultural Crops Development Authority (HCDA). The HCDA is mainly a regulatory one, but also provides market information and extension services to the sub-sector. Private sector based institutions such as the Fresh Produce Exporters' Association of Kenya (FPEAK), the Export Promotion Council (EPC) have played a great role in ensuring that the sector grows. This is the sector with the highest number of foreign companies involved in production, processing and exports of produce-both flowers and fresh fruits and vegetables. Out of the 17 large scale integrated exporters 11 of them are multinationals who specialize in exports to Europe.

The sub-sector generates over US$ 300 million in foreign exchange earnings. The total horticultural production is close to 3 million tonnes making Kenya one of the major producers and exporters of horticultural products in the world. Europe is the main market for Kenyan fresh horticultural produce. Other importing countries include Saudi Arabia and South Africa. A well-developed and dynamic private sector has profitably marketed a wide range of horticultural products to diverse international markets.

- **Cereals Sub-sector**

The agro-grain processing sub sector is one of the leading and well-established industries and it includes major cereal foods such as maize, wheat, rice, sorghum, millet and barley among others. The grains sub-sector falls under the Crop Development Division, Ministry of Agriculture. The sub-sector is regulated and controlled by National Cereals and Produce Board of Kenya (NCPB), which monitors procurement, distribution, storage, processing and licensing of grain dealers. Following liberalization of the sector, the NCPB has faced competition from independent players especially in procurement, distribution, storage, and grain processing. Other players include the Kenya Seed Company, a Government parastatal that provides and certifies seeds before being offered for sale to farmers. The National Cereal and Produce Board is the largest trader in cereals and grains in Kenya. It regulates the trade of cereals and grains in the country, while at the same time licensing other marketing and trading investments.

The industry is structured into producers who are mainly small-scale farmers with farms of less than 5 acres, and large-scale farmers who have farms of over 5 acres. All these sell their produce either independently to the domestic market or to millers like Unga Limited, Pembe Maize Millers, Mwea Rice Millers, or to produce boards like NCPB and NIB. Kenya has 22 millers, of these 18 are large capacity (150 tons/24 hours) and 4 are medium capacity (50-150 tons/24 hours). The country's installed milling capacity is about 3,500 tons per day. The majority of mills operate at capacities of between 100-300 tons per day. Unga Group Limited is the largest grain miller and animal feed manufacturer in Kenya.

The relationship between the private sector and smallholders like in many other sub-sectors is skewed, often prices are fixed by middlemen and they pretty much depend on the time of season, prices are low during harvest season and higher during non-harvest seasons. However recent introduction of the receipt system in grain marketing has helped regulate some aspects of the marketing of grain produce in the country.

- **Sugar Sub-sector**

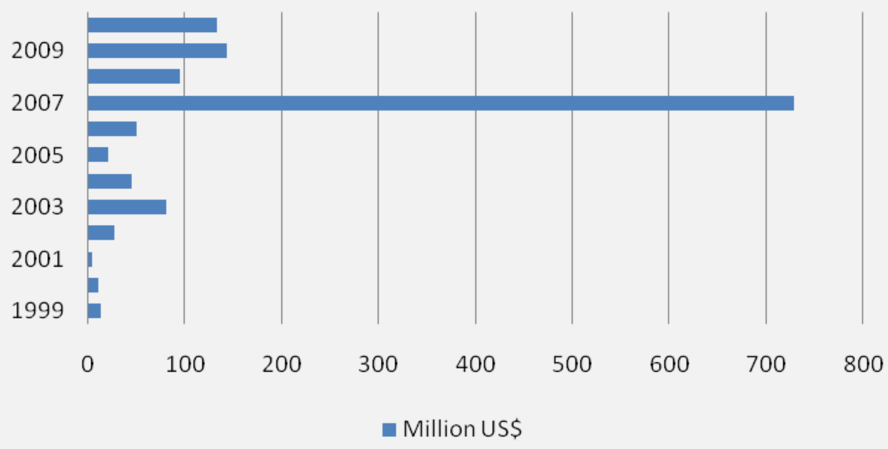
The country has 7 major factories with an annual production capacity of between 550,000 and 600,000 tonnes of sugar. By-products from the factories include molasses (mostly for alcohol production), baggase (for generation of power) and filter press mart for fertilizer. Statistics show that Kenya's consumption of sugar outstrips production. Kenya currently produces about 70% of her domestic sugar requirement. Sugar production increased from 384,171 tonnes in 1995 to 448,489 in 2008. Consumption also increased from 560,000 tonnes in 1995 to 691,563 tonnes in 2008. The deficit in sugar production is met through imports. There exists potential for Kenya to become and retain self-sufficiency in sugar production and also produce surplus amounts for export.

There are seven major sugar factories in Kenya with a total installed capacity of 22,150 tonnes of cane per day (TCD), which at full capacity for 300 days a year would produce approximately 550,000 tonnes of sugar. Two additional sugar factories are currently under development; Busia Sugar Company and Soin Sugar Company. Other potential factory projects include Transmara Sugar Project, Ramisi Sugar Project, Siaya Sugar Project and Kamulamba Sugar Project. However government expenditure and investments in the sugar sector has been dismal mainly due to the politics of exclusion played by two main regimes since independence. The sector has also been shrouded by mismanagement and misappropriation of funds by corrupt managers. As a result of poor management of the sugar industries many smallholder sugarcane growers often receive low and late payments for their produce a phenomenon which has seen sugarcane growing become less and less lucrative in the past two decades. In addition to this, importers now play a major role in cartelization of the industry and it is said that some of these cartels are in government offices and would therefore prefer the imports of sugar rather than investing in the industry to ensure self-sufficiency.

3.2.6 Private Sector Investment in the Agriculture Sector in Kenya

Multinational Corporations (MNCs) form an important nexus linking Africa's economies to global markets. Kenya presents a dynamic example of the potential of MNEs to generate multiplier effects as sources of foreign exchange, employment, and technological and managerial know-how. Kenya has recently experienced a surge in foreign direct investment (FDI) following a period of substantial declines in FDI inflows near the turn of the century. However, FDI has played a small (though increasingly important) role in the economy. Net FDI flows to Kenya have not only been highly volatile but also generally declined in the 1980s and 1990s, despite economic reforms and the progress made in improving the business environment. Kenya's total FDI as percentage of GDP rose from 0.86% in 1970 to 1.22% in 2000 however declined to 0.57% in 2003 currently FDI as a percent of GDP is at 0.7% (UNCTAD, 2010).The investment wave of the 1980s dwindled in the 1990s as the institutions that had protected both the economy and the body politic from arbitrary interventions were eroded. The FDI inflows to Kenya dipped to $133 million in 2010 from $144 million the previous year, according to a new report by the UNCTAD (Figure 3.1).

Figure 3.1: Trends in FDI inflows in Kenya (1999-2010)



Source: COMSTAT

In the past decade, FDI in the agricultural sector has mainly been concentrated in the horticulture sector and the textiles and apparels sector due to the export processing Zones (EPZs) that gave tax concessions to foreign companies. Although there is no available data on the exact amounts of FDI into the sector, in the last decade, 12 multinational companies set base in the country and mainly in the export of flowers and other horticultural produce. These are large integrated firms who acquired land around Lake Naivasha and other areas and employing about 5,000 Kenyans on average. They initially had 10 year tax concessions and when these expired, some of them decided to acquire Kenyan citizenship and stay in the country.

Other forms of foreign investment in the agriculture sector have raised a lot of concern especially with respect to foreign firms buying large tracts of land to produce food which is directly exported to their countries. One such firm is the Dominion Farms Limited an American-owned, Kenyan-registered company that operates a farm on a 17,000-acre leasehold in western Kenya. The company's products include long-grain rice, tilapia fish, rotation crops and a number of by-products related to those crops. An estimated 1500 villagers (smallholder farmers) were displaced from their land and were not sufficiently compensated by the government in a deal that was shrouded with a lot of secrecy. This has raised concern by many human rights organizations because such investments are seen to destroy the socio-economic livelihoods of many communities. Although some argue that the company has provided a lot of employment for the locals, others see it as a problem which has been fuelled by the scramble for Africa's vast productive agricultural lands in deals that are largely viewed as unequal and shrouded in corruption by government officials.

3.3 Government and Related Institutions

The agricultural sector has several ministries, parastatals and several programmes. The ministries are the top organs in agriculture policy formulation and implementation. The agriculture related ministries include; the Ministry of Agriculture, Ministry of Livestock Development, Ministry of Fisheries Development and the Ministry of Cooperative Development and Marketing. Closely related are the; Ministry of Water and Irrigation, Ministry of Land, Ministry of Natural Resources and Environment and Ministry of Regional Development. Below is a summary of functions of ministries and their respective parastatals.

3.3.1 Ministry of Agriculture

The core functions of the Ministry of Agriculture are speltout in the Strategic Plan 2006–2010 as those of facilitating and representing agricultural state corporations in the Government. The ministry's mandate also include promoting and facilitating production of food and agricultural raw materials for food security and incomes; advance agro-based industries and agricultural exports; and enhance sustainable use of land resources as a basis for agricultural enterprises. The ministry is composed of seven key departments that include; Planning, Land and Crop Development, Policy and Agricultural Development Coordination, Agri-business, Market Development and Agricultural Information Services, Extension, Research Liaison and Training Development, Agricultural Information and Resource Centre, and the Central Agricultural Board. In addition to the departments, the ministry also runs special programmes which include; the Kenya Agricultural Productivity Project (KAPP), the Agricultural Sector Programme Support (ASPS), the National Agriculture and Livestock Extension Programme (NALEP), the Promotion of Private Sector Development in Agriculture (PSDA)/GTZ, the Eastern Province Horticulture and Traditional Food Crops Project (EPHTFCP) and Njaa Marufuku Kenya (NMK). Table 2.2 below gives a summary of parastatals involved in agriculture and their mandates

Table 3.1: Agricultural Sector parastatals and their Mandates

Parastatal	Year	Core mandate
Agricultural Development Corporation (ADC)	1965	To promote the production of inputs such as hybrid seeds, and high grade livestock.
Agricultural finance Corporation (AFC)	1963	Provide financial services for the development of agricultural sector in Kenya
Cotton Development Authority (CODA)	2006	to promote, coordinate, monitor, regulate and direct the cotton industry in Kenya
Coffee Board of Kenya	2001	Regulation of the industry and control over production, marketing and export of coffee
Coffee Research foundation (CRF)	2001	Undertakes research in coffee and financed by the coffee board of Kenya
Kenya Planters cooperative Union (KPCU)	1963	Controlled milling services before liberalization but now it holds milling licences including licences for roasting and auction
Coffee Development Fund (CoDF)	2001	The Fund is mandated to provide sustainable, affordable credit facilities to coffee farmers for farm development, farm inputs, farming operations and coffee price stabilization.
Tea Board of Kenya	1950	Regulation of tea industry including licensing tea growers, factories and control of the marketing of tea
Kenya Tea Development authority (KTDA)	1964	Extension services for tea farmers and processors through the provision of seeds, fertilizers, inspection and collecting leaf tea from farmers and processing
Nyayo Tea Zones Development Corporation (NTZDC)		To provide infrastructure in tea growing areas and processing and management of assets of tea growers in liaison with KTDA
Tea Research Foundation of Kenya (TRFK)	1980	Research into all matters pertaining tea production and processing
Horticultural crops Development Authority (HCDA)	1967	Regulatory body for the horticulture sector as well as promoting the development of horticultural crops, licencing, information dissemination and marketing
Kenya Sugar Board (KSB)	2001	Succeeded the Kenya Sugar authority and is mandated to regulate and coordinate activities of production processing and marketing in the sugar industry

Kenya Sugar research foundation (KESREF)		Conduct research pertaining to sugar production and processing and provides extension services.
Kenya Sisal Board		Regulation of the sisal industry
Kenya Agricultural Research Institute (KARI)	1979	The main institution for agricultural research in Kenya and carries out research related to plant breeding and biotechnology and adaption of new technologies to improve productivity. Also carries out research on livestock production, breeding and diseases
Kenya Plant health Inspectorate services (KEPHIS)		Mandated to ensure quality control of agricultural input and produce relating to crop pests and diseases
Pests Control Product Board (PCPB)		To regulate the importation, exportation, manufacture, distribution and use of pest control products
National Cereals and Produce Board (NCPB)	1985	Mandated with the regulation of production marketing and management of cereals (wheat, rice, maize etc). It also manages the strategic grain reserves for the county

Other quasi government institutions not listed above include Agricultural society of Kenya mandated with organizing provincial agricultural shows; the Kenya Food Security Group and Kenya FOOD Security Meeting (KFSM) both mandated with coordination of food security issues in conjunction with other stakeholders for emergency response and early warning systems; and the Agricultural Sector coordinating Unit ASCU which is mandated to coordinate institutions for the implementation of the ASDS.

3.3.2 Ministry of Livestock Development (MoLD)

Established in 2008 following the split of the ministry of livestock and fisheries development and is mandated to promote, regulate and facilitate livestock production for socio-economic development and industrialization". The organizational framework of the Ministry is presented in Appendix III. The departments in the ministry include the Department of Veterinary Services (DVS) and the Department of Livestock Production (DLP). In addition, the ministry has a number of special programmes that include; NALEP, the ASAL Based Livestock and Rural Livelihoods Support Project, Central Kenya Dry Areas Programme (CKDAP), Smallholder Dairy Commercialization Programme, the Pan-African Tsetse and Trypanosomosis Eradication Campaign Programme (PATTEC), the Pan-African Control of Epizootics (PACE), the Kenya Agricultural Productivity Project (KAPP) and the South Nyanza Community Development Project.

The MoLD has two parastatals and two statutory bodies that receive grants from its vote. These include the Kenya Dairy Board mandated to promote and regulate the dairy sector, The Kenya Meat Commission (KMC) mandated to regulate the meat industry, the Kenya Veterinary Board (KVB) and the Central Artificial Insemination Services (CAIS).

3.3.3 Ministry of Fisheries Development

Established in 2008 and mandated to regulate and manage issues related to fish production, marketing and export. Departments include Aquaculture Extension and Development, Fisheries Management and Legislation, Quality Control, Research and Statistics, Project Planning, Monitoring and Evaluation and Training. The main parastatal under the Ministry of fisheries development is the Kenya Marine and Fisheries Institute (KEMFRI) which carries out all matters pertaining to research on fisheries.

3.3.4 Ministry of Cooperative Development and Marketing

Established with the main aim of regulating and managing cooperatives, it spearheads the growth and development of an economically viable cooperative movement through formulation, development and implementation of policy guidelines, programmes and legal frameworks that meet the aspirations of cooperative members. Three key parastatals operate under the ministry. These are; the Cooperative College of Kenya performs the functions of teaching, research, consultancy and development interventions in co-operatives and the associative economy; and the Kenya Cooperative Creameries (KCC) which manages the production and processing and marketing of dairy products.

3.3.5 Ministry of Regional Development Authorities

The Ministry of Regional Development Authorities (MoRDA) has the mandate to provide: policy guidance; capacity building and support; and management oversight and support to Regional Development Authorities (RDAs) and to pursue an integrated basin based regional development. The ministry through its regional development authorities fulfils its mandate through promotion of agro-industry development, creation of employment, resource conservation, sustainable exploitable and management of natural resources, promotion of tourism and sustainable utilization of the environment to alleviate poverty and enhancement of food self-sufficiency.

The regional development authorities include: the Lake Basin Development Authority (LBDA) covering the region around Lake Victoria that measures 39,000 sq km and includes the whole of Nyanza and Western Provinces and parts of Rift Valley Province, Ewaso Ngiro North Development Authority (ENNDA) covering 28 Administrative districts[6]. The Tana & Athi River Development Authority (TARDA) includes most of the Central province, the southern districts of Eastern province, the riveline portion of North Eastern Province along the Tana River (Garissa and Ijara Districts) and parts of the Coast province where both the Tana and Athi rivers drain into the Indian Ocean. Kerio Valley Development Authority (KVDA) includes the districts of Baringo, Koibatek, Keiyo, Marakwet, West Pokot, Turkana and western parts of Samburu. The total area covered by the Authority is approximately 96,285 sq Km, representing 16.5% of the land mass of Kenya with over 80% being arid or semi-arid. Ewso N'giro outh Development Authority (ENSDA) includes Narok north, narok South, Kajiando, Oloitoktok, Transmara and parts of Naivasha Nakuru, Molo, Nyandarua North and Nyandarua South districts. Coast Development Authority (CDA) includes Coast province (Kwale, Msambweni, Kinango, Taita, Taveta, Kaloleni, Kilindini, Mombasa, Kilifi, malindi, Tana River and lamu districts), Ijara district of North eastaern province and Kenyan Exclusive Economic Zone(EEZ) i.e the 200 nautical miles into the Indian Ocean.

3.3.6 Other Ministries

There are several other ministries which are not related to agriculture but are all the same very important in providing services needed for agricultural development. These include Ministry of lands which deals with land issues; Ministry of Environment and Natural Resources; Ministry of Roads and Public works mandated for providing infrastructure including feeder roads in farming areas; Ministry of trade which is extremely important for agricultural trade issues in providing linkages with markets for both the domestic market and exports; Ministry of east African Community also important in providing an enabling environment for agricultural producers to trade in the East African Community (EAC); Ministry of Water and Irrigation and the national Irrigation Board which are also crucial for providing irrigation services and Ministry of Finance which determines the budgetary allocation towards agricultural development.

[6] Moyale, Chalbi, Marsabit, Laisamis, Isiolo, Garbatulla, Wajir East, Wajir West, Wajir South, Wajir North, Garissa, Fafi, Ladgera, Mandera East, Mandera West, Mandera Central, Samburu East, Samburu Central, Samburu West, Laikipia East, Laikipia North, Laikipia West, Meru Central, Imenti North, Tigania, Igembe, Nyandarua North and

3.4 Producer Organizations

Kenya has vibrant producer organizations and cooperative movements. The cooperatives were disbanded in the early 1990s following SAPs and liberalization but have recently been revived albeit with a different structure and mandate. Producer organizations are of 3 different types:

3.4.1 Umbrella organizations

These are organizations that represent a large body of producers either individually or as a coalition of smaller producer groups. Their aim is to articulate their issues in terms of policy needs and also lobbying and support. They include:

- *Kenya National Federation of Agricultural Producers (KENFAP)* formerly Kenya National Farmers Union (KNFU) is the umbrella organization charged with lobbying and representation of the interests of farmers in policy round tables, it currently hosts about 14 commodity groups.
- *Kenya Private sector Alliance (KEPSA)* – this is the umbrella organization for the private sector in Kenya and is also charged with articulating problems of the private sector and lobbying for creation of an enabling environment for private sector amongst others.
- *Kenya Association of manufacturers* – KAM is also an umbrella organization for manufacturers and processing industries and is mandated with lobbying and representation of the interests of manufacturers and processors.
- *Kenya National Chamber of Commerce and Industry (KNCCI)*- an autonomous, private sector institution and membership based organization mandated to protect and develop the interest of the business community by providing advice regarding marketing, laws and regulations to the business community
- *Kenya Producers Coalition (KEPCO)* – which is a coalition of producer groups of key agricultural subsectors including Sugar Campaign for Change (SUCAM) Western Kenya; *N'gombe na Mahindi (NGOMA)* in North rift region; *Sauti ya Wafugaji (SAWA)* South rift region; *Matunda na Mboga (MAMBO) in the eastern region;* Fisher folks Forum (FIFO) in Nyanza region; and Coffee and Tea Campaign (COTECA) in Central region.

3.4.2 Cooperatives

In the agricultural sector, cooperatives previously (in the era before SAPs) handled over 72 per cent of coffee sales, 95 per cent of cotton sales, 76 per cent of dairy produce sales, and 90 per cent of pyrethrum sales. However, with the exception of coffee and dairy cooperatives (whose share in the total market has remained stable), other agricultural marketing cooperatives have seen their market share fall below 40 per cent, with cotton cooperatives recording a paltry two per cent of the marketed bales of lint in 2008. Cooperative societies were revived in 2003 when the Ministry for cooperative development and Marketing was set-up. Today cooperatives not only help farmers in marketing their produce but they also contribute greatly in the financial sector.

Financial cooperatives (savings and credit cooperatives [SACCOs], KUSCCO, Cooperative Bank and CIC) hold substantial savings portfolios. On the one hand, the Cooperative Bank, the fourth largest bank in Kenya, has a capital base of over KES 13.5 billion (USD $180 million). On the other hand, the combined assets of all SACCOs are worth approximately KES 200 billion (USD $2.7 billion), out of which approximately KES 150 billion (USD $2 billion) are members' deposits, which consist of both shares and savings. Of a total turnover of KES 24.3 billion (USD $323.4 million) for the entire cooperative movement in 2007, SACCOs posted a combined turnover of KES 14.4 billion (USD $192 million). Agricultural cooperatives' total turnover was KES 8.4 billion (USD $112 million) (Ministry of Cooperative Development & Marketing, 2008: 20).

3.4.3 Commodity Specific organizations

These are producer organizations formed to articulate issues affecting specific commodities. They include:

- *Fresh Produce Exporters Association of Kenya (FPEAK)*- this is the umbrella body for exporters of fresh produce, usually fresh fruits and vegetables and flowers – mainly horticultural exporters
- *Kenya Flower Council (KFC)* - For flower producers and exporters
- *Kenya Cotton Growers Association* – mainly for cotton growers
- *Kenya Coffee growers Association*
- *Kenya Tea farmers Association*
- *Association of Fish Processors of Kenya (AFIPEK)*

2.4.4 Producer groups

Producer Groups are a collection of smallholders in a specific locality such as a village or a district and who grow specific commodities and come together as a self-help group or for purposes of accessing credit or extension services. These are numerous in number and spread all over the country. Most of the producer group groups have membership in umbrella organizations.

3.5 Non-Governmental Organizations and Civil Society

Lobby groups and NGO's have increasingly played a limited but significant role in influencing agricultural policy formulation in Kenya. These include both international and local NGO's such as CARE International, Plan International, Catholic Relief Services (CRS), World Vision, Action-Aid, and Oxfam UK, faith groups like churches and the media. Most of the international NGOs are mainly based on providing support to farmers at the grassroots or providing food aid in times of drought and famine, for instance world vision is mainly active in arid and semi-arid areas distributing food aid or providing water and sanitation to farmers. More recently the Bill and Melinda gates foundation has also been to the grassroots promoting access to finance for farmers and adoption of new technologies. Few organizations like Action-Aid, CUTS-International and Oxfam carry out research, disseminate and even participate in policy round tables. A number of local NGOs like Centre for Governance and Development (CGD) have also worked on the grassroots with producer organizations and organized them in groups based on their regions and sectors where they can lobby for favourable policies.

In the past, NGOs and civil society did not have space in policy round tables and could only articulate their issues through the media. However this has changed and NGOs have also been allowed space in policy round tables as they are also allowed to present their position papers during discussions of various policies. One limitation to policy making in Kenya has been the little or no response from government to the economic and social policy position papers prepared by lobby groups and NGO's this was corroborated by some NGOs who insisted that even though they now have space their positions are often not taken into account.

3.6 Overseas Development Agencies

The period during the SAPs and market liberalization policies in the 1980's and 90's was marked by a series of Aid conditionality from development agencies which became a very important factor in shaping the policy environment and the subsequent developments in the Agricultural sector. The period following liberalization also saw a deliberate push for certain policies by donors through their support of certain programmes and again this Aid was pegged on conditionality. Some of the most active donors in the agricultural sector have been:

- *The UK's Department for International Development (DFID)* - which is committed to supporting programs related to the achievement of the MDGs. It works with governments, civil society and research community and its programmes are often co-funded by multilateral organizations such as World Bank. DfID funded a smallholder dairy project that covered 112 districts between 1997-2004 to increase incomes for dairy farmers through capacity building for improved production practices.
- *International Fund for Agricultural Development (IFAD)*- works with governments by giving grants that enable poor rural smallholders to have access to credit and financing.
- *World Bank* – Gives loans to governments for various programmes and has been involved in two major programs: the Kenya Agricultural Productivity Program (KAPP) 2004-2010 to improve productivity in the agricultural sector through various reforms; and the Arid Lands Resource Management Project (ALRMP) 1996-2009 to enhance food security and reduce vulnerability in the ASALs.
- *United States Agency for International Development (USAID)*- has recently supported smallholder dairy commercialization programme 2006-2013 covering 9 districts and whose objective is to increase incomes of rural poor households who depend on dairy production for their livelihoods.
- *GTZ/GIZ Germany* – has recently supported the school camel programme in 1991 whose main objective was to promote consumption of camel milk in school and improve nutrition for school children.
- *The African Development Bank (ADB)* – also works in conjunction with the government of Kenya through provision of loans and grants for specific programmes. ADB has recently supported the ASAL based Livestock and Rural Livelihood Support Project (2004-2010) covering 22 districts and aimed at improving incomes of pastoralists though better marketing of their products; and Aquaculture Development Project whose aim is to commercialize aquaculture and fish production. ADB has also supported the Smallholder Horticulture Development project (SHDP) in selected areas in rift valley aimed at capacity building of horticultural producers to meet international standards and link farmers to markets.
- *Swedish International Development Agency (SIDA)* – also funds various projects in conjunction with the Government of Kenya most recent one being the National Agriculture extension program (NALEP) that began in 2000 covering 53 districts. The programme works through a focal area approach in order to address specific needs of farmers in different areas.
- *Danish International Development Agency (DANIDA)* – also works with GoK on many projects most recent one being the

Agricultural Sector Support Program (ASPS) which started in 2005-2010

- *Japanese International Cooperation Agency (JICA)*- has funded many projects in conjunction with the Government of Kenya most recent ones being Smallholder Horticulture Empowerment Project (SHEP) between 2006-2009 aimed at raining smallholders on Sanitary and Phyto sanitary and other standards required for exporting horticultural produce. The Community Agricultural Development Project in Semi-Arid lands (CADSAL) in five divisions in Marakwet district running from 2005-2010

3.7 Research Institutions

There are numerous agricultural research institutions in Kenya both locally based and internationally based. They carry out research on many aspects of agriculture including breeding, productivity improvement, technology adoption, and various aspects of the agricultural economy in order to inform policy and programs. The internationally based institutions include: the Consultative Group of International Agricultural Research (CGIAR); International Centre for Tropical Agriculture (CIAT); International Crops Research institute (ICRISAT); International Centre of Insect Physiology and Ecology (ICIPE); International Livestock Research Institute (ILRI); World Agro-Forestry Center (ICRAF) amongst others. The locally based institutions include Kenya Agricultural Research Institute (KARI); Kenya Forestry Research Institute (KEFRI) Kenya institute for Public Policy Research and Analysis (KIPPRA) and various Universities. The research institutions are critical for informing policy and also for providing new ideas for the agricultural sector to help improving productivity, adoption of new technologies or exploring new markets.

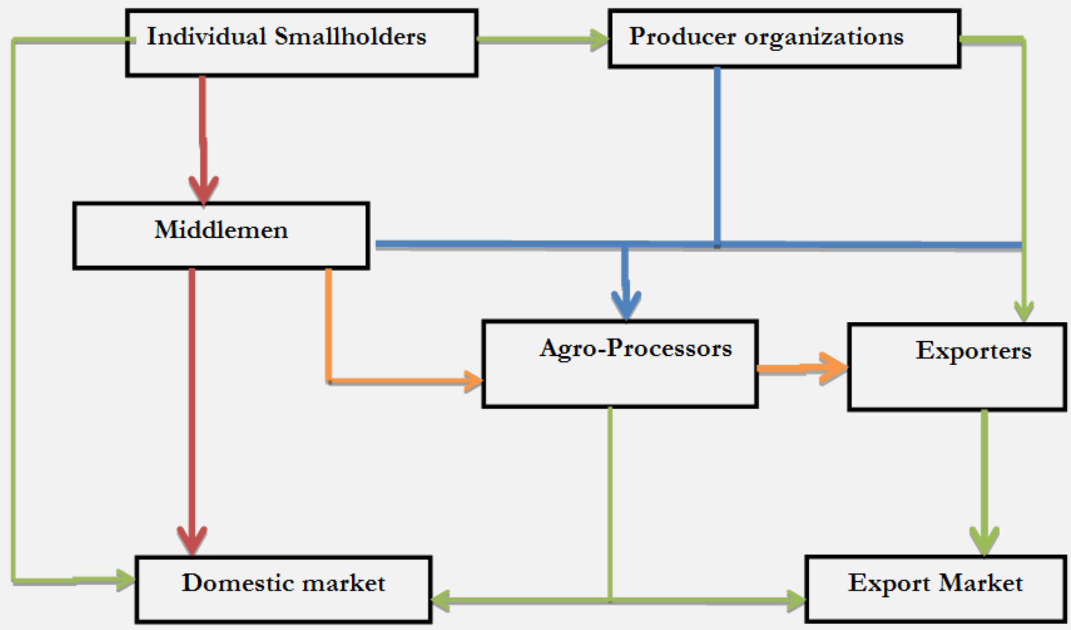
3.8 Stakeholders' relationships

3.8.1 Interactions between Farmers, Private sector and the Government

The relationship between stakeholders in the Agriculture sector is not well defined. Never the less the government's major role has emerged as providing supporting services; implementation of policies; legal and regulatory frameworks that govern the sector; and creating an enabling environment for farmers and private sector to function smoothly. The private sector is the 'driver' of the agricultural economy providing market and information to farmers amongst other support services.

There are various levels of 'private sector' in the agricultural sector depending on the type of market and the type of produce being sold. Farmers selling their produce in local markets either sell directly to the consumers or they sell to middlemen who then sell in urban markets directly to consumers or they to agro-processors and or exporters. Other relationships also exist where farmers sell directly to agro-processors and exporters either individually or through their producer groups (Figure 2.1). The Middlemen, agro-processors and exporters add value to the produce before selling and therefore receive premiums for the value added. This means that farmers receive less for their produce, this is further exacerbated by low levels of technology and value addition by famers especially smallholders.

Figure 3.2: Summary relationships of key players in Kenya's agricultural markets



The nature of relationships between farmers and private sector in Kenya's agriculture sector varies from sector to sector. However some 3 distinct forms of business relationships can be adduced:

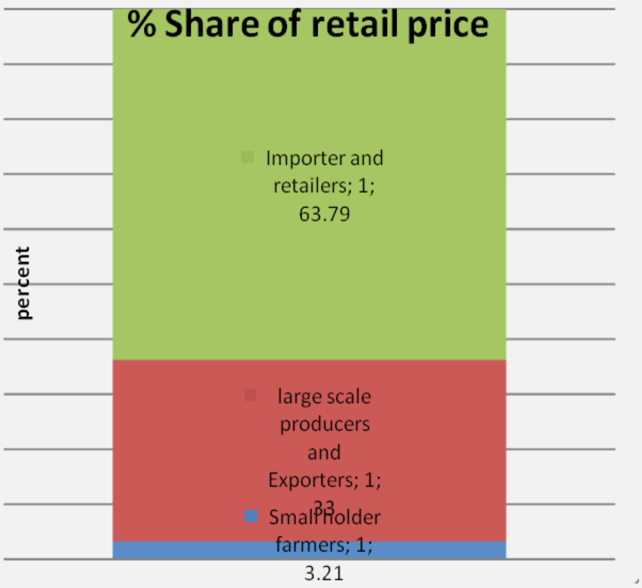
- *Contractual arrangements*: where farmers have either formal or informal agreements with private sector firms to produce and sell a specific amount of produce of a specified quality over a given period of time. These are predominant in the sugar subsector – between farmers and the out grower companies; in the horticulture sector where smallholders sell their produce to exporters and in the tea and coffee sectors between farmers and their respective cooperatives. Contract terms are largely determined by the private sector firms and therefore skewed to benefit them. Some forms of bargaining exist (although minimally) through respective producer associations.
- *Middlemen and brokers*: many firms selling in the domestic market rely on middlemen and brokers to market their produce. These are some of the most unequal and unregulated relationships in the sector in which the middleman solely determines producer prices or prices are determined by market forces. The middlemen often have transport and information concerning the market and they take advantage of farmers. These middlemen operate predominantly in the maize, rice and wheat sector and fresh produce markets and often buy produce from rural farmers for sale in the urban areas, making huge profits in the process.
- *Cooperatives and producer groups*: cooperatives provide marketing channels and information to farmers predominantly in the coffee and dairy sub-sectors. The cooperatives are part owned by farmers as a percentage of their sales are retained in the cooperatives in the form of shares. Cooperatives are seen as the most fair in terms of according producers good market prices and this is partly because they are run by farmers themselves. A more recent evolution of cooperatives has seen the movement expand to provide financial services for millions of smallholder farmers. Some key informants feel that the future of the agriculture sector lies in strengthening cooperatives.

Box 1 below gives an example of an 'unequal' relationship between farmers and exporters in the Horticulture sector.

Box 1: The share of retail price among key value chain players in the horticulture sector

In a recent study on the green beans export value chain, the share of retail price summarized below shows that farmers smallholder farmers who form the majority of producers in the sector (estimated at 40,000 by Okello, 2005) have the least share of the retail price at 3.21 percent, whereas exporters and large scale producers have a modest 31 an 33 percent respectively, the bulk of the share of retail price (63 percent) goes to developed country importers and retailers (Figure3.32 below).

Figure 3.3: Share of retail price for various actors in the green beans value chain



In addition, the value added at each stage of the value chain was found to be 30.45 percent between the farmers and processor and 66.45 percent between the processors and exporters. Much of the value adding takes place at the processing stage mainly done by exporters through sorting, grading packaging and labeling. There is also an additional premium received as a result of meeting certain standards. However the incomes are very low at lower ends of the value chain with farmers receiving a paltry 0.29 percent of the retail price. Exporters earn 33 percent of the retail price and the lion's share goes to developed country importers and retailers.

It is evident therefore that relationships between private sector and farmers are skewed to favour private sector actors in a highly unregulated environment. There are no legal and regulatory frameworks that govern the way contracts are administered in the sector and therefore farmers easily get exploited by private sector actors and middlemen.

3.8.2 Stakeholder Interplay in the Policy process

The process of policy formulation and implementation has undergone an evolution since independence. According to a study by Alila and Otieno in 2006, five plausible forms of policy initiation and formulation process can be distinguished they include: bureaucratic initiatives both requiring and those not requiring cabinet approval; executive directives; budget policy decisions; other domestic policy initiatives; and external policy initiatives.

In the period immediately after independence until the 1980's (precisely 1985) agricultural policy was mainly formulated by the government. This was a predominantly bureaucratic process where policies were initiated, formulated and approved by the Minister in charge of agriculture. There was some form of Inter-ministerial co-ordination at the permanent secretary (PS) level predominated by consultations with the Ministry of finance which allocated funds for the policy implementation. Over the years, however, this approach to policy initiation and implementation has been abandoned.

In the period after 1985 which was principally characterized by implementation of SAPs, which were conditionality for Aid; the policy process was generally dictated by external policy considerations. During this period the government banned cooperatives and agricultural marketing boards and did away with any forms of subsidies accorded to farmers. This period saw an increasing presence of donors in policy through the financing of certain sectors and/or initiatives according to their policy prescriptions. Again there was minimal participation from farmers and private sector.

In the 1990's after the failure of the SAPs, many policy decisions were made in line with the budgetary considerations and with the help of some bureaucrats and technocrats. Policies were made in line with the Medium Term Expenditure Framework (MTEF) which was eventually adapted in 2001. The framework had an elaborate process through which concerned ministries lay out their policy framework to their budget and plan. The ministry of agriculture (MOA) had to make policy decisions it perceived could best enable it achieve its objectives, not only annually but also in the medium term. In the budgetary process it is those with the final say on resource allocations that determined which policy decision would be implemented because most policy decisions required resources to implement. The Ministry of Finance was therefore crucial in the realisation and implementation of policies. Furthermore this period also saw some policy pronouncements by the executive especially in sectors that it had interests like tea. It is during this period that the tea sector received higher amounts of budgetary allocation and the Nyayo tea zones were born.

The past decade has seen a major shift in the policy making process where more policies are initiated domestically and a participatory approach has been adopted. This has seen the 'voices' of parliamentarians (as initiators of some policies), NGOs and civil societies, producer associations, the private sector, and smallholders in policy round tables as the process becomes more systematic, transparent and inclusive. And when the NARC government came to power in December 2002, the preparation of its blue print for economic revival, the Economic Recovery Strategy for Wealth and Employment Creation (ERSWEC) which addressed policy issues in the agricultural sector as well, received widespread stakeholder consultations with parliamentarians, donors, trade unions, professionals, financial institutions, industrialists, ASAL representatives amongst others (Alila & Atieno, 2006).

The policy process has also benefited from the 1993 reconstitution of parliamentary committees under the umbrella Liaison Committee chaired by the Speaker of the national assembly. The Agriculture, Land and Natural Resources Committee tasked to process and/or vet proposed legislation from all the six ministries3 involved in the sector. Parliamentary caucuses established from 1999 to seek opportunities for commodity producer groups and stakeholders are also concerned with policy formulation. For instance, caucuses have been created comprising MPs from areas growing three commodities, namely, the Coffee and Tea Parliamentary Group (COTEPA) and the Sugar Parliamentary Group (SUPA). They influence policy on these commodities, especially when put under pressure by their constituents to change or improve policy guiding the production of the affected commodity.

Along the same vein have emerged various civil society interest groups, which are comprised of more farmers. Those already created include SUCAM (Sugar Campaign for Change in Western Kenya), NGOMA ("Ng'ombe na Mahindi" to cover maize and milk in the North Rift, SAWA ("Sauti ya Wafugaji" – North Eastern pastoralists, MAMBO

("Matunda na Mboga" for horticulture in Eastern province. Currently efforts are underway to unite the sub-sectors into a national umbrella body with representation from all the groups to enable them deal with issues that are cross-cutting that include policies and a common voice in the policy process.

This major shift in the policy process has seen major improvements not only in the process of policy making but also in the quality of policies and legal frameworks being implemented. For instance in the last decade alone, major sub-sector policies have been formulated such as Cotton sector, dairy sector, fisheries policy, livestock policy, National food security and nutrition policy, national extension policy among others which were done through various policy round tables which had representation of many producer associations, civil societies and private sector.

The representation of farmers and private sector in the policy round tables is mainly done through KENFAP[7] and through Members of various commodity associations and other civil society organizations. This is mainly by invitation where the federation is asked to send a representative to sit in various policy review committees to represent the farmers' views. Moreover, there are different platforms and forums through which different policies and policy proposals are presented by various interest groups, these include:

- Budgetary process and sector working groups (SWG)
- Ministerial Stakeholder forum (MSFs)- where issues are discussed at the ministerial level together with representatives of various organizations
- Sub-sector policy round tables such as dairy sector policy or food and nutrition security policy round tables.
- Other institutions that sit in these policy round tables include Government parastatals research institutions and experts.

However despite this progress, many policy consultation processes still do not reach smallholder farmers especially because they have weak linkages and poor communication between their respective producer organizations and their representatives in the umbrella associations that participate in these policy round tables. There also seems to be a disconnect between the interest of private sector and the collective interests of farmers as the private sector has powerful lobby groups and cartels.

[7] Private sector participation in the government processes has been through its umbrella body, the Kenya Private Sector Alliance (KEPSA).KEPSA operates through sector boards, with that of agriculture being chaired by the Kenya National Federation of Agricultural Producers (KENFAP).

4. Towards Equitable terms of Trade among Stakeholders

4.1 Challenges and Constraints faced by stakeholders in Kenya's Agricultural Sector

The main challenges facing the agricultural sector can be classified as policy challenges or productivity related challenges. Increasing productivity in the agricultural sector and economic growth is a key requirement for halting the worsening poverty levels. Other challenges are also related to market imperfections that ultimately increase transaction costs for producers thereby acting as a disincentive and making farming unprofitable. Globally, the Kenyan agriculture sector has to deal with multilateral trade rules; climate change, subsidies in the developed (that distort world trade) the looming financial crisis and a declining financial and natural resource base. Furthermore the country depends on a narrow range of primary agricultural products for exports, which are facing a fairly volatile and stringent world market. One of the greatest challenges in Kenyan agriculture exports is to increase the volume and value of export within the various trade protocols of the WTO Agreement on Agriculture and foster bilateral agreements that allow the country to trade in value added products. This section gives a summary of the constraints faced by stakeholders from their own account following key interviews with major government departments, private sector, producer organizations and farmers.

4.1.1 Productivity related challenges

(i) Poor access to agricultural inputs (especially fertilizers, improved Seed)

An analysis of information obtained through key interviews with producer organizations in various sectors (maize, sugar, cotton, tea, coffee, horticulture and livestock) all point to the key issues in access to agricultural inputs include:

- High costs of inputs- the costs of key inputs such as seeds, pesticides and fertilizer have been increasing over the years and this has caused an increase in production costs for most farmers ultimately rendering them inaccessible. Recently the government introduced the fertilizer subsidy program for smallholders which were targeted at various sectors however farmers still felt that the prices were too high.

- Poor access to improved seed and unscrupulous dealers who sell fake seed – this was mainly prevalent in the maize sector where there was a seed shortage which was thought to be artificially created by unscrupulous business men. Farmers in a particular region in rift valley were faced with failure of an entire crop due to purchase of fake seeds and this is attributed to lack of clear regulations in the seed sector.

- Cost of labour- with the rising cost of living, the cost of labour in the rural areas has become very expensive and takes up to 30 per cent of the cost of production especially in some sectors such as horticulture which increases costs of transactions and diminishes the profit margins. Many smallholders therefore opt to use family labour for most of their farm work leading to inefficiencies.

(ii) High transaction costs

Due to high costs of inputs, labour and electricity, many large and small medium firms that are doing value addition or manufacturing in the agricultural sector cannot compete in the international market due to high transaction costs. The reasons for high transaction costs cited by the private sector and agro-processing industries included high costs of electricity which was identified as the most pressing issue, rising costs of fuel prices, poor infrastructure, corruption –bribery at police check points, and high costs of labour amongst others. High taxes paid by manufacturers were also cited among the factors leading to high costs of transactions.

(iii) Low levels of technology development and absorption

Over the years there has been a very slow adoption of the technology to suit local conditions in terms of technical efficiency, affordability and cultural acceptance. This coupled with the problems of land by smallholders' fragmentation into very small pieces making them uneconomical to till using ploughs or apply any forms of mechanization. Adoption of new technologies of production such as gene revolution technologies and other forms of biotechnologies that increase output has been very low and slow, partly due to lack of dissemination through extension, lack of proper information and capacity building on the part of smallholders and cultural beliefs in some communities such as cattle keeping pastoralists.

(iv) Persistent drought and dependence on rain fed agriculture

Agriculture in Kenya is predominantly rain fed and output is therefore heavily influenced by the amount, distribution and variability of rainfall, which causes considerable risks and uncertainty in production. Over the years, Kenyan farmers especially smallholders have faced major crop failures due to persistent drought brought about by climate change and vagaries of weather. Farmers depending on rain are only able to produce crop one or two seasons a year depending on their agro-ecological zones. The government has failed to invest in irrigation systems to ensure crop production throughout the year. In many irrigation schemes, equipment are obsolete and run down and they operate well below their capacity, some like Bura irrigation scheme operate at about 10 per cent capacity. The lost potential in terms of increasing productivity is very big, there has been some effort to revive some schemes for instance the Mwea irrigation scheme for rice production that was revamped about 5 years ago. In addition farmers lack basic strategies to mitigate effects of drought such as rain water harvesting, or production using drought resistance varieties of crops.

(v) Poor Infrastructure

Kenya suffers from collapsed infrastructure: poor road network, inadequate railway network, unreliable and costly electricity, and water supply, lack of information and communications technology infrastructure. Due to poor transport network, commodity prices often fluctuate substantially from one region to the other and are seasonally volatile. Even when agricultural surplus zones have gluts, it is virtually impossible to transport the produce to the deficit zones. Similarly, when technical solutions in agriculture become available, lack of infrastructure hinders their transmission especially with regard to marketing, credit, extension and input provisions. In some cases, the cost of transporting agricultural inputs and produce is extremely high to the extent that farmers do not produce at all even if other resources are available. This has negatively affected the development of the agricultural sector and consequently resulted in poverty and food insecurity. The recent food security situation in the country gave a stark reality to the problem of infrastructure and subsequent lack of redistribution mechanisms from areas of surplus to areas of deficit. While farmers in rift valley had a bumper harvest, people in the north eastern ASAL areas were faced with starvation. The poor road networks leading to Turkana and northern parts of the country are a huge impediment for relief efforts and a hindrance to traders.

(vi) Access to credit and financing

Access to credit and finance has been cited by many stakeholders as an important factor in pushing agricultural development. Because of the lack of collateral and/or credit history, most farmers are bypassed not only by commercial and national development banks, but also by formal micro-credit institutions. In addition to own sources, farmers thus rely on incomes of friends and relatives, remittances, and informal money lenders. The share of commercial banks' loans to agriculture has been very low compared to manufacturing, trade, and other services sectors, hampering expansion and technology adoption. For example, in Kenya, the lack of capital and access to affordable credit is cited by smallholders as the main factor behind the low productivity in agriculture. While more recently micro-finance institutions have taken financial services to millions of previously un-bankable clients due to innovative instruments, they have so far largely failed to reach poorer rural areas and/or smallholder agricultural producers whose livelihoods are characterized by highly seasonal investments, risks, and returns.

4.1.2 Policy Related Challenges

(i) Enabling environment and trade policy frameworks

In the past three decades, Kenya's agricultural policies were largely shaped by colonial legacies and conditionality for Aid. Subsequently, this saw a huge decline of the sector especially following the SAPs which saw most support and extension services including marketing boards completely phased out. There was lack of a comprehensive legal framework to guide formulation of consistent policies; this was further exacerbated by lack of capacity by the private sector to take over functions previously performed by the state before liberalization. There was also inadequate integration and coordination of activities by major players within the sector including the various Government Ministries, farmers' organizations, private sector, donors and NGOs. More recently, the policy process has seen major inputs from farmer related organizations and lobby from private sector, a move which has seen the change of policy formulation process. However interviews from key informants in the private sector and lobby groups indicate that even though they attend policy round tables and are allowed to articulate their issues, most often their position is ignored, this seems to be a public relations exercise on the part of the government. Most of the policies are also influenced by donors, since the sector receives a lot of aid and have their own conditionality.

Over the years, a number of policies have been designed and implemented to improve the contribution of agriculture to the country's economic development. Increasing emphasis has been placed, since the 1980s, in reducing state intervention and increasing reliance on liberalized markets to allocate resources. Further, the government has also extended various tax incentives to the sector. These tax measures have aimed at exemptions as well as zero-rating of all the imported inputs used in the sector, in addition to eliminating duties and zero-rating all taxes on agricultural exports. Nevertheless, the "shifting of taxes" from the non-agricultural sector still impacts negatively on the sector. This is because the sector is not an enclave in the Kenyan economy. As such, it is bound to bear tax burdens shifted on to it by some of the sectors with which it has some relationships, while passing on to various other sectors some levies which it has either borne directly or by incidence.

In the years after liberalization, real exchange rate overvaluation led to an implicit tax of agriculture to the extent of 167 percent which was a bias to the agricultural sector (Ronge *et al*, 2006). Furthermore nominal protection to wheat has been declining over the years and the taxation on maize increased by 18 percent over the same period. Inflation has also been rising in the past year which has seen an increase in relative rice variability and is a disincentive for both local production and exports.

Kenya's trade policy was originally based on the need to safeguard local agriculture and domestic manufacturing sector against adverse competition. This trade regime tended to unfairly tax agricultural exports thus denying the country of vital foreign exchange with which it could access food imports (Nyangito, 1999). Even after the trade regime was liberalized, cheap food imports have suppressed domestic food prices and therefore food production (Nyangito, 1999). Competing uses for land have tended to reduce the land area dedicated to food farming. The government has under-invested in infrastructure that could be vital to encouraging cross border trade in food commodities, which can reduce food insecurity (Ackello-Ogutu et al, 1997). Until recently the high tariff regime on intra-regional trade reduced the potential of regional trade to help in alleviating food insecurity through food imports from the region (Weeks et al. 1998). However with the implementation of both COMESA and EAC agreements, tariffs that originally affected regional trade have been removed and hence it was thought that this would invariably lead to stimulation of imports from the region - a phenomenon which has the advantage of providing cheap food and hence ensure food security, but also has the disadvantage of discouraging local production of foodstuffs.

Despite the removal of tariffs and the setting up of duty free quota free trade both under COMESA and EAC, there still exist numerous Non-Tariff Barriers (NTBs) that hinder trade in the region. NTBs include cumbersome administrative procedures and licensing requirements, cumbersome customs formalities that lead to delays, unnecessary police road blocks that harass traders, and lack of information to exporters and importers. These NTBs invariably raise the costs of doing business which is consequently transferred to the consumer making the prices of goods higher and less affordable, especially for the poor. The COMESA customs Union and the EAC customs union have different policies in terms of the CETs and some of the policy issues are overlapping and need harmonization. As such this makes it difficult for the private sector to conduct their business in the EAC and COMESA countries. Key informants indicated that the rules of origin certificates are required for private sector selling their produce in the EAC countries especially Tanzania - the process is tedious and expensive as validations are required through verification missions who take a long time and implies loss of business time. Within the EAC there are also issues surrounding the 'sensitive products' different EAC countries have different sensitive products and have set different import duties to protect them. For instance Tanzania has 100 per cent import duty on rice which makes it impossible for Kenyan traders to sell any rice in Tanzania.

(ii) Lack of Markets, Cheap Imports and Cartelization of some subsectors

One of the major problems faced by farmers is the lack of markets or lack of proper regulation of markets for their produce. Many farmers are often faced with numerous problems especially when it comes to marketing of perishable produce, poor infrastructure in some areas leads to poor access to markets. However many farmers are exploited by middlemen especially during high season, because of lack of proper and organized marketing channels through cooperatives or producer groups, the middlemen have the prerogative for setting prices, most of the time farmers make losses or get very little profits. In some sectors like horticulture and tea where contract farming is prevalent the farmers are still not assured of good prices for their produce because the exporters have the prerogative for reducing agreed prices if the world market prices go down.

In the main subsectors- cotton, sugar, maize, rice and wheat, there has been a worrying trend in the market which most often is over flooded by cheap imports. Because of the high costs of production for local producers, they cannot compete with the cheap imports which are a disincentive for production. This trend has dealt a major blow to these subsectors for example the rice subsector has a huge untapped potential, a potential which if tapped, could produce enough rice for the country with surplus for export. However despite this, rice irrigation schemes –Bunyala, Ahero, Bura, Mwea are all operating at very low capacity levels, equipment in these schemes remain obsolete and underutilized and thousands of rice farmers have lost their livelihoods as a result of this. The same applies for the cotton subsector where ginneries were literally shut down in Ndere –Siaya, Amagoro-Teso, Homabay –Nyanza, Kitui -Eastern, Machakos –Eastern, amongst others. Some were privatized and many farmers gave up on cotton farming for lack of markets. And in the sugar subsector the recess (closing down of sugar factories for maintenance) carried out yearly for all sugar sectors is done in the month of July, this means that the country has to rely on imports during this period. Many key informants suggest rotation of recess in order to deal with this problem.

Some key informants pointed out these particular sectors –especially rice, sugar and maize which are also considered to be political commodities, are run by cartels who have connections with the ruling class, some are even government officials who are themselves importing maize, sugar or rice cheaply and therefore would like the status quo to remain, they would not therefore like to see these sectors regulated as they would lose business. As one key informant in the sugar sector laments

"Cartels, seem to have found the soft under belly of the regulatory systems and continue to hit hard on the innocence of the consumers through incessant manipulation of market forces hoarding and price manipulation, yet the concerned offices only sit back and watch and this is because they are part of the cartels. The Kenya Sugar Board has remained a toothless dog that won't bite and requires radical restructuring of its operations if such rot is to be cleared."

(iii) Land policy

Over the years, Kenya has pursued a land tenure system in which ownership of land has evolved from customary land to individual and private ownership. Under the individualized tenure system, land is privately owned by individuals and this has led to fragmentation of land to very small uneconomical portions, especially in the medium to high potential areas, and a dominance of production by smallholdings. The average of about 4 million farms has been reduced to less than an acre due to fragmentation. These small holdings are uneconomical and hence have led to low yields in the high potential areas.

Also related to land and productivity is the political nature of the land issue in Kenya which originated from the days of Colonial rule. During the British rule, many indigenous communities' land across the central uplands of Kenya, the so-called "White Highlands" and adjacent rangelands were usurped and given to European settlers; 20% of Kenya's land, most of which were prime agriculture lands, was seized in this process. This colonial land policy was legalized by colonial legislation, supplanting the customary land tenure systems with the implementation of an individual freehold title registration system, thereby taking away the local inhabitants' guaranteed claims over their land. After independence however, Kenya's first President gave major political posts as well as much of the fertile central highlands to a small group of Kikuyu (an ethnic group to which the President belonged) at the expense of other ethnic groups. These land tensions were further aggravated by his successor who remained in office until 2002 and also used public lands as patronage resources and hence land was traded for political support. To restore stolen land, the Kikuyus were evicted from these areas, which led to post-election violence at the end of 2007. This scenario further exacerbated the food security situation because when farmers got displaced from their homes; the lands in question were unused, leading to a deficit in production.

A National Land Policy was passed by parliament in December 2009. It aims to put an end to unscrupulous land appropriation by central and provincial government officials and its subsequent arbitrary distribution. The vehicle will be an independent National Land Commission tasked with registering land transfers and resolving disputes. New regulations vested in the Commission's powers also place limits on rights acquired by foreign buyers and even on the size of private holdings.

(iv) Insufficient Investments and budgetary allocation in the sector

The sector allocations fall short of the required international standards. The reason behind the poor performance in the agriculture sector is the low level of investments in the sector. Investments in the sector do not only mean the specific budget allocation to agriculture related Ministerial activities, but also means the other indirect funding to the agriculture sector such as; the resources going towards rural access roads for movement of agricultural produce and the resources going towards water for irrigation and livestock especially in the rural areas. Therefore, there is need for investment by government in the agriculture sector to be reviewed and increased. The government needs to increase the proportion of the budget to this sector to reach the Maputo declaration of 10 per cent of the total budget. The increase should not however, target the components of compensation to employees and the transfers to state corporations but the use of goods and services and acquisition of non-financial assets.

(v) Lack of information and extension services especially for smallholders

Despite the fact that the ministry of agriculture has developed a very clear national extension policy, many smallholders interviewed cited lack of information and extension services as a major factor affecting their productivity. In some regions farmers have never seen or heard of extension officers for the past decade. This is because there is a shortage of extension officers. The ratio of extension officers to farmers is 1:1400 against FAOs recommended ratio of 1:400. Currently there are only 4000 extension officers operating country wide with a shortfall of 3000 extension officers and this has been a major impediment for the development of the sector specifically because most of the smallholders need extension services.

(vi) Lack of clear policy and/or regulations governing relationships between private sector and smallholders

Due to lack of information and bargaining power especially by smallholders, farmers often get exploited by middlemen who pay next to nothing for their produce and sell it in urban markets reaping huge profits in the process. This is in part also due to a poor regulatory environment to protect smallholders from such exploitation and poor market linkages between smallholders and their respective markets. Focus group discussions with various groups of smallholders from different sectors cite lack of information as the key issue leading to these unequal partnerships coupled with lack of resources like transport to enable farmers reach markets themselves. Besides this, many farmers prefer that there be clear guidelines on marketing and that cooperatives be strengthened as a form of marketing of produce in order to do away with the menace of exploitative middlemen. Furthermore regulations governing contractual arrangements must also be put in place to ensure that smallholders get a fair share from the sale of their produce.

4.2 Policy framework for equitable terms of trade

From the preceding section's analysis, there definitely exists an unequal relationship between farmers and private sector. The main reasons for this unequal partnership stems from low value added among farmers especially smallholders who have low levels of technology adoption, this situation is further exacerbated by lack of information on markets and lack of transport to markets coupled with poor infrastructure in rural areas. Middlemen therefore take undue advantage of poor smallholders and reap huge benefits from buying raw produce, adding some value and reselling in domestic or international markets. The analysis also shows that unequal relationships exist because farmers are poorly organized in their producer organizations and therefore lack the collective power to bargain for better prices for their produce and/or access better technology for their value addition activities. This points out to a lack of laws to govern relationships between farmers and private sector or to protect farmers from exploitation by middlemen.

On the other hand, many private sector and agri-businesses cite that a big percentage (about 70 per cent) of agricultural production is done by smallholders who pose a challenge of quality and consistent quality of produce for their agro-processing industries and exports, this they say is partly the reason why smallholders receive low premiums for their produce. As a result, many have resorted to importing raw materials from neighbouring Uganda and Tanzania because of disorganized fragmented production that is unreliable. This also suggests therefore a lack of organization of production in a manner that will guarantee quality and consistency even at the lowest smallholder levels.

Recently, reforms in the sector have seen various steps taken by the government in order to provide an enabling environment for both private sector and farmers to thrive in harmony. Some of the efforts by the government include:

- *Improved regulatory environment*: the Kenyan government has attempted to improve the regulatory environment through the promulgation of a new constitution, and enactment of various policies in the agriculture sector as well as the financial sector that recognize the importance of creating an enabling environment for private sector participation in the economy. However many sector players observe an absence of policies that foster linkages between farmers and private sector as well as efforts to step up smallholder production to include value addition.
- *Improvement of major infrastructure such as airports and major highways*: the improvement and upgrading of Kisumu international airport has opened up the entire western region to opportunities for directly exporting. The Eldoret international airport is also picking up in terms of export volumes and major roads linking the EAC region are under maintenance. The sea port of Mombasa is also under expansion, and all this is to foster export expansion both regionally (in EAC and COMESA) and internationally. However there still exists a lack of clear policy for improvement of rural infrastructure that would ultimately lead to an improvement in linking of smallholders to markets and reducing transaction costs of transporting produce.
- *Trade facilitation*: several measures have been improved such as the single business permit for private sector and SMEs.
- *Favourable financial services:* especially for small and micro-enterprises since there are numerous banks offering cheap affordable loans, SMEs now have access to loans to improve their businesses. There are also several financial initiatives targeting smallholders such as Kilimo Biashara which gives loans for inputs to smallholders.
- *Regional integration and the COMESA and EAC customs unions*: they have meant that access to these markets has now opened new frontiers for trade and especially for exports of value added or agro-processed products.

Efforts have also been made to restructure the grain sector and help smallholders get favorable prices for their grains. NCPB which is now positioned as a leader in grain marketing and management has been revived and since the year

2010, a program of buying maize under the warehouse receipt system was introduced and has been lauded by many stakeholders as successful. Under this system, during periods of Maize surplus farmers sell their produce to the NCPB and get a warehouse receipt while awaiting better prices, NCPB charges them 60 Kshs for fumigation and handling. They can opt to cash the receipts at a later date and get higher prices or they can cash them immediately. Many smallholders interviewed preferred this system because it assures them of good prices.

Efforts have also been made to strengthen cooperatives

5. Conclusions and Recommendations

This section presents the main findings of the linkages between agriculture and development within the Kenyan context, identifies gaps and implications and gives recommendations for different stakeholders.

5.1 Conclusions

Kenya is largely an agriculture based economy, with exports accounting for the bulk of its foreign-exchange. The agricultural sector accounts for 23% of the GDP mainly driven by small scale farmers who produce close to 70 per cent of agricultural output. The sector has evolved tremendously since independence beginning with a decade of high protection and high support from the government, this period saw high growth rates of the sector as well as high GDP growth rates. By the 1970's support to the agricultural sector was waning and in the 1980's the government started to liberalize the sector and implement SAPs as a pre-condition for aid. Virtually all forms of support to the sector were dismantled and allocation of budget to the sector reduced tremendously. This period saw a huge decline in agricultural GDP and GDP growth. Over the last decade however policies were reviewed and when the NARC government came into power in the year 2003, there was concerted effort to invest in the sector and improve the legal and regulatory frameworks, some aspects of support to farmers were also re-introduced and the sector subsequently experienced some growth which was also reflected in the GDP growth.

Furthermore trends in productivity indicate that for many sectors productivity started slowing down or stagnating during the period of liberalization. These indicate the importance of systems such as extension, marketing intermediaries, agricultural cooperatives and financial institutions towards productivity and increase in output. This argument is corroborated by evidence of increased productivity following the re-introduction of extension services, market support and cooperatives in the last decade which have improved output and productivity in many subsectors. Moreover low investments in technology and low levels of technology adoption especially for smallholders have also contributed to low productivity – this is evident mainly by years of over reliance on rain fed agriculture and low investments in irrigation or other drought mitigation measures.

Critical to this sector is private sector participation and their subsequent relationships with farmers. Private sector participation in agriculture appears to be two pronged; the first being through agri-business i.e exporting and agro-processing and the second being through providing services to farmers in the sector. From the analysis there is evidence to suggest unequal relationships between private sector (who largely comprise of middlemen, agro-processors and exporters) with farmers specifically smallholders. This is due to a host of reasons amongst them being:

- The relative position of smallholders in production and export chains which see them adding minimal value to their produce and subsequently receiving low premiums for their produce.
- The proliferation of many sub-sectors by middlemen who are exploitative to farmers partly because of they are not well organized in their respective producer groups
- Low levels of technology adoption and value addition
- Lack of extension services and poor access to market information
- Fragmentation of production and inconsistent quality and quantity making it difficult for agro-processors and exporters to rely on smallholders
- Over-reliance on rain fed agriculture and lack of irrigation technology adoption leading to low levels of productivity
- Poor infrastructure and poor market linkages for smallholders
- Poor access to credit and financial services which is ultimately linked to low productivity

From the study, it is apparent that since liberalization, there was a gap due to governments dismantling of various support services for farmers. This gap has been filed by private sector whose participation in agriculture has evolved to include not only agri-business and agro-processing but also various forms of support services such as information and financial services. The private sector through contractual arrangements has also supported farmers with inputs, technical knowledge and capacity building to enable them participate in export markets. It is thus important that the role of private sector as an engine for growth in the agricultural sector be recognized and enhanced through effective policy.

In this backdrop, the government's role is also emerging as creating an enabling environment not only for the development of the agriculture sector but also for growth and expansion of agri-business. From the study it emerges that the policy making process has also gone through an evolution where previously –in the period after independence, there was minimal stakeholder participation the sector policies. Policies were mostly dictated by government decisions and/or conditionality for aid and implementation of IMF and World Bank's SAPs. The years following liberalization saw an increasing presence of donors in shaping the policy processes again through conditionality for aid or by funding only certain programmes. More recently the private sector through their respective representative organizations also sits in policy round tables and are able to articulate their positions. Civil society and farmers organizations are also increasingly being represented in policy discussions. However despite the progress made to include all stakeholders in policy process, there still exists a gap in policy especially with respect to fostering equitable interaction among the farmers and the private sector and/or providing safety nets for farmers – this appears to be a policy issue that has been largely ignored and needs to be urgently addressed.

The study also finds that there is a huge potential for growth of the agricultural sector but this potential is not being achieved because of existing constraints which range from poor infrastructure especially in the rural areas, low levels of technology adoption, low FDI and investments, low budgetary allocation in the sector and corruption and cartelization of certain sub- sectors. The private sector and agri-businesses also face high inflation and taxes, high transaction costs occasioned by high energy and labour costs, lack of harmonization of regional integration and trade policies and lack of harmonization of agriculture and trade policies. If these constraints are addressed then growth of the sector is possible.

5.2 Recommendations

5.2.1 Creating an Enabling environment for Investment and Agri-business

A number of constraints emerge from the sector, some related to productivity and others related to policy. The government of Kenya has attempted to address some of these issues through key policy documents that provide sectoral priorities cascaded from the Economic Recovery Strategy for Wealth and Employment Creation (ERS) 2003–07. In the agricultural sector, the Strategy for Revitalizing Agriculture (SRA 2004–2014) remains the main reference document supplemented by specific Agriculture and Rural Development (ARD) sector Ministries' Strategic Plans. It is envisaged that the economic expansion momentum will be consolidated further through Vision 2030 Strategy which is a successor to the ERS. Through these, the government has put in place various measures to stimulate investments in the sector through increasing budgetary allocation in the sector, investing in major infrastructure and streamlining requirements for licensing of businesses through a one stop shop. Furthermore the Ministry of agriculture has set up a directorate of agribusiness and marketing information which deals with coordination of agri-business and market development initiatives. There have also been efforts to improve information dissemination and capacity building at the grassroots through the national agricultural Extension Policy among others. However gaps still exist in policies which need to be addressed in order to improve the agri-business environment:

- Harmonization of the country's trade policies with those of EAC and COMESA should also be a priority and the government should also consider negotiating for Mutual recognition for various member states in order to facilitate private sector participation in those markets.

- Improvement of rural infrastructure must be at the backdrop of improving major infrastructure as this will improve market linkages for farmers.

- The cost of doing business is relatively higher in Kenya than in other countries in the region-this is mainly because of high cost of labor, high cost of energy and water, and corruption. These are issues which need to be addressed in the short and medium term to make Kenya more attractive for investments

- Rising inflation and stabilizing exchange rates must be prioritized in the sector in order to attract export oriented agri-business

- Irrigation should be a long term policy measure that must be undertaken by all stakeholders since depending on rain fed agriculture in the past has led to low productivity.

5.2.2 Recommendations for Various Stakeholders

In order to facilitate equitable agricultural development in Kenya, various measures should be undertaken by various stakeholders both in the long and medium term.

- **The Government**

The Government needs to increase budgetary allocation to the sector to reach the desired level of 10 per cent of GDP as agreed by the AU in the 2003 Maputo Declaration on agriculture and food security. Investments in the sector in the short and medium term are also necessary to help increase productivity and improve food security situation especially through investing in irrigation in the ASALs. In addition recurrent expenditure in various ministries needs to be checked with an aim of increasing development expenditure incrementally.

In order to curb the cartelization of various sub-sectors, strict regulations must be put in place to curb unnecessary imports and hoarding of commodities such as sugar and maize by cartels. Corruption in various sub-sectors must be curbed and the process of obtaining import or milling licenses must be transparent, we would suggest that instead of this process being left to the discretion of the agriculture minister, it should be done by a committee comprising of representatives from the sub-sectors affected, private sector, civil society and members of the Kenya Revenue Authority (KRA).

The support services for smallholders must also be enhanced to stimulate productivity through capacity building, encouraging adoption of new technologies, through improvement of extension services and increasing the ratio of extension workers to farmers to the recommended 1:400 instead of the present 1:1400.

Providing a legal framework for relationships between private sector and farmers. This can be done through strengthening cooperatives and producer organizations and providing legal support for contractual arrangements between private sector and farmers. Furthermore the producer groups need to be reorganized and strengthened in order to increase their bargaining power for prices and services. It is therefore important to build institutional capacity, and create partnerships at the local and national level that will ensure smallholder participation in an equal and fair manner.

Tackling inflation and stabilizing exchange rates must be a short term measure that the government has to pursue given high inflation rates, (the inflation figures hit 17.5 % in the month of August-September 2011) discourage investment. The rapid inflation erodes the market confidence and discourages investors; this also weakens the shilling which is a disadvantage for exporters especially in the horticulture sector.

Regional disparity in agricultural investments and budgetary allocations must be addressed by the government through equalization programs that will ensure sub-sectors in all regions of the country get budgetary allocations and investments especially in sectors such as irrigation and agro-processing for smallholders.

- **The private sector**

Findings from the study indicate that the private sector's role in the sector has evolved to include not only markets but also support services such as information, training and capacity building and also linking smallholders to export markets. The private sector therefore is the key to unlocking the agricultural sector's potential. The private sector provides key market linkages to farmers and therefore must ensure that their vital sources of raw materials (farmers) are providing consistent quality and quantity. This means that private sector support towards smallholders must go beyond service provision to include extension and technology, encourage value addition at lower levels instead of concentrating on maximizing profit.

Private sector relationships with farmers must also be redefined and governed by rules and regulations. Middlemen must be regulated and controlled and should belong to associations such as KEPSA. Those that do not belong to these associations must be barred from dealing with farmers to ensure rules and regulations are followed. Private sector may also benefit from agricultural sector by investing not only in agriculture but also in energy sector – such as geothermal or green energy and rural infrastructure.

Finally Corporate Social responsibility by the private sector must evolve to directly include support for farmers through projects such as irrigation amongst others.

- **Smallholders**

Smallholders form the backbone of the agricultural economy and therefore production is vital for the survival of the entire sector and as such all efforts must be made in order to improve their productivity and provide an enabling environment for smallholder growth. For this to be realized; smallholders must organize themselves in groups – along their commodities or sectors. Subsequently cooperatives, producer organizations must be strengthened and legalized in order to help farmers negotiate for better prices and contract terms and also to make it easier for extension workers to provide services to them. This organization will also make it easier for the private sector to interact with farmers as they can have unvarying quality and quantities of produce also improve cost effectiveness by reducing transaction costs of having contracts for individual farmers instead of groups of farmers.

In addition, smallholder groups must have linkages with various government institutions and parastatals in order to be able to receive support tailor made for a particular sector and also to have powerful lobbies for their interests. Producer Organizations (Pos) and cooperatives must also have proper representation at policy level but must have linkages with umbrella organizations at national level with grassroots producer organizations so that information is shared effectively and issues at the grassroots are properly represented at policy level. Pos would also provide an easier way for smallholders to obtain credit and financial services like insurance for produce.

Smallholders through cooperatives and POs should acquire (with the help of government and/or private sector) cottage industries and post-harvest processing facilities such as in the dairy sector that would ensure value addition of their produce which would ultimately increase the premiums they receive for their produce and would also increase profitability of the cooperatives which are largely owned by the smallholders themselves.

- **Civil Societies and NGOs**

Civil societies and NGOs must also play a role in advocating for better services to farmers especially from the government. Some grassroots NGOs have in the past been involved in organizing POs and funding projects aimed at training and capacity building or accessing some support services. Where possible grassroots NGOs should help farmers and POs to negotiate better prices for their produce as well as in lobbying for better policies. .

- **Donors**

Evidence from the study suggests that donors have in the past provided support for some major government projects and have also influenced policy decisions. There is an inherent strong relationship between government and donors and more often, aid is given to the government for various programmes. However, due to corruption some of this funding is never utilized for its intended purposes to benefit farmers. Therefore it would be more beneficial if donor funding would be felt more at the grassroots either through liaison with grassroots NGOs or the private sector or even through cooperatives and POs.

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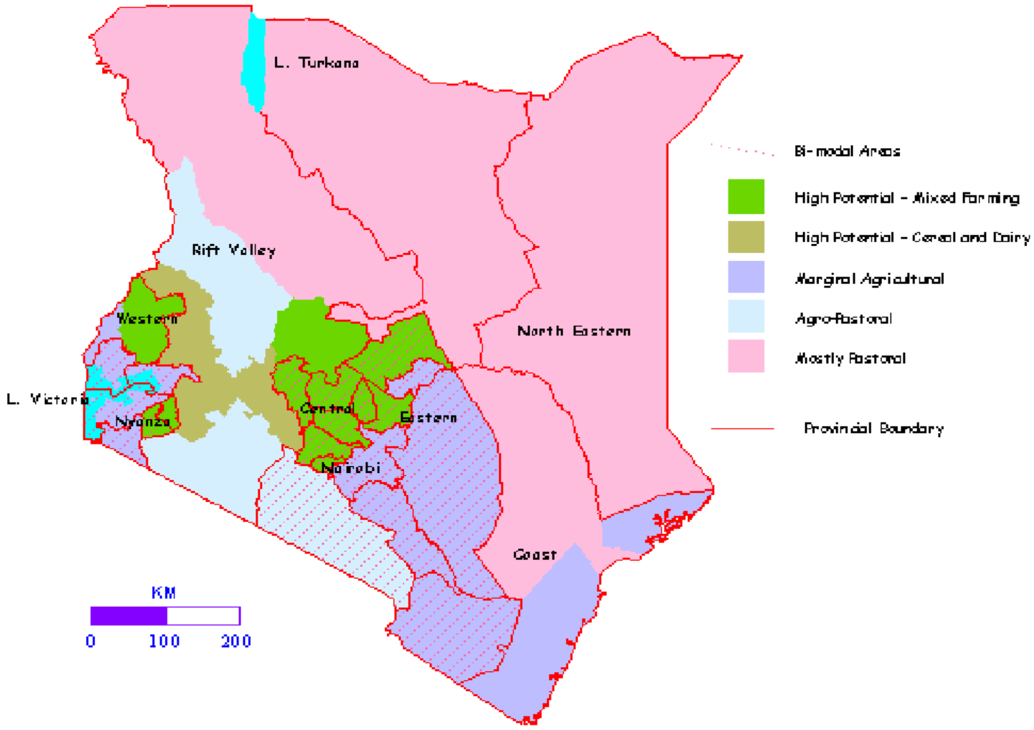
Annex 1: Kenya's Production Systems



Annex 2: Kenya's Livelihood Systems