## OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.


## DISCLAIMER



## FAIR USE POLICY



## CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

# Productivity performance in developing countries

Country case studies

# Kenya

Peter Kimuyu

November 2005

## Contents

**List of tables**

**List of graphs**

## List of Acronyms

| | |
|---|---|
| AGOA | African Growth and Opportunities Act |
| ALP | Average Labour Productivity |
| ATC | Agreement on Textile and Clothing |
| EAC | East African Community |
| EPPO | Export Promotion Programme Office |
| EPZ | Export Processing Zones |
| ERS | Economic Recovery Strategy. |
| EU | European Union |
| FDI | Foreign Direct Investment |
| GATT | General Agreement on Tariffs and Trade |
| GoK | Government of Kenya |
| ICAP | Investment Climate Action Plan |
| ISI | Import Substituting Industrialisation |
| KEPSA | Kenya Private Sector Alliance |
| KIRDI | Kenya Industrial Research and Development Institute |
| KIMB | Kenya Industrial Management Board |
| KIPI | Kenya Industrial Property Institute |
| KIPO | Kenya Industrial Property Office |
| KPLC | Kenya Power and Lighting Company |
| KPTC | Kenya Posts and Telecommunications Corporation |
| KR | Kenya Railways Corporation |
| KNCCI | Kenya National Chamber of Commerce and Industry |
| MFA | Multi-Fibre Agreement |
| MUB | Manufacturing Under Bond |
| MOEST | Ministry of Education, Science and Technology |
| MOL&HRD | Ministry of Labour and Human Resource Development |
| MW | Megawatts |
| NSE | Nairobi Stock Exchange |
| PPP | Productivity Performance Project |
| R&D | Research and Development |
| TFP | Total Factor Productivity |
| TIVET | Technical, Industrial, Vocational and Educational Training |
| UNIDO | United Nations Industrial Development Organisation |
| USA | United States of America |
| VAT | Value Added Tax |
| WB | World Bank |
| WTO | World Trade Organisation |

# Executive summary

## Introduction

This report aims at shedding light on the growth of productivity in Kenya, one of the countries from the African region chosen as part of UNIDO's Productivity Performance Project.

The specific terms of reference for the country case study were to:

- account for productivity changes over several decades, using information supplied by UNIDO on the growth of average labour productivity (ALP) and total factor productivity (TFP)
- assess major determinants of productivity changes, using a set of five clusters of potential determinants
- provide a discussion of government policies that have shaped productivity
- identify constraints to productivity growth in Kenya, and propose interventions for over-coming them, indicating what UNIDO could do by way of intervention.

## Accounting for growth performance

Although Kenya's economic growth performance has been subject to volatile swings, it has maintained a generally declining trend since 1962. The swings were particularly dramatic during 1969-73 due to:

- the first oil price shock
- political unrest in East Africa
- political assassinations
- knee-jerk reaction to a rapidly worsening foreign exchange crisis that precipitated extensive import restrictions

Factors that shaped productivity performance during the second half of the 1970s included:

- the coffee and tea booms of 1976
- the break-up of the East African Community in 1977
- political uncertainty following the death of Kenya's first president in 1978.

An unsuccessful coup attempt in 1982 occasioned widespread uncertainty, and undermined the government's policy focus. This was followed by the emergence of structural rigidities that, in turn, forced a deepening of policies throughout most of the 1980s.

In the 1990s, a clamouring for political reforms, the emergence of grant corruption, disagreements between the government and development partners, and the emergence and rapid spread of the HIV/AIDS scourge played havoc with growth performance in Kenya. Secondary effects, such as deepened domestic borrowing that resulted from disagreement with development partners, not only put pressure on the cost of capital but also crowded

out the flow of investments to private enterprises, further undermining productivity growth performance.

### The changes in labour and factor productivity

In absolute terms, average labour productivity and total factor productivity in Kenya maintained a declining trend so that Kenya has been receiving progressively less not only from its labour application but also from all its factors of production. These negative changes have been driven by technical changes and changes in technical efficiency.

Overall, changes in labour productivity, total factor productivity, and technical efficiency have shaped changes in economic growth so that, where these have been declining, the growth performance has also suffered. It will therefore be difficult for Kenya to reduce poverty without increasing labour productivity and total factor productivity.

The structure of the Kenyan economy has changed only marginally in the last 40 years. While agriculture still dominates, its contribution to monetary gross domestic product declined from 41% in 1964 to only 25% in 2000. Over this period, the contribution of the manufacturing sector increased from only 8% to 14%.

While increases in the sector contributions were recorded by community services, finance and electricity, the contributions by building, mining and construction, wholesale trade and ownership of dwellings, declined.

The impact of these changes in the structure of the Kenyan economy on productivity growth is likely to be determined by the relative productivity of the different sectors that are, in turn, shaped by the structure of production in these sectors.

Strong linkages between the manufacturing and electricity sectors mean that increases in the relative importance of these two sectors had significant positive consequences on both average labour productivity and total labour productivity.

However, the scope for changes in productivity in community services is limited, so that the overall productivity consequences of such structural changes that have taken place in Kenya in the last 40 years were marginal.

Labour productivity in the United States of America was more than 20 times that in Kenya in 1961, and more than 25 times that in 2000. In other words, labour productivity in Kenya has been declining not only in absolute terms but also in relative terms. This decline in relative productivity is the outcome of:

- Poor productivity performance in Kenya due to a myriad of factors, including negative external shocks, domestic uncertainties, and disparities and mismatch between the supply of and demand for skills
- Increased technological breakthroughs in the United States.

## Determinants of productivity

### *Creation, transmission and absorption of knowledge*

Kenya has a well-educated population by regional standards, but existing skills are supply driven and do not match domestic labour market requirements. Very little research and development takes place in Kenya. The legal framework for protecting intellectual property is only beginning to crystallise, and there has been a failure to link key technology-relevant institutions with industry.

Capital stock is outdated, and Kenyan firms do not easily adopt new technology. Inter-firm linkages are very limited, and foreign licenses and franchises are not common. There are major challenges in the generation, acquisition and absorption of technological capacity and productivity has suffered on this account.

### *Factor supply and allocation*

The HIV/AIDS scourge has been eroding Kenya's productive population. Existing capital stock is subject to very low capacity utilisation. The stock of classified roads has not increased much over the years and is in a poor state of repair. The Kenyan infrastructure has not fully benefited from privatisations, and utility services are overstretched. There are imperfections in the banking sector due to domination by a few large banks. Excessive domestic borrowing reduces access to finance by productive sectors. There are also high levels of collateralisation on account of contestable rights over assets with collateral value. Although cell phone connections have expanded rapidly in the recent past, teledensity is still very low.

Savings rates are very low, and the flow of foreign direct investment has been modest even by regional standards. Investment rates are low and inadequate for even replacing worn-out equipment.

More generally, factor markets in Kenya are nascent, and poor property rights, heavy transactions costs and corruption encourage misallocation of resources, undermining efficiency and productivity.

### *Institutions, integration and invariants*

The Kenyan economy was highly controlled and regulated up to early 1990s when the controls were dismantled, improving efficiency and productivity from that perspective. The judicial system has been subjected to major reforms but is still poorly rated. Property rights are poorly defined and enforced. There is little commitment to the rule of law, and insecurity is common.

The economy is well integrated in the regional and global markets, and Kenya has many business-support organisations. Significant invariants include:

- a long coast line with beautiful beaches
- the Great Rift Valley, which passes right through the middle of the country from North to South
- the two tallest mountains in Africa, one shared with Tanzania
- a share of Lake Victoria, the second greatest fresh water lake in the world, with Tanzania and Uganda

### *Competition, Social Dimensions and Environment*

Although there are still outstanding entry barriers, the Kenyan economy is highly competitive. Kenya is also a multiethnic country with considerable ethno-linguistic fractionalisation. Income and asset disparities have resulted from distorted reward and accumulation systems. Socio-economic and political uncertainties have tended to increase discount factors, discouraging long-term decision-making. Poorly implemented environmental regulations have made the pursuit of profitable opportunities more difficult.

### *Other issues specific to Kenya*

Asians dominate large-scale businesses, but there are no Asians in the public sector. Asians employ Africans but mainly in non-managerial jobs. Relationships between the public and private sectors, and between employees and employers are characterised by mistrust, negatively affecting productivity in Kenya.

Tradition and modernity are interwoven, accentuating failures in factor markets. These failures make subsistence production appealing, trapping households in low-level production and undermining overall productivity.

## Policies Affecting Productivity

An import substitution industrialisation (ISI) strategy was adopted in Kenya well before independence. This strategy encouraged industries that catered for the needs of the settler community, and was pursued well after independence. While the ISI policy encouraged FDI and initially led to rapid industrial expansion, the scope for import substitution was exhausted within a decade after independence. Furthermore, the pursuit of ISI led to:

- reduced domestic competition
- shifts in incentives against export production
- strong subsidising of manufacturing activities at the expense of activities in other sectors
- undermining of the competitiveness of Kenyan products in export markets
- an increased appetite for imported raw materials
- encouragement of the importation of whole plants, undermining the development of skilled manpower
- a reduced potential for progression from the production of consumer goods to the production of intermediate and capital goods

The net effect of these outcomes of the ISI was a reduction in productivity.

Kenya also pursued an indigenisation policy, ostensibly to create a more inclusive society by increasing the participation of Kenyans in the business sector and their appointment to key positions in the public sector. While indigenisation of the business sector was not successful, indigenisation of the public sector was achieved in record time. There were also successes in the agricultural sector where the policy was effected through the formation of farmers' groups and by assisting such groups to acquire large commercial farms from departing settlers for subdivision. One outcome of this was a rapid expansion in smallholder agriculture; this enjoyed high levels of productivity, encouraged by the introduction of new high yielding seed varieties and the application of chemical fertilizers. Success in the agricultural sector was countered by the erosion of professionalism in the public sector resulting from a policy that allowed public servants to straddle between their public offices and business. The productivity consequences of the indigenisation policy are therefore indeterminate.

Structural adjustment policies (SAPs) pursued in the recent past were important events in Kenya's policy history. Some relevant components of the SAPs were:

- price decontrol
- tariff adjustments
- the reforming of state corporations
- cost sharing in the delivery of social services

While the productivity consequences of most of these components were positive, cost sharing reduced access to health and education. This had negative consequences for productivity.

The government of Kenya has also been pursuing export-promotion interventions. Included among these are:

- manufacturing under bond
- export processing zones
- duty and VAT exemption schemes

These export-related interventions were mounted before the trade liberalisation reforms that were part of the SAP and suffered setbacks following liberalisation of the foreign exchange markets and appreciation in wage rates. Although some of these platforms attracted FDI through the subsidiaries of multinationals, most of the firms are manufacturing enclaves with little linkage with local firms. Their impact on productivity is therefore negligible.

The recent publication of the government development blueprint spawned many new policies, including:

- a national export development strategy to consolidates export intervention
- renewed impetus towards the implementation of the Millennium Development Goals
- an Investment Climate Action Plan with a cluster of activities for making the business climate better

- a Private Sector Development Strategy currently under way.

Most of the policies pursued by the government of Kenya have been broad so that their productivity implications are only implicit.

### Constraints to productivity growth and required interventions

From a knowledge perspective, productivity is Kenya is constrained by:
- little or no R&D
- limited use of foreign technology licenses
- declining school enrolment and educational standards
- limited interest in technical education
- outdated capital stock
- weak links between industry and institutions of higher learning

To address these constrains, the government of Kenya is currently:
- attracting FDI to promote the use of foreign technology
- increasing the research component of the national budget
- introducing performance contracts in educational institutions
- making primary education free

Other interventions that can help in the creation, transmission and absorption of knowledge include:
- creating tax incentives for R&D expenditures
- monitoring progress in the implementation and quality implications of free primary education
- continually monitoring the outcomes of the existing educational institutions
- creating sustainable links between industry and institutions of higher learning
- ensuring firms willing and able to replace or upgrade equipment can do so

To further ameliorate these knowledge-related constraints, UNIDO can assist in the design and implementation of selected university-industry projects, initially on a pilot basis.

Factor supply and allocation is constrained by:
- poor roads and water, telecommunications, power and railway services
- heavy reliance on hydroelectricity which is prone to shortages during poor rain seasons
- low national teledensity
- congestion and delays at the port city of Mombasa
- a mismatch between productivity and the cost of labour
- inadequate access by small businesses to the debt market

The government of Kenya is addressing factor supply and allocation constraints by:
- developing service charters to facilitate the concessioning of major roads
- increasing the use of independent power companies
- liberalising the telecommunications market
- aligning minimum wages to labour productivity

Further improvements in the factor supply situation can be achieved through:
- permitting self-providers of electric power to off-load excess power to the national grid
- developing mechanisms for pooling private investment in minor roads
- increasing fiscal investments for extending the use of solar and wind energy
- exploring ways of promoting labour productivity
- improving mechanisms for enforcing property rights
- increasing credit rating institutions

UNIDO can assist in this cluster by:
- supporting the government of Kenya in identifying and removing constraints to the adoption and use of wind and solar energy
- assisting the development of a work programme for the National Productivity Centre
- providing technical assistance to the National Productivity Centre

Constraints facing institutions and integration include:

- inadequate mechanisms for enforcing contracts
- poor and costly access to justice
- weak and difficult-to-enforce property rights
- weak business organisations unable to lobby the government
- limited exploitation of Kenya's geographical dividend

Currently, the government of Kenya is carrying out broad-based legal and judicial reforms. Other interventions with potential for removing relevant constraints are:

- an improvement in the rule of law
- refinement of property rights
- tightening the enforcement of property rights
- strengthening the Kenya Private Sector Alliance
- developing a framework for coordinating the burgeoning pool of micro and small sized enterprises
- designing and implementing a master plan for increasing the density of activities along the Kenya coast

UNIDO could contribute to this cluster of policy interventions by:
- mounting capacity building programmes and technical assistance for the Kenya National Chamber for Commerce and Industry
- assisting in the development of a master plan for the port city of Mombasa and Kenya's coastline

Other constraints relate to competition, social dimensions and environment. These include:

- urbanisation
- dramatic failures in land and labour markets
- poor implementation of environmental protection legislation

To address these constraints, the government of Kenya has introduced policies for increasing the pace of agricultural and rural transformation and increasing the pace of adjudicating and titling land.

The package of interventions for improving the situation include:

- encouraging the growth of rural industrial clusters
- encouraging the National Environmental Management Authority to improve the enforcement of environmental legislation
- promoting the development of rental markets for land

For this cluster of constraints, UNIDO can help the government design a master plan for rural industrialisation and investigate constraints to rental land markets.

# I. Productivity Performance in Kenya: Introduction

This report constitutes the Kenya-country component of UNIDO's Productivity Performance Project (PPP), whose goal is to supply policy-relevant material on the impact of policy on productivity to the public policy community and to contribute to the forums where researchers and policymakers deliberate and choose instruments of public policy.

The PPP has four main characteristics: it focuses on productivity rather than just output per head; it focuses on developing countries in order to fill the current information gap (data problems in developing countries have led most research to focus on developed countries); it pays specific attention to manufacturing; and it combines cross-country and country-specific analyses. This Kenyan case study fulfils the country-specific requirement of the PPP.

This study is very timely for Kenya, given recent concerns about low productivity that, when juxtaposed with high real wages, have undermined the country's competitiveness as an investment destination and its products in the external markets (McCormick et al 2004; WB 2004).

## 1.1 Terms of Reference for the Country Case Study

### *1.1.1 Account for productivity changes over several decades*

For this part of the assignment, UNIDO supplied information on the growth of average labour productivity (ALP) and total factor productivity (TFP) at aggregate levels for Kenya, both absolute and relative to the United States of America (USA) which is used as the world's technology frontier. Using these data, the consultant was to provide broad interpretations of episodes of rapid growth and slump. In addition, the consultant was to identify the major issues about changes in productivity. The consultant was also to examine the relationships between productivity and output growth and, where data permit, decompose output change into technological change, and change in technical efficiency. The consultant was also required to explain changes in Kenya's position relative to the USA.

### *1.1.2 Assessing the major determinants of productivity*

For this second part of the terms of reference, the consultant was to undertake a detailed assessment of the strengths and weaknesses in Kenya in five clusters of determinants of productivity by identifying the major determinants of productivity performance in Kenya over the last 30 years, describing in detail the direction in which the influence was exerted, its intensity and which channels it passed through, and explain the circumstances under which the identified determinants exerted their influence. The consultant was also to assess why other factors commonly considered important in explaining productivity growth do not play a role in the Kenyan case. The consultant was also to assign weights to the discussion of determinants based on his knowledge of Kenya. This accounts for half the productivity growth for Kenya and represents the consultant's main contribution.

The five clusters of determinants were as follows:

a. Creation, transmission and absorption of knowledge
Within this cluster, the consultant was to assess the importance of research and development activities in Kenya, and the transfer of technology from abroad through trade and foreign direct investment. How important are these factors? What about Kenya's absorptive capacity for the adoption of new technology?

b. Factor Supply and Allocation
The term 'factor supply' in this context is used in reference to investment in human capital, 'labour supply', physical capital and physical infrastructure, while 'factor allocation' refers to structural changes in production and the financial system. The consultant was to discuss how investments in various forms of capital have affected growth in Kenya. Different sectors differ with regard to the size of their contribution to productivity growth, so that an examination of changes in factors across broad economic sectors is imperative. Financial systems play key roles in allocating resources, for which reason the consultant was to provide an assessment of the financial system.

c. Institutions, integration and invariants
In this cluster of determinants, the consultant was to assess how institutions in Kenya affect productivity. Relevant institutions include rules governing the protection of intellectual property rights, regulatory structures, bureaucratic capacities, and special institutional arrangements for supporting businesses. The consultant was also to examine the effect on productivity of Kenya's integration into the world economy, its geographic location, its natural history endowments, its historical legacy, and its size.

d. Competition, Social Dimensions and Environment
For this cluster of determinants, the consultant was to examine the competitive environment in which the economy operates, and to assess and discuss the effects of the social environment on productivity growth and how environmental concerns may affect productivity.

e. Other issues specific to Kenya
This part gave the consultant an opportunity to bring to bear on the report any other issues peculiar to the case study country other than those represented in the clusters.

### *1.1.3 Policies Affecting Productivity:*

Under this component of the terms of reference, the consultant was to provide a discussion of government policies that have shaped productivity, based on the discussion on Section 2. In this regard, it was the outcomes rather than the stated intentions that are of the essence. Policies were to be categorised as either in a narrow sense, a broad sense or a broadest sense, depending on whether their effect is only on productivity increase, promoting economic performance and general growth or whether they are intended to have effects other than growth. The consultant was also to identify constraints to productivity growth in Kenya and suggest interventions that have potential for overcoming them. The consultant was also to state what UNIDO could do to better assist Kenya in increasing the growth of productivity. The rest of the report addresses these terms of reference.

## II. Characterising and Accounting for Growth Episodes

### 2.1.1 Pendulum swings and tapering off of growth rates

Graph 1 tracks changes in growth performance in Kenya and reveals a general declining trend in the growth rates since 1962. This trend is also characterised by periods of dramatic swings, the most notable of which occurred during 1969-1973. During this period, growth rates declined from 6.99% in 1969 to –8.99% in 1970 and then 27.42% in 1971. By 1973, the growth rate had dropped again to just about 2%. In other words, the growth rate increased by more than 36 percentage points between 1970 and 1971, having declined by about 16 percentage points in the 1969-70 period. Between 1971 and 1973, it further crushed by about 25 percentage points. Towards the end of the 1970's, the growth rate reached a new local high, with about 12 percent in 1979. There were other swings in the growth rates during the 1980s and the 1990s.

However, these were less dramatic. For example, the highest growth rate during the 1980s was about 11 percent, reached during 1986, the lowest growth rate during this decade having been 0.44% in 1983. The range of the growth rates during the 1980s was about 10 percentage points. The highest growth rate recorded in the 1990s was only 4.5%, recorded during 1995. The lowest growth rate during this decade was 0.10%, recorded during 1992. The range during the 1990s was therefore only 4.6%. Growth rates reached rock bottom 6 times during the 39 years under consideration, in 1968, 1970, 1976, 1983, 1992 and 1999. Similarly, the growth rates peaked 6 times, in 1965, 1969,1971, 1979, 1986 and 1993.

### 2.1.2 Independence-related uncertainties

Following concerns about unpredictable new independent government's policies, capital flight reached panic proportions around the time of political independence in 1963. Settlers were no longer investing but on the contrary were selling their stocks and paying off labour. Pre-emptive measures by the new independent government gave assurances against nationalisation and in 1964, a year after independence, it successfully appeased foreign investors and settlers[1]. In 1965, the independent government issued the first development blueprint, in which it affirmed its commitment to a free market economy where foreign investors were not only welcome but actively encouraged[2].

By this paper, nationalisation was officially rejected as a national policy and was only to be applied when state ownership would obviate wasteful use of resources. This policy bore fruit as foreign investors and their investment began flowing back. Economic prospects improved in the short term so that, by 1966, growth rates were at a record high.

[1] This was largely the outcome of the publication of The Foreign Investment Protection Act in 1994 which created a framework through which overseas investors could apply for a Certificate of Approved Enterprise that guaranteed holders the right to repatriate profits, loans, interest on loans, and an approved proportion of the proceeds from the sale of the approved enterprise (Jadin, 1997).

[2] Republic of Kenya, 1965. African Socialism and its Application to Planning in Kenya, Sessional Paper Number 10. Nairobi, Government Printer

### 2.1.3 Political assassination and loss of policy focus

In the later part of 1969, Kenya was in political turmoil following the assassination of Tom Mboya, a powerful minister of planning, in the capital city of Nairobi. This first political assassination in independent Kenya generated significant ethnic animosity and political uncertainty in the months that followed and was a major setback to the fledgling economy's development dreams. There was also a loss of policy focus as the political system expended its energies dealing with the resulting crisis. One outcome of the uncertainty occasioned by Mboya's assassination was that the economic growth rate crushed, reaching a record low in 1970. However, it would seem that the government quickly managed to re-establish order, leading to a pendulum upward swing in the growth rate and the achievement of a record high in 1971.

### 2.1.4 The first oil price crisis, political unrest in East Africa and import restrictions

The first oil price crisis and a mini-crisis that emerged in 1970-71 following a dramatic increase in imports and the dwindling of foreign exchange reserves (the crisis was precipitated by transitory inventory build-ups and deepened deficit fiscal financing that spilled into increased demand for imports) played havoc with Kenya's growth prospects in the early 1970s and brought down the growth rate. A 1971 coup in Uganda and economic malaise in the region also affected Kenya's exports. The new president of Uganda expelled Asian businessmen from Uganda and nationalised their businesses, sending shockwaves through out the Asian community in the East African region.

Considering the dominance of Asians in East Africa's manufacturing and trade sectors, this created uncertainty and a slow-down in Asian investment in the region, including Kenya. A foreign exchange crunch triggered by the oil price crisis precipitated tariff and quantitative import restrictions, deeper foreign exchange controls, and the strengthening of the Price Control Act in 1972, ostensibly to align the price control system with the country's income policy, which required, from 1973, control of wages through wage guidelines[3]. Quantitative import restrictions had adverse consequences on export industries that used imported raw materials mainly for packaging.

Simultaneously, the government also took measures meant to protect import- substituting industries. This involved the issuance of certificates of non-objection to ensure that importers import products not produced in Kenya, technically banning imports that competed with local products. Anomalies with this system led to its discontinuation later (Jardin 1997)[4].

[3] The Price Control Ordinance, which later became the Price Control Act, was first enacted in 1956 and revised in 1972.

[4] The no-objection certificates led to a situation where firms were often required to obtain such certificates for the import of raw materials and intermediate inputs from competitors.

### 2.1.5 Windfalls from coffee and tea booms, and the break up of the East African Community

Other important developments that had a bearing on the growth rates during the second half of the 1970s include the coffee boom in 1976, the break up of the East African Community in 1977, the death of Kenya's first president in 1978, and the second oil price crisis in 1979. During 1976-79, Kenya benefited from very large improvements in the terms of trade following the quadrupling of coffee prices following the damage to the Brazilian coffee crop due to frost. The prices of tea were also temporarily high. The gain in terms of trade was equivalent to a third of the 1975 GDP (Bevan et al 1989). Since the government chose not to impose a windfall tax, the boom was experienced directly by farming communities. The income windfall encouraged investment and changes in the use of resources between activities, which had major implications for changes in GDP.

Differences in political ideologies, unequal economic prospects and performance, and emerging inequities, fuelled regional animosities that led to the break up of the East African Community in 1977. Regional markets were important for Kenya's manufactured products, and closure of borders with Tanzania and Uganda significantly reduced the market for Kenya's products and accounted for some of the economic slowdown in the later part of the 1970s. This was compounded by uncertainty associated with the death of President Kenyatta, Kenya's first president, in 1978. There were fears of political unrest arising from uncertainty regarding the ability of the political institutions to ensure a smooth transition into the post-Kenyatta dispensation.

Such fears were allayed after the political machinery allowed Moi, Kenyatta's vice-president, to ascend to power. About this time, the second oil crisis caught-up with Kenya, further complicating the environment for growth. The growth spike in 1979 was, perhaps, the delayed effect of the coffee and tea booms, which was nevertheless attenuated by the negative effects of the break-up of the community and uncertainty caused by the transition to Moi's regime.

### 2.1.6. Attempted coup, severe drought, emergence of structural difficulties, and deeper policy interventions

Two developments influenced Kenya's growth performance in the early part of the 1980s. First, there was an attempted coup in August 1982 that caused panic across the country and undermined Kenya's ability to attract and sustain foreign investment. The failed coup had also the undesirable outcome of encouraging the ruling regime to shift focus from national development to self-preservation. The oil price shock and the weak market for Kenyan exports following the break up of the East African Community exacerbated balance of payments problems and precipitated a foreign exchange crisis that climaxed in 1982. A severe draught also hit Kenya in 1984, reducing agricultural production and making necessary the importation of large quantities of food.

In 1986, there was a second but short-lived coffee and tea boom that did not have the dramatic effects associated with the earlier one. The government had already learnt how to apply measures to stabilise the economy during boom times, including the introduction

of a progressive coffee tax. By this time, structural problems that had become evident during the later part of the 1970s became objects of interventions. The main thrust of these interventions was to shift from a highly protected import substitution to stimulation of private investment, to improve efficiency, to increase foreign exchange earnings, and to diversify the economy. This, in turn, entailed trade and tariff reforms, dismantling of price controls, privatisation of state corporations, and promotion of exports (Bigsten & Kimuyu, 2002). It was also during this time that aid conditionalities became common features of aid contracts. These conditionalities often became bones of contention between the government of Kenya and its development partners.

### 2.1.7 Agitation for political reforms, assassination, grant corruption, break with donors, and the HIV/AIDS scourge

Towards the end of the 1980s, two developments were significant from the point of view of changes in growth in Kenya. First, there was widespread agitation for political reforms as Kenyans became increasingly disenchanted with the one-party system of rule that promoted excessive abuse of power and destroyed traditional chains of command. Second, donors were generally unhappy with the slow pace of implementation of structural adjustment programmes, some of which were perceived as politically unacceptable. Such donor dissatisfaction plus perceptions of widespread corruption led to a break with donors in November 1991, which resulted in the withdrawal of quick-disbursing aid funds. This substantially reduced the supply of foreign exchange and ushered in a period of large swings in foreign exchange and import policies[5].

An initial introduction of Foreign Exchange Certificates eventually gave way to a Foreign Exchange Retention Scheme that allowed foreign exchange earners to retain their earnings, and the complete liberalisation of the foreign exchange markets.

A number of other developments during this period (early 1990s) are also noteworthy from an economic performance perspective. The government eventually gave in to demands for competitive politics by making amendments to the law to allow the registration of many parties, paving the way for the first multiparty elections towards the end of 1992. Prior to this, Kenya's powerful foreign minister was assassinated, throwing the country into political turmoil. This period also saw the design and implementation of the now infamous Goldenburg project, ostensibly to assist Kenya earn foreign exchange through the sale of gold. In reality, the architects of the project fleeced the country of millions of dollars through the organised manipulation of an export compensation scheme. The end result was that, rather than generate foreign exchange, the Goldenburg project became a monumental scam that wreaked broad based macroeconomic havoc. Competitive politics also reduced the time profiles of the ruling party, deepened corruption, and fuelled ethnic animosity that translated into tribal clashes that, in turn, rendered unproductive the grain basket region of the country. The grabbing of public lands was also perfected during this period as the ruling regime sought opportunities to reward loyalty. Money earned through the liquidation of grabbed land was laundered through the acquisition of large chunks of productive land for speculative purposes.

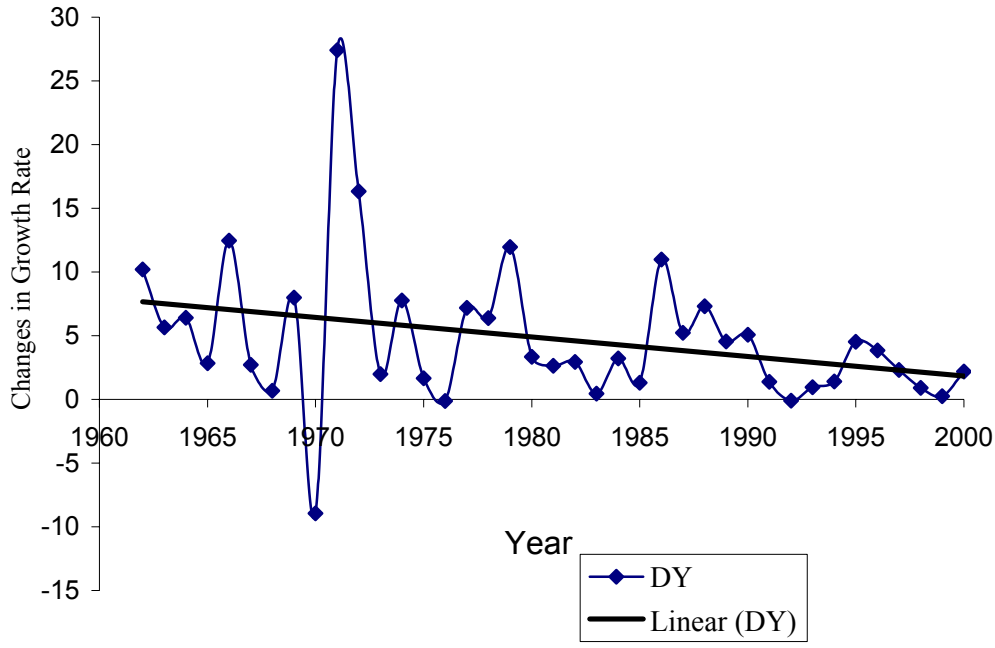
[5] Most of the donors simply shifted some of their funds from quick disbursing to project aid.

The spread of the HIV/AIDS infection also reached disaster proportions, eroding Kenya's productive population and making it harder for the country to realise its growth goals.

### 2.1.8. Deepened domestic borrowing and unsuccessful political reforms

An unfriendly donor and international environment over the 1990s encouraged the government to run a burgeoning deficit, funded through domestic borrowing. This strategy not only put pressure on interest rates but significantly reduced the flow of funds to the productive sectors, with undesirable consequences on productivity. The application of competitive politics did not produce the desired change during the 1990s. The ruling party won the first and second multi-party elections in 1992 and 1997. The failure of the political framework to bring about change led to accusations of vote rigging, which deepened uncertainty during most of the 1990s. As a consequence, there was little flow of foreign direct investment. The combined effect of these factors was stagnation in Kenya's economic growth. It is for these reasons that the linear trend line of growth performance in Kenya shows progressive stagnation over the period under consideration (Graph 1).

Graph 1: Changes in Growth Rate

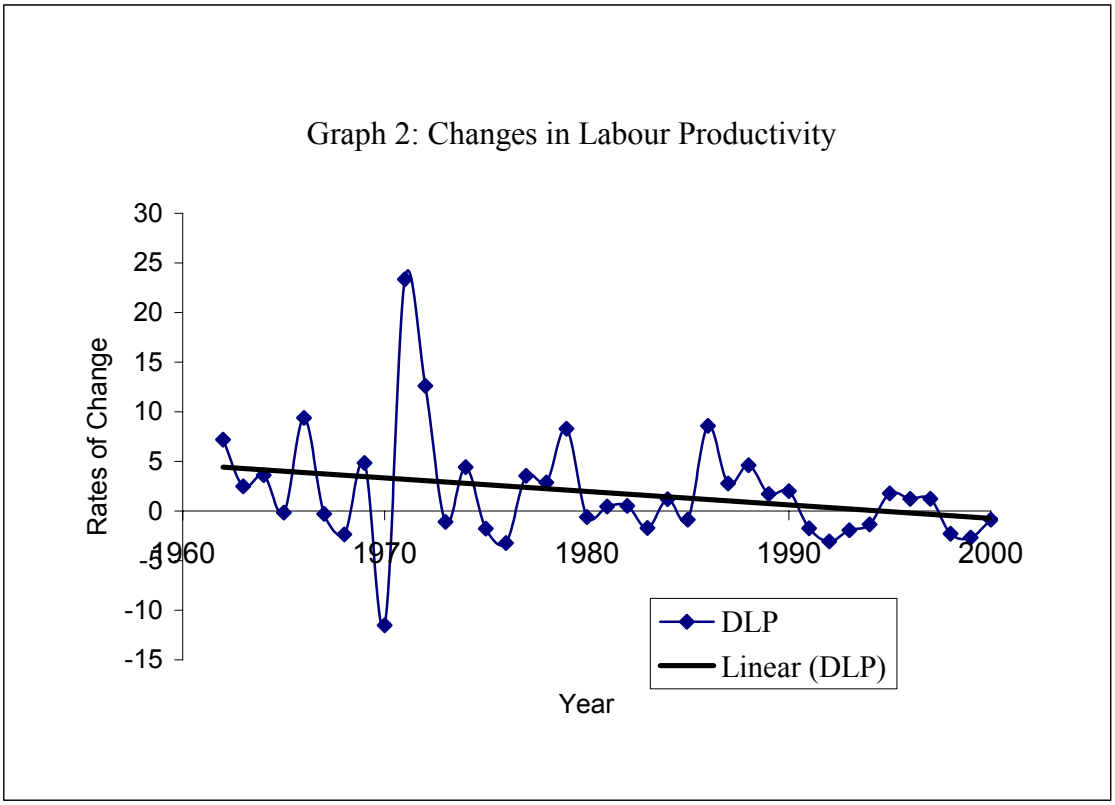


## 2.2 Characterisation of Productivity Changes

### 2.2.1 Changes in labour and total factor productivity

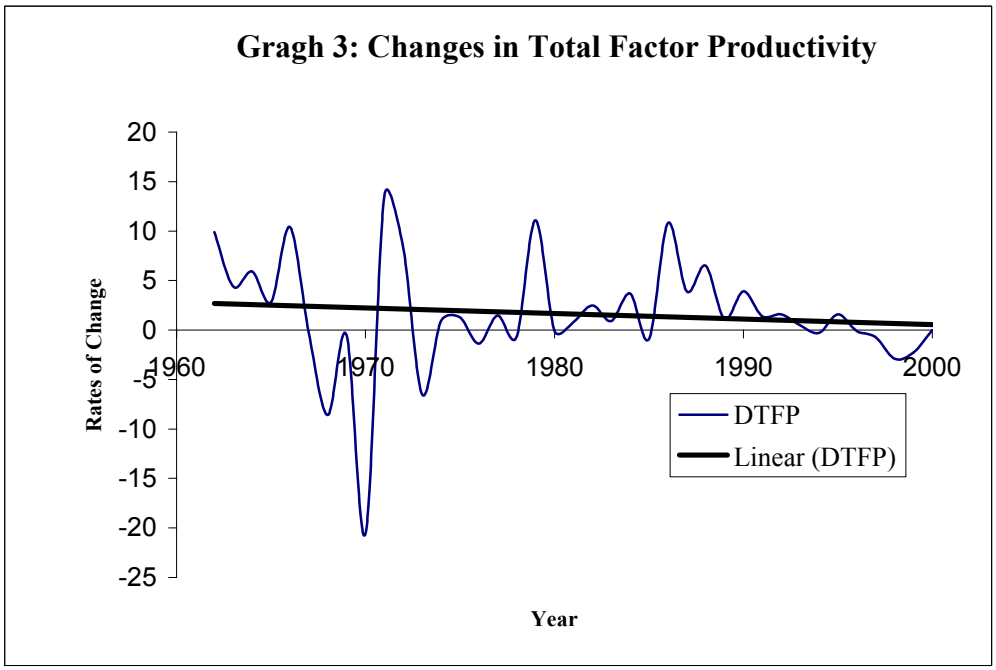
Graphs generated for average labour productivity and total factor productivity for Kenya reveal that changes in labour productivity were very volatile during the 1969-72 period, but show a gradual declining trend over the 39-year period under consideration. During the 1990s, many of the changes in labour productivity were negative, pulling the trend line below the axis of the abscissas (Graph 2). Average labour productivity in Kenya therefore progressively declined throughout the period under consideration.

Total factor productivity also oscillated violently, especially during the late 1960s and early 1970s (Graph 2).



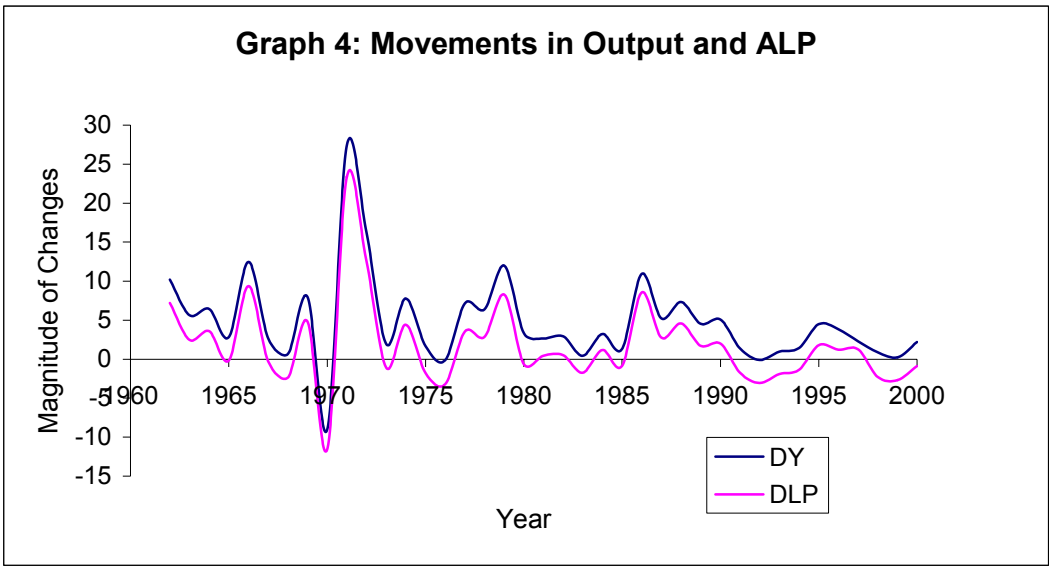

During most of the 1980s, changes in total factor productivity were less violent and generally positive, especially during the second half of the decade. The 1990s registered a steady decline in total factor productivity so that the overall trend line for total factor productivity is a declining one but generally within the positive quadrant. When everything is taken into account, the overall picture is that Kenya received progressively less from its factors of production.

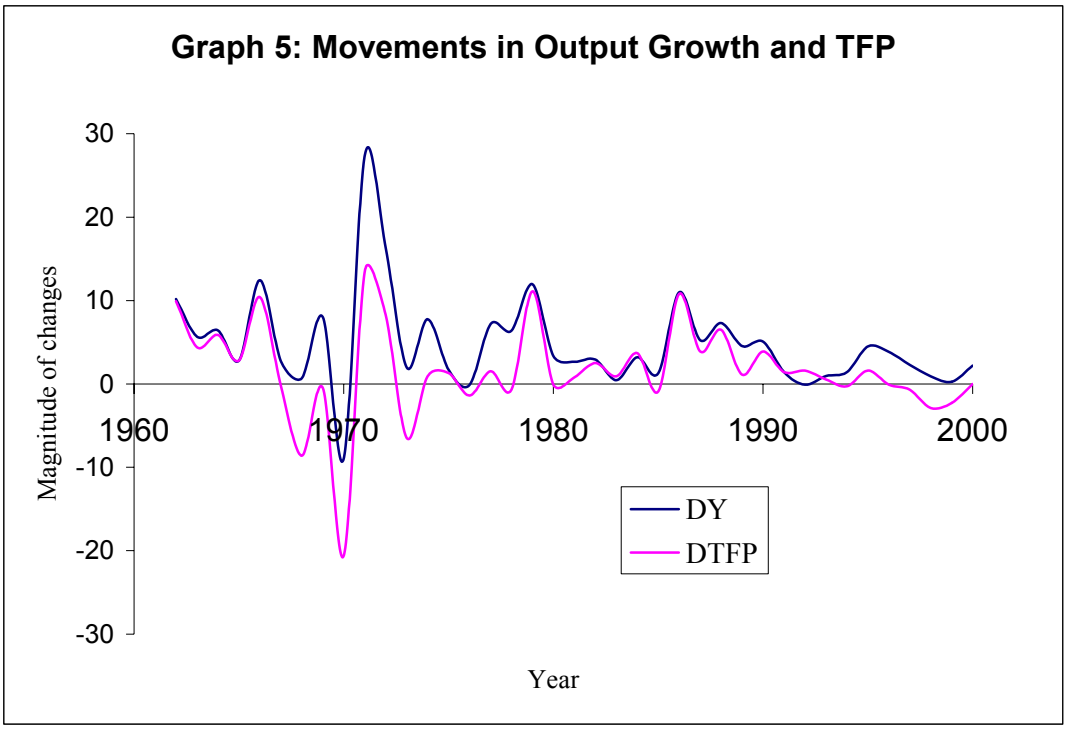
These two measures of productivity show similar trends, with productivity changes that oscillated violently during the late 1960s and early 1970, and gradually petered off in the 1980s and 1990s. We can therefore argue that productivity change in Kenya has been driven by movements in technical change and changes in technical efficiency.




### 2.2.2 Relationship between ALP, TFP and Output Changes

Chart 4 tracks the relationship between changes in output and labour productivity. A common shape seems to suggest that growth in output tracks growth in ALP, so that whatever happens to the productivity of labour, consequently happens to output growth as well. Chart 5 shows a similar association between changes in output and TFP. Correlation analysis reveals very strong positive association between change in output and changes in labour productivity, total factor productivity, and technical efficiency; a near negligible association between output change and change in capital labour ratio; and a negative and weak association between change in output and technical change (Table 1). In other words, while increases in labour productivity, total factor productivity and technical efficiency had notable positive effects on output, and capital deepening had not had any significant effects on output, such technical changes as happened in Kenya had a deleterious effect on output.






For these reasons, changes in labour productivity and total factor productivity influence output growth, so that the relationship between productivity and output growth is positive and strong. We conclude from these findings that it will be very hard for Kenya to address the problem of poverty without addressing low labour productivity and total factor productivity.

**Table 1: Correlation Matrix**

| | Dy | Dkl | dlp | dtfp | deffch | techch |
|---|---|---|---|---|---|---|
| Dy | 1 | | | | | |
| Dkl | 0.08 | 1 | | | | |
| Dlp | 0.9958 | 0.0625 | 1 | | | |
| Dtfp | 0.8105 | -0.496 | 0.8224 | 1 | | |
| Deffch | 0.6696 | -0.216 | 0.6623 | 0.7026 | 1 | |
| Techch | -0.1529 | -0.1635 | -0.1366 | -0.0241 | -0.7256 | 1 |

Note: Dy = GDP growth, Dkl = capital deepening, Dlp = labour productivity growth, Dtfp =total factor productivity growth, Deffch = change in technical efficiency and Techch = technical change

The structure of the Kenyan economy has not changed dramatically in the last 40 years. However, some changes are observable (Table 2). Although agriculture remains the most important sector, its contribution to monetary GDP declined from 41% in 1964 to only

25% in 2000. On the other hand, the contribution of the manufacturing sector increased from 8% to 14% over the same period.

The other sectors whose contribution to GDP increased are the finance and electricity sectors. Sectors whose importance has somewhat diminished include building, mining and construction, wholesale trade, and ownership of dwellings. These changes in the structure of the Kenyan economy, albeit modest, are expected to have influenced the growth of output and changes in aggregate productivity. The specific impact is, however, likely to be a function of the relative productivities of the different sectors, which, in turn, is an outcome of the structure of production in the different sectors of the economy. Considering the strong upstream linkages between manufacturing and electricity activities, it is possible that the increase in the relative importance of manufacturing had significant productivity consequences on both ALP and TFP. However, it is the community services sector that has been replacing agriculture in relative importance. Unfortunately, the scope for productivity change in community services is limited so that such structural change that has taken place in Kenya is not likely to have contributed to growth in productivity.

### 2.2.3 Changes in Kenya's Labour Productivity relative to that in the United States

Data supplied by UNIDO show that the productivity of labour in Kenya decreased from 4.27% of the US level in 1961 to 3.84% in 2000. In other words, US labour was more that 20 times more productive than Kenyan labour in 1961, and more than 25 times more productive in 2000. Earlier graphs have shown a declining trend for the average labour productivity in Kenya. This decline in ALP is not only absolute but also relative to that in the United States of America. Given the declining trend for ALP, it is understandable why the relative productivity is also a declining one, even assuming that the productivity of labour in the USA remained unchanged.

However, taking into consideration the technological breakthroughs that have taken place in the developed world, productivity of labour in the USA is likely to have significantly increased during the last 40 years. The productivity of labour in Kenya is also likely to have suffered from a history of negative external shocks, domestic uncertainties, the slow pace of adapting to technological changes, the inability to upgrade equipment, and the mismatch between the supply and demand for skills. The decrease in the relative productivity of labour in Kenya is therefore an outcome of the combined effect of falling productivity in Kenya and rising productivity in the USA.

**Table 2: Sector Contributions to Monetary GDP in constant (1982) prices**

| *Sector* | Selected Years | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1964 | 1970 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 |
| Agriculture | 0.414 | 0.376 | 0.361 | 0.328 | 0.302 | 0.302 | 0.271 | 0.252 |
| Mining | 0.003 | 0.004 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| Manufacturing | 0.079 | 0.084 | 0.104 | 0.13 | 0.132 | 0.136 | 0.139 | 0.137 |
| Electricity | 0.005 | 0.005 | 0.007 | 0.008 | 0.009 | 0.011 | 0.011 | 0.01 |
| Building and construction | 0.042 | 0.051 | 0.047 | 0.047 | 0.034 | 0.033 | 0.026 | 0.025 |
| Wholesale Trade | 0.172 | 0.156 | 0.121 | 0.118 | 0.111 | 0.113 | 0.115 | 0.116 |
| Transport | 0.051 | 0.059 | 0.053 | 0.055 | 0.064 | 0.06 | 0.062 | 0.064 |
| Finance | 0.034 | 0.047 | 0.052 | 0.063 | 0.076 | 0.081 | 0.098 | 0.111 |
| Ownership of Dwellings | 0.074 | 0.068 | 0.067 | 0.061 | 0.059 | 0.056 | 0.055 | 0.059 |
| Community services | 0.126 | 0.15 | 0.185 | 0.187 | 0.198 | 0.206 | 0.22 | 0.224 |

*Sources:* Jardin (1997) and computations for this report.

## 2.3 Determinants of Productivity

### 2.3.1 Creation, transmission and absorption of knowledge

There are institutions in Kenya charged with the responsibility of developing new industrial products but very little R&D takes place, and formal links between industry and institutions of higher learning have never developed. There are some subsidiaries of multinational corporations but these are generally production enclaves with limited linkages with local firms. Foreign licenses and franchises are uncommon. The overall size of the industrial sector has been shrinking, and absorptive capacity is limited. Productivity growth in Kenya has been undermined by the country's failure to create, transmit and absorb knowledge.

Increased output and welfare depends on how successfully a country exploits increasingly efficient technologies. Improvements in the avenues through which technology can be created and transferred, and in the capacities for the absorption of technology, all help in increasing productivity. Where there is limited capacity for creating more efficient methods of producing goods and services, as well as creating new products, efficient access to imported technology becomes a crucial part of a country's technological infrastructure.

The colonial and independent governments of Kenya recognised the importance of technology in economic growth, especially industrial growth (Ikiara & Aura, 2001). During the Second World War, technological development was considered a key component of industrial growth, and colonial governments worldwide adopted an import substitution strategy for the industrialisation of their colonies. This was because the colonies were completely cut off from most imported supply and needed to maintain self-

sufficiency in these circumstances. As a consequence, the colonial government was forced to establish the Kenya Industrial Management Board (KIMB) and the affiliated East African Industrial Research Organisation in 1941. The KIMB became the predecessor of the Kenya Industrial Research Development Institute (KIRDI).

KIRDI was established in 1980 to promote industrial research and development by identifying and developing process and product technologies appropriate for the country's domestic market and export potential, to facilitate the replacement of imported with domestic inputs, to hasten the transfer of technology through the development of designs and adoption of machinery, tools, equipment, instruments and processes suitable for Kenya, to establish pilot plants to demonstrate the operations and effectiveness of industrial technologies developed through the efforts of the institute, and to raise local technological capacity, in order to facilitate exploitation of

Kenya's resource potential (Ikiara 1988)[6]. The Institute is organised in four operational divisions, namely, analytical testing, design and engineering, process and product development, and product studies and development. Each of these divisions has a very clear mandate. For example the Analytical and Testing Division aims at developing new analytical techniques and modifying existing ones to localise them for both parastatal and private manufacturers.

The Design and Engineering Division develops indigenous equipment, machinery and product designs. It also offers improvements and development of industrial machinery and equipment services, and undertakes laboratory studies to develop products from local materials. It also carries out laboratory pilot plants. The Process and Product Development Division has the responsibility of improving and developing industrial processes and products through laboratory studies. The Project Studies and Development Division carries out studies on factors that influence markets as well as economic analysis of industrial projects on commission from interested parties.

Evidently, KIRDI has the potential to become a technological hub for developing indigenous technology, promoting appropriate technology that shows regard to the domestic raw material base and that encourages necessary linkage with agriculture and the service sectors, helps produce intermediate materials for further industrial production, encourages production of export goods, and rationalises technological transfers in Kenya.

Unfortunately, these attractive outcomes are undermined by inadequate funding that translates into inadequate equipment and under-staffing. Other publicly funded research institutes include the Coffee Research Foundation, the Kenya Agricultural Research Foundation, the Kenya Forest Research Institute, the Kenya Institute of Public Policy Research and Analysis, the Kenya Marine and Fisheries Research Institute, the Kenya Medical Research Institute, the Kenya Sugar Research Institute, the Kenya Industrial Property Institute and the Tea Research Foundation. These have specific mandates, some of which are more relevant from a technology development perspective than others.

The drive towards the development of technology in the colonies lost steam after the end of World War II as opportunities for sourcing supplies from the rest of the world

[6] The KIRDI was also mandated to reduce environmental problems derived from industrial waste and effluents by designing appropriate treatment and recovery methods. It was also to provide consultancy services to Kenyan manufacturers and help commercialise research findings.

resumed. However, not only was the import substitution strategy inherited by the independent government but it was further encouraged through increased tariffs and import licensing. Import substituting industries depended highly on imported technology. Most of the investment encouraged by the import substitution strategy was in light industries, and undermined the development of intermediate input technology. Many foreign investments through subsidiaries of multinational corporations were subject to export and import restrictions by parent companies. Examples of such restrictions include tied-import arrangements that make it mandatory for locally based subsidiaries to import technology, inputs and information from the parent company, and post-expiry restrictions that made it difficult for such subsidiaries to acquire technology from other sources. The structure of incentives under the import substituting strategy of industrialisation also encouraged capabilities for substituting local materials for imported ones. The Multinational Corporation (MNC) have not been efficacious avenues for the transfer of technology. The incentive regimes also encouraged installation of second hand and obsolete equipment.

The implementation of structural adjustment during the late 1980s encouraged technological improvement in response to the competitiveness that was ushered in by liberalisation. There has been evidence of upgrading through procedures for quality control, equipment maintenance and the development of new products. However, progress is very limited. There is only limited use of foreign technology licenses, and Kenyan firms continue to use second-hand equipment. Analysis of the World Bank's Regional Enterprise Development Programme's data for Kenya revealed very low use of foreign licenses. Although the use of technical assistance was more common than foreign licenses, it was also less than desirable. Expenditure on licenses and technical assistance in Kenyan manufacturing is also minimal (Bigsten & Kimuyu, 2002).

#### *2.3.1.1 The capability stock*

Although a small proportion of Kenya's industrial sector has adopted advanced technology and upgraded skills, and although some firms have achieved improvements through the replacement of basic machinery and the enhancement of skills, liberalisation has not helped technological advancement. On the contrary, some firms have regressed to lower cost production technology, and others have moved from value adding activities, such as manufacturing, to trading (Ikiara & Aura, 2001). The textiles and garment sector is an example of this development.

Enrolment in all levels of the education system increased substantially after independence in 1963. In terms of annual rates, the most rapid expansion was at the university level, which grew at 13.6 percent per annum for the period 1963 to 1995, followed by enrolment in secondary education at 9.5 per cent and primary at 5.7 per cent per annum. In quantity terms, primary school enrolment increased from 892,000 in 1963 to 5,545,000 in 1995. Over the same period, enrolment at secondary schools increased from only 30,000 to 632,000, and university enrolment from 571 to 44,900 in 1995. As well as the academic programmes, Kenya also put in place a mechanism for imparting technical skills to young Kenyans. Enrolment in technical schools and colleges increased from only 1,000 in 1963 to 8,148 in 1995 (Abagi and Odipo, 1997).

However, the introduction of Structural Adjustment Programmes and their cost-sharing components was costly from a school enrolment perspective. Primary level enrolment dropped from 95% in 1989 to 77.5% in 1996. For secondary schools, enrolment also fell

from 30.7% to 26.5%. Enrolment increased in absolute numbers after independence in 1963, but began declining in the 1988/89 financial year, following the introduction of cost sharing through user fees and poor economic out turns that increased poverty and reduced access to education (Njeru and Orodho, 2003, Kulundu, 1997).

The education system has also been fraught with wastage. For example, only 45% of the pupils enrolled in the first year ever complete the 8 years of primary education due to high dropout rates and repetition of classes (Abagi 1997). Recently, the new government introduced free primary education that increased enrolment in primary education by more than a million pupils within the first year of implementation. Although unscrupulous managers of some of the educational institutions have been introducing hidden charges, the free primary education programme is likely to increase the number of people with this level of education in the years to come.

The technological capability improvement resulting from increased school enrolment has been undermined by declining educational standards. Studies have shown that the means scored for the Kenya Certificate of Primary Education, and especially the performance in mathematics and science based subjects, has been declining. Similar trends are also evident in secondary level education. Since these levels of the educational cycle form the basis for university education, we can conclude that the quality of university education has also been declining. The quality of education has also suffered due to inadequate funding and change to an education ostensibly driven by the need to impart practical skills but that in the end encouraged rote memory and undermined reasoning ability[7].

Very little R&D takes place in Kenya. Existing literature suggests that Kenya spends only 0.5% of its GDP on R&D annually. Of this, only 5% goes into industrial research. This expenditure is way below the 2% spent on R&D by developing countries (Ikiara 1988). Firm-level studies have also shown negligible firm-level R&D in Kenya. Furthermore, there are no incentives for firm-level R&D efforts. In many other countries, manufacturers are given tax deductions for R&D expenses, customs duty exemption for R&D equipment, accelerated depreciation allowance on such equipment, and special allowances for using local technologies (Coughlin 1991 p.13). Formal links between industry and institutions of higher learning, such as polytechnics and universities, are uncommon. A university of Nairobi industry link programme was established in 1987. However, other than an infamous car project that was used as a conduit for embezzlement of public funds, university-based production-related links have not yielded any technological results. Other than a textile technology programme in one of the public universities (Moi University), most programmes in Kenyan universities are theoretical, and out of step with technology requirements and developments in the domestic labour markets.

[7] In 1966, primary education was changed from 8 to 7 years. At the time there were 6 years of high school education, 4 of secondary (O level) and 2 of higher (A level) schools. A basic bachelors degree took 3 years. During the mid-1980s, the educational system was further changed so that it provided for 8 years of primary education, 4 years of secondary education and 4 years for a basic first degree.

**Table 3: Trends in school enrolment, 1963 and 1995 in thousands**

| *Level* | 1963 | 1995 | Annual rate |
|---|---|---|---|
| Primary | 892 | 5,545 | 5.7 |
| Secondary | 30 | 632 | 9.5 |
| University | 0.571 | 44.91 | 13.6 |
| Teacher training | 4 | 16.878 | 4.5 |
| Technical | 1 | 8.148 | 6.6 |
| Polytechnic | - | 7.927 | - |

*Source:* Abagi, O (1997)

A Patent Registration Act was enacted under the colonial government in 1933, under which patents originally registered in England qualified for registration in Kenya. This act was to protect British industry and commerce, but remained in force well after independence. Kenyan law does not require patent holders to make products locally in quantities that would satisfy local demand, a requirement common in many developing countries (Coughlin 1991). Subservience to English patent law created an ironical situation where Kenyans paid royalties and licensing fees for the production of products that have simple designs and where there was already sufficient domestic capacity to produce. Very few Kenyans were able to get patents registered under this legal framework[8].

Kenya does not extend intermediate protection through utility certificates for innovative steps that may improve products. Such certificates, usually given exclusively to citizens of a country for innovations not meriting patents, are common in most other countries. These types of provisions encourage the upgrading of traditional technologies. For developing countries such as Kenya, such protection is particularly cost-effective and attractive to small and medium sized firms. This arrangement was therefore not technologically beneficial to Kenya. However, property rights arrangement improved with the establishment of the Kenya Industrial Property Office that was later converted to the Kenya Industrial Property Institute.

Kenya's capital stock is largely outdated. A recent study of manufacturing firms revealed that, although the manufacturing sector is highly capital intensive, most of the capital stock is vintage. Only 20%`of the capital stock held by manufacturing firms is less than 5 years old. Nor do Kenyan firms readily adopt new technology. They show low capacity utilisation due to many factors, including volatile demand, poor management, and unreliable power. Low capacity utilisation is also viewed as a tool for uncompetitive practices, since spare capacity discourages new entrants. This keeps profits high at the expense of productivity and economic growth.

In the past, subsidiaries of MNCs were set up to exploit the import substitution situation, many of which subsequently left the country. New subsidiaries have emerged, especially in the Export Processing Zones, attracted by opportunities for exploiting the AGOA.

[8] Out of the 1025 patents registered in Kenya during 1970-78, only five were by Kenyans of Asian origin, and three of these five were subsidiaries of multinational corporations (Coughlin, 1991).

These have very limited linkages (mainly packaging) with other local firms. Foreign licenses and franchises are uncommon. The overall size of the industrial sector has been shrinking, even though the sector's contribution to GDP has remained the same. It is possible that absorptive capacity may well be limited.

We conclude that, although Kenya has a reasonably well-educated population, the quality of education does not match the skills needed in the domestic labour market. Very little research and development takes place in Kenya due to under-funding of research and the absence of appropriate firm-level incentives. Although there are key technology-relevant institutions, these are either not properly linked to industry or are under funded. There are therefore problems in the generation, acquisition and absorption of technology so that national productivity is likely to suffer on this account.

### 2.3.2 Factor Supply and Allocation

Kenya has a well-educated population but the relevance of the school curriculum is often questioned. There is a mismatch in the skills mix, and HIV/AIDS infections are eroding the country's productive population. Unit labour costs have been increasing across the board without any matching increase in productivity. Kenya has also a large stock of physical capital that is largely outdated, and capacity utilisation is low. The stock of classified roads has not increased over the years and most of it is in a state of disrepair. Electricity, telephone and water provisions are overstretched and unreliable, and the incidence of self-provision is very high. The introduction of cell phones has cleared some of the telephone-related communication bottlenecks, but cell phones are costly. Kenya has many banks, but most of them are in the competitive fringe. Excessive domestic borrowing by the government tends to reduce access to finance by productive sectors. Contestable property rights also lead to high levels of collateralisation.

Well before independence, Kenya had built a reasonably modern physical infrastructure that helped make the country the East African region's commercial centre. Its towns, led by Nairobi, were the nerve centres of the rail, road, water and air links in the region. Nairobi was the heart of telecommunications in the region, and the port city of Mombasa the gateway for many of the land locked neighbouring countries, such as Uganda, Sudan, Rwanda, and Burundi, and often the gateway to the eastern region of the Democratic Republic of Congo. Nairobi was also a hub for continental air links, particularly for air traffic, not only for the East African region but also for Southern Africa.

A large proportion of Kenya's road network is unclassified and its management the responsibility of poorly funded local authorities. By 1996, the total stock of classified road network amounted to 63,146-kilometres. Only 13% had a bitumen surface, 42% had gravel and 45% were earth roads (Table 5). The actual stock has not increased much in the recent past, and the standard of the network varies substantially across regions. Kenya's road stock is the most readily used network for passenger and freight transport.

Over the 1980s and 1990s, the quality of Kenya's infrastructure was undermined by a combination of population pressure, poor maintenance and inadequate budgetary provisions, including a decline in donor funding, corruption in the award of road construction and maintenance contracts that led to the appointment of incompetent contractors, and ineffective macroeconomic policies. The introduction of a petroleum levy to raise funds for road maintenance and restructuring of the road governance

arrangement through the creation of a road board has not improved the situation. Only 30% of the paved part of the network is in good condition and 20% is in critical condition. Only 12 percent of the earth and gravel road is considered to be in good condition (Kayizzi-Mugerwa & Kimuyu, 2002). Heavy traffic, including transit traffic, has congested the main road arteries into and through Kenya, often occasioning long delays at the border points and weighing stations, and road accidents. Recent research has revealed that 2.5% of export cargo from Kenyan manufacturers was discounted/returned due to delayed delivery, and that truck maintenance costs absorb 8-10% of overheads. Furthermore, as many as 24% of Kenyan manufacturers spend private resources to repair or improve roads in their neighbourhoods (Ajayi et al, 2004).

The expansion of the road network has not kept up with urban expansion and sprawl so that traffic snarls in the main urban centres are also now common features. Access to and exit from production centres such as the industrial estates of the main towns are not easy, causing delays in the delivery of materials and in meeting product orders. Urban workers take a long time commuting to and from work. The existing stock of the road network does not meet Kenya's infrastructure requirement and does not support growth and productivity.

**Table 4: Length and Surface type of Classified Roads in Kenya**

| Provinces | Total length (km) | % Bitumen | % Gravel | % Earth |
|---|---|---|---|---|
| Nairobi | 383.7 | 92 | 7.97 | 0.03 |
| Central | 7 761.2 | 25 | 43.6 | 31.4 |
| Coast | 5 658.9 | 13 | 28.8 | 58.2 |
| Eastern | 13 010 | 8.4 | 37 | 54.6 |
| North Eastern | 4 856.7 | 3 | 13.5 | 83.5 |
| Western | 4 048.7 | 10 | 61.3 | 28.7 |
| Rift Valley | 20 203.8 | 15.6 | 47.3 | 37.1 |
| Nyanza | 7 225.5 | 10.3 | 52 | 37.7 |
| Total | 63 146.4 | 13.5 | 41.7 | 44.8 |

*Source:* Kayizzi-Mugerwa and Kimuyu, 2002

The railway system laid by the colonial government at the turn of the 19th century has been an important complement to the road network for overland travel. It was crucial in opening-up the East African interior and partly fuelled the rapid conversion of some of the original trading centres on its route to towns and cities[9]. The purpose of the railway network was to cater for bulk transportation within the East African region. This regional dimension of the railway network collapsed with the collapse of the first East African Community in 1977. A railway with national focus suffered huge scale diseconomies. There has not been any development of the network since independence in 1963.

On the contrary, the Kenya Railways (KR) Corporation fell under the stranglehold of poor maintenance that precipitated repeated derailments, destruction of railway bridges, and general inefficiency and unreliability. Due to this state of affairs, the railway system

[9] The capital city of Nairobi itself benefited immensely from the construction and opening of the Mombasa to Uganda railway line.

has lost out to private haulers and passenger bus companies, and this has increased the maintenance requirements of the road network. Where KR used to haul the largest share of freight traffic between Mombasa and Nairobi and nearly all transit transport into Uganda, it now transports about 1/5 of the total volume of transit cargo to Uganda. KR's container prices are double those of road transporters, and it has lost most of the traffic destined to Burundi and Rwanda, to the Tanzanian Railways Corporation. This company is also aggressively pursuing the Ugandan transport market (Ajaya et al 2004).

There are three international airports in Kenya, in the cities of Nairobi, Mombasa and Eldoret. The Nairobi airport is the main link with other airports elsewhere in the world and is the main air traffic hub. The Mombasa airport is often the port of entry for tourists visiting Kenya, attracted by the world-class beaches at the port city of Mombasa. The main activity of the Eldoret-based international airport is off-take of horticultural produce from the western part of Kenya. There are a number of other domestic airports, including the Nairobi-based Wilson airport, which is reputed to be one of the busiest airports in the region. All the airports have passenger and cargo facilities. Kenya Airways is the national flag carrier and has become a market leader in Africa, following privatisation in 1996. Research has shown that only a small proportion of manufacturers using air transport are dissatisfied with its quality (Ajaya et al, 2004).

Mombasa is Kenya's main port city. Kisumu is also an important port on the shores of Lake Victoria, and is shared by the three East African countries, making it an important port for cargo and passenger transport in the region. Both ports provide important links with other countries in the hinterland. The quality of port services has deteriorated progressively over the last decade, and the ports have suffered from outdated equipment, corruption and pilferage of goods. Users of port services complain about the inadequacy of capacity for handling and clearing cargo, which results in long turnarounds. A review of the Kenya Ports Authority, the parastatal vested with the responsibility of running the port, has revealed that new efforts to improve the management of the container terminal and the maintenance of port equipment have not been making things better. Recent surveys have shown that Kenyan ports, especially the main port of Mombasa, are the single most important infrastructure constraint to business operations.

Like the railway system and the airways services, the postal and telecommunications services in Kenya are the successors of the previously commonly owned East African service corporations established by colonial governments in the pre-independence period. Following the break-up of the East African Community, the Kenya Telecommunications Corporation (KPTC) was established in 1977, and its service provisions expanded rapidly thereafter. However, in due course, problems that beset other public services began to manifest themselves at the KPTC (corruption, service stretching, inefficiency, pilferage, etc.), which was also unable to innovate so that its technology became progressively outdated. In 1996, the government of Kenya initiated a process of restructuring the KPTC, which led to the creation of three separate entities, the first one in charge of postal services (Postal Corporation of Kenya), the second in charge of telecommunications (Telcom Kenya Ltd), and the third a regulatory authority, the Communication Commission of Kenya. This paved the way for opening the market for cell phone service providers, the first two of which were subsequently licensed.

By 2003, teledensity in urban Kenya was 4 lines per 100 persons, compared to 0.16 lines in rural Kenya. While land line telephone connections declined by 1.8%, between 2002

and 2003, cell phone connections increased by 2.7% over the same period (Table 4). The use of cell phones has been growing at a very fast rate since the first cell phone license was issued. There are plans to expand telecommunications services by privatising Telcom Kenya, licensing a second national fixed-line operator, licensing more internet gateway service providers, and fully liberalising the very small aperture terminal (VSAT) (Republic of Kenya 2003). The government of Kenya recognises the importance of large-scale telecommunications capable of delivering efficient communications services. Until these plans are implemented, the state of postal and telecommunications services remain impediments to productivity and economic growth. Half of the businesspeople operating in Kenya are very dissatisfied with the telecommunications services. It takes an average of 124 days to receive a connection, and corruption-related informal payments are often necessary. The fixed telephone costs are very high and the service poor. As a result, as many as 90% of manufacturing firms regularly use the more reliable, but very costly, mobile phones (Ajaya et al. 2004).

Rapid urbanisation and deteriorating access to water in the arid part of Kenya puts considerable pressure on existing water resources. The water sector is characterised by a history of under-funding and failure to meet targets. Existing water sourcing and distribution equipment is old (from the 1960s) and poorly maintained. Apart from Edoret, cities and urban centres in Kenya face a long-run water deficit. Nairobi meets only 72% of its needs and water rationing is a common feature. The situation is only marginally better in Mombasa, which meets 82% of its water needs. The other important cities of Kisumu and Nakuru meet only 38% and 25% of their water needs respectively (Kayizzi-Mugerwa and Peter Kimuyu, 2002). One outcome of water scarcity is that many firms self-provide for water by sinking bore holes and erecting roof catchment installations for harvesting rainwater. These self-provision mechanisms increase the costs of accessing water, which, in turn, undermines efficiency and competitiveness. Businesspeople rate the water services in Kenya as extremely poor. Under-investment in maintenance has led to the collapse of the water and sewerage infrastructure and, in some cases, the complete abandonment of major investments in the sector. Illegal water connections are common in Kenyan cities, and only a small proportion of the water is fully accounted for. Although agricultural productivity in Kenya can be increased through irrigation, the management of the irrigation schemes is vested with a poorly managed state corporation. User rights are also a common problem in the irrigation schemes, which are not as productive as they should be.

The development of energy resources has been a major occupation of the government of Kenya. Although a wide range of sources is available, the development has so far focused on wood fuel, electric power and petroleum. Wood provides slightly less than three quarters of total energy requirements and therefore remains the most important source of energy used, mainly for cooking, by the majority of rural Kenya. Charcoal derived from wood is also a common form of cooking fuel in urban areas. Because of the demand for wood-fuel and despite policies for ensuring adequate and sustainable supply, many rural areas suffer deforestations and degradation, especially where property rights are either unclear or contestable.

Petroleum accounts for 80 percent of all commercial energy and is the dominant energy source for transport, agricultural and industrial activities. Liquefied petroleum gas competes with electricity and charcoal as sources of cooking energy in the upmarket parts of Kenya. Fuel wood is the main source of energy for the majority of rural households.

Kenya does not have any sources of crude oil of its own, despite a long history of exploration[10]. It relies on imported crude oil and petroleum products for all its needs and is highly susceptible to fluctuations in the world oil prices. It imports a mixture of crude oil and refined products, and the crude oil is processed at the Mombasa-based Kenya Oil Refineries. This refinery is the successor of the East African Oil Refineries, which was part of the corporations jointly owned by the three East African countries before the break up of the East African Community, and uses very old technology that produces a mixture of products out of step with the needs of the local markets.

**Table 5: Telecommunications Services, 1997-2000**

| | Unit | 1997 | 2002 | Growth Rate |
|---|---|---|---|---|
| Telephone exchange capacity | '000 | 384 | 1347 | 251% |
| Telephone exchange connections | '000 | 272 | 839 | 208% |
| Public call boxes | No. | 6,309 | 10,718 | 70% |
| Card phones | No. | 49 | 8,225 | |
| Mobile telephone connections | '000 | 5 | 2,493 | |

*Source*: Republic of Kenya 2004

Most of Kenya's hydroelectric potential has already been developed. The country has more costly geothermal potential that represents the outstanding electric potential, since only a fraction has so far been developed. Currently, the total installed electricity generation capacity is 1,142.2 MW, consisting of 677.2 MW of hydroelectric potential, 407.00 MW of oil-based thermal electricity capacity, and 58.00 MW of geothermal installed capacity. Under a long standing agreement, Kenya imports about 20MW of electricity from Uganda. The main distributor of the electric power is the Kenya Power and Lighting Company (KPLC), a public utility company quoted in the Nairobi Stock Exchange. The government has a majority shareholding in KPLC, which buys bulk power from KenGen, a state corporation involved in power generation, and from a group of independent power producers. During the second half of the 1990s, the Electricity Regulatory Board was established to regulate the development of the electric sector.

Due to the heavy reliance on hydroelectricity, seasons of poor rainfall occasion power shortages that precipitate rationing. Power surges and outages are also common. A recent survey of manufacturing firms showed that 48% of the full sample and 56% percent of the exporters rated electricity as a severe impediment to business pursuits, and as a problematic utility. The KPLC network is inefficient. Power losses during transmission/distribution are of the order of 21% of total energy production. During 2002, firms experienced an average of 33 power outages that cost, on average, 9% of the total value of sales. Sixty four percent of the firms suffered either damage or complete loss of equipment due to the power surges (Ajaya, 2004). Seventy percent of the firms have stand-by generation that supplies, on average, 14.5 percent of power requirements. It also takes more than two months, on average, to get a new power connection, and connection charges are high.

Connections and coverage rates are also low. Although the corporation has a rural electrification programme, funded through a cross subsidization arrangement, most of rural Kenya is not connected, and rural enterprises have no access to electricity. Although

[10] The first exploration licence was issued to British Petroleum 50 years ago.

Kenya lies in the solar belt and receives considerable sunshine, solar energy is not widely tapped except for drying crops. Due to relatively high costs, solar panels are still out of reach for the majority of Kenyan households. There have also been attempts to tap wind energy, but the diffusion of wind technology is also inhibited by setup costs. Investment in the power sector does not match increases in demand. Power problems are therefore a major impediment to efficiency and productivity.

Kenya's population is roughly 32 million in 2003. The working-age population (age 15 to 64) is about 18 million. Although the population has been growing at 2 to 2.5 per cent annually, that in the working-age bracket has been growing at a faster rate of at least 3.5 per cent (Ajaya et al 2004). About 14 million of the working labour force is unemployed. Formal sector growth has not matched the demand for jobs, but growth in the informal sector, estimated at 10% annually since 1998, has been filling the gap.

Formal private sector employment stood at just over 1 million in 2003, or roughly 7.7 per cent of the labour force. About 4 million Kenyans of working age are inactive, and another 6.5 million are either in smallholder agriculture or unemployed. Other than unemployment, underemployment is pervasive. Graduates of tertiary institutions often do jobs that require only a secondary level of education and in some cases no education at all.

Manufacturing is the third largest formal private industry by employment. It is a substantial employer within the overall formal sector. The informal sector claims 83 per cent of manufacturing employment and dominates other major sectors in employment terms.

The HIV infection rate was estimated to be 15 per cent in 2001. This rate has been increasing due to the high transmission rates among the young, sexually active population. The short-term economic costs (lost labour and cost of caring for the sick) are estimated at US$6.5 million a month (Ajaya et al, 2004). Unemployment and general economic difficulties have pushed skilled Kenyans to other parts of the world, including other parts of the continent. Presently, there is a pool of Kenyans in Southern Africa and Western countries who were trained using public funds but who are forced to relocate in search of employment opportunities. For those that remain, generalised corruption has tended to skew the flow of talents away from productive sectors to those that are susceptible to rent extraction and corruption (Kimuyu, 2004). The school system spews many students into the labour market annually, many of whom either cannot find jobs or are forced to accept jobs that do not require much education. Under-employment is therefore common, and many job seekers are forced into informal self-employment activities. There is also little emphasis on technical education so that the education system does not build the skills that can support productivity growth. The allocation of skills and talent in Kenya is therefore inefficient and does not encourage productivity.

#### *2.3.2.1 Financial Resources and their Allocation*

Kenya has a reasonably well-developed financial sector and relatively high levels of credit channelled to the private sector. However, the financial sector is highly concentrated, the top three banks controlling 40 per cent of all bank assets. The concentration ratio is, however, lower than the OECD average of 48 per cent and significantly lower than the average for Sub-Saharan Africa of 77 per cent (Ajaya et al, 2005). Kenya's financial sector is therefore relatively well structured.

During the mid-1990s, poor governance and poor economic outcomes drove interest rates through the roof[11]. By 2002/03, real lending rates had fallen to roughly 16 per cent. Although rates have come down, interest spreads remain consistently high, and bank productivity is low as a result of a huge portfolio of non-performing loans incurred during the regimes of high interest rates that tended to attract riskier customers; inadequate institutional and legal structures; and politically motivated interventions. More recently, there have been positive developments with the interest rate spreads falling significantly.

The high cost of capital and other financial sector problems account for falling and low investment rates. Elsewhere, we have argued that the stock of capital is outdated as only a small proportion of firms invest, and new investment is hardly adequate for the replacement of worn-out capital stock. Three forces drive the availability and cost of finance, namely, the supply of credit, the demand for credit, and transactions costs.

Macroeconomic factors such as fiscal discipline, financial depth, the capacity to manage stocks, economic stability, and the efficacy of the legal system, are central to the supply side. Although progress has been made in these supply side issues, structural challenges remain. The quality of firms' investment opportunities, the quality of firm management, and their ability to understand requirements in sourcing credit, are all important demand-side considerations. Experts are often sceptical about the ability of the majority of managers in Kenya, especially of small firms such as those that dominate Kenya's business community, to prepare and implement acceptable business plans (Ajaya et al. 2004).

Transactions costs in the financial markets are high because they represent an accumulation of the costs of evaluating, monitoring and recovering credit contracts. These are influenced by the quality and availability of information related to firms' credit ratings, disclosure requirements, incentives, and penalties for misrepresentation. They are also influenced by the effectiveness of the existing legal and institutional framework for collecting credit and handling default situations. Property rights problems, evidenced by difficulties in the collection and repossession of pledged collateral, translate into high levels of collateralisation that small-scale operators are unable to meet. Transactions costs are viewed as posing the greatest credit constraint to small and medium firms. There are no public credit rating institutions, and the evaluation of the credibility of potential borrowers is very costly for banks, making it harder for them to lend, so that the debt market remains constrained. This state of affairs affects small borrowers more than large ones, and reduces credit availability to this category of borrowers, who form the majority of borrowers in Kenya.

Recent surveys indicate that a large proportion of firms cite poor access to the debt markets as an important constraint to their business. Personal savings and retained earnings are important sources of finances for business start-up and working capital. There is, however, a limit to how much financial resources can be raised through these sources. Due to problems that small businesses face in accessing credit from the large commercial banks, micro-finance institutions and informal credits sources such as savings and credit associations, including those of the rotating nature, play a significant role in Kenya's financial landscape.

[11] At one time, the rates were as high as 90 percent

Over the years, the Kenyan government has played a key role in the financial sector as part owner of several large financial institutions and user of financial resources. This role has decreased and will continue to do so following the implementation of a privatization programme. For example, the Kenyan government has a 35 per cent stake in the Kenya Commercial Bank (KCB), the third largest bank in Kenya in terms of assets, and a 25 per cent stake in the National Bank, the sixth largest bank in the country. Already it has reduced its shareholding in KCB to 25 per cent, and there are plans to recapitalize and restructure the National Bank and prepare it for eventual privatization. There are also plans to privatize the Consolidated Bank and the Industrial Development Bank[12]. However, the government's role as a consumer of financial resources remains.

In the recent past, the performance of the Nairobi Stock Exchange (NSE) became very poor, as a result of which market capitalisation fell sharply as a proportion of GDP. In 2003, however, the NSE 20-share index more than doubled, while market capitalization tripled. The stock exchange has improved its performance to the extent that it is considered one of the most developed markets in the region. Despite this, the stock exchange market is relatively concentrated and often illiquid. Transaction costs are also relatively high, so that the stock exchange does not allocate equity efficiently.

The institutions relevant for Kenya's financial markets are fragile, and there are weaknesses in supervision. Regulators suffer from a lack of independence from central government and are unable to enforce prudential regulations. Direct government participation in the financial system is also a source of distortions and vulnerability. Non-performing loans were at least 28 per cent of the total loan portfolio of politically influenced banks in July 2003. Such loans remain problematic to the financial market. Development finance institutions in Kenya not only operate with high overheads, but have also accumulated non-performing assets often equivalent to 95 per cent of their total loan portfolios. Competition in the banking sector is weak and is also hampered by weaknesses in the legal infrastructure and the presence of many small banks in the competitive fringe, which are unable to compete with the few big banks. Banking supervision is often indecisive and the payments system inefficient. The enforcement of capital market rules and supervision of market participants are weak. Kenya's pension system has limited coverage and its benefits are limited.

There is evidence of a "financing gap" between the micro-finance institutions that cater for the needs of the majority of small-scale operators and commercial banks. Typically, the small and medium-sized firms are rather large for the type of loans available from micro-finance institutions. On the other hand, they are not always able to obtain loans from commercial banks because their monitoring, evaluation and other costs are too high to make extension of loans to such firms profitable. In consideration of these constraints, the Kenyan government has been working on a short-term financial sector reform programme and will be developing a long-term sector development strategy. In the mean time, businesses in Kenya continue to rely heavily on retained earnings[13]. When firms rely on bank loans, it is mainly for investment. However, overdrafts and trade credit are only used for working capital. Only a few firms, in particular those with some foreign

[12] The Consolidated Bank was established in the late 1980s to cushion the financial sector from a banking crisis that saw the collapse of a number of smaller banks.

[13] The Investment Climate Assessment Study revealed that firm size and export inclination does not make much difference in terms of the tendency to use retained earnings rather than tag on to the debit markets. See also (Ajaya et al, 2004)

ownership, do business with foreign banks. Generally, larger firms, firms that export, and firms with some foreign ownership are slightly more likely to use credit.

Despite heavy reliance on personal savings and retained earnings, recent studies have not confirmed the presence of a credit constraint in Kenya (Ajaya et al, 2004). Only a small percentage of firms across the size scale report feeling credit constrained, and the majority declare that credit is not an obstacle to their operations. Many of them have never bothered to apply for commercial loans because they, ostensibly, do not need it.

Often, the government of Kenya borrows heavily from domestic sources (Ajaya et al, 2004). This reduces the amount of credit available to businesses. Domestic borrowing by the government has a crowding-out effect that can undermine the productivity of private enterprise. Domestic borrowing therefore further distorts the allocation of financial resources already distorted by property rights problems that precipitate high levels of collaterisation and imperfections in the financial markets that make these markets uncompetitive.

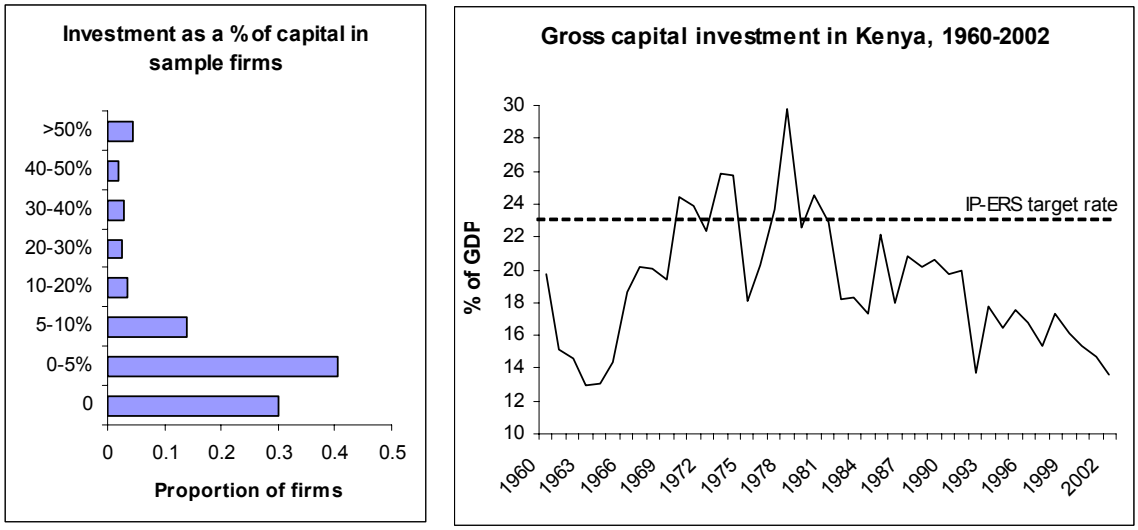
Saving rates are low in Kenya due to widespread poverty. This means that injection of external resources, such as those from Foreign Direct Investment (FDI), is crucial for the expansion of productive capacity and economic growth. Unfortunately, the flow of FDI has been relatively modest. At $50 million annually, FDI flows to Kenya are much lower than to its neighbours, such as Uganda and Tanzania, each of which attracts in excess of $200 million annually. Kenyan firms invest in Uganda and Tanzania and therefore contribute significantly to the regional flow of FDI. Liberalisation has not yet attracted more FDI. FDI triggers technological developments that are a boon for productivity growth. Low and declining FDI has therefore undermined productivity growth in Kenya.

#### *2.3.2.2 Capital Formation*

The investment rate in Kenya is very low. Recent reports have shown that in 2002/03, only 15 per cent of manufacturing firms had investment rates exceeding 10 per cent –the rate required simply to replace worn-out equipment (Ajaya et al, 2004). More than two thirds of the firms reported investment rates of less than 5 per cent and a third of all firms did not invest at all. Investment rates have been low since the early 1990s. Earlier surveys showed that half of the manufacturing firms did not undertake any investment in a given year over the 1992-2000 period. Firms that invest also do so very modestly.

Low levels of firm investment are consistent with the low and declining rates of capital investment observed in the Kenyan economy. Graph 6 shows gross capital formation in Kenya as a proportion of GDP over 42 years against the Economic Recovery Strategy for Employment and Wealth Creation (ERS) targets. This figure shows a peak at nearly 30 per cent of GDP in the late 1970s that is followed by a steady decline to less than 14 per cent by 2002.

**Graph 6: Investment levels in Kenya**




*Source:* World Bank, KIPPRA and Oxford, 2004

Note: Firm-level capital investment rates are defined as gross investment in plant and equipment divided by the replacement value of plant and equipment. Economy-wide gross capital investment rates

Other than this declining rate of gross capital formation, Kenya's capital stock is largely outdated, as noted earlier. Only 20 per cent of manufacturing capital is less than five years old, compared to more than 30 per cent in Tanzania and more than 40 per cent in Uganda. Declining capital formation and vintage capital contribute to poor productivity performance.

To conclude, Kenya has a mixture of factors of production that are put into use in accordance to the dictates of market forces. However, the factor markets are nascent and the potential for their improvement significant. Misallocation results from a mismatch between supply and demand for skills, poor property rights, heavy transaction costs, and corruption. These undermine efficiency and productivity in Kenya.

### 2.3.3 Institutions, Integration and Invariants

Kenyan laws have an Anglo-Saxon orientation due to its colonial history. The Kenyan economy was highly regulated and controlled up to early 1990 when the controls were dismantled. Although there have been major judicial reforms in the recent past, the judicial system is still rated very poorly. Kenyans do not always follow the rule of law, and insecurity is rampant.

There are important business support organisations, and the Kenyan economy is well integrated into the regional and world markets through trade and offshore financing. The equator passes right through the middle of the country so that the country enjoys considerable sunshine. There are other important invariants, such as the Great Rift Valley, long beautiful beaches, and a wide variety of wildlife. Kenya shares Lake Victoria, the second largest fresh water lake in the world, with its two East African neighbours. It also owns part of the tallest mountain in Africa (Mount Kilimanjaro), and Mount Kenya, the

second tallest mountain in Africa, is within its borders. While the impact of institutional determinants is likely to be negative, that of invariants and integration to the regional and world economy has a positive impact on productivity growth.

#### *2.3.3.1 Historical Legacy*

In the period prior to independence, the colonial government prohibited the small Asian community that stayed behind in Kenya after the completion of the Mombasa-Uganda railway line from owning land or farms in the White Highlands. For this reason, Asians concentrated on the slowly growing urban centres where they invested in retail shops, real estate, and small-scale manufacturing. The main farming and manufacturing activities remained in the hands of Europeans of British origin. Africans were hardly involved in commerce and industry, and had only been allowed to commercially grow cash crops, such as coffee and tea. Racial imbalances were therefore dramatic at independence. Industrial activities had already taken root, dominated by agro-processing that catered for the consumption needs of the expatriate community.

As a former British Colony, most of Kenya's laws have an Anglo-Saxon orientation. Many of the laws enacted by the colonial government survived political independence, and some of them have either progressively diverged from common existing norms or have simply become irrelevant. An example of this is a law that prohibits farmers from uprooting coffee trees once they have planted them, so that even when coffee growing is no longer profitable, there is no legally acceptable mechanism for replacing coffee trees with other crops[14]. To circumvent this law, farmers cut the coffee trees and plant low-lying crops, such as beans and potatoes, until the coffee trees rejuvenate.

It became evident soon after independence that political freedom did not immediately translate into economic freedom. Desperate attempts to Africanise the economy led to state capitalism during the 1960s and 1970's that saw the establishment of many state corporations in all of the country's economic sphere. There were also acquisitions of land through a programme that organised loans for Africans to replace settlers, programmes for the Africanisation of the public service, and selective support for Kenyans of African origin in the business sector. To redress pre-independence racial inequities, the government restricted retail and wholesale trading to Kenyans of African origin, forcing long-established trading houses owned by Europeans to shift toward manufacturing.

The Africanisation policy, broached through multiple legislations,[15] was put in place to reduce domination by Europeans and Asians. However, its implementation was half-hearted, and its results mixed.[16] The economic independence of the few budding African industrialists also provoked disaffection from a political establishment frightened by the political consequences of a critical mass of independent-minded wealthy Kenyans.

[14] Although this law has been helpful in allowing forecasting of coffee yields, it was based on a fallacious assumption that coffee farmers are irrational and do not know how to optimise farming activities.

[15] Examples include the Trade Licensing Act of 1967, which excluded non-citizens from certain business activities, the Immigration Act of 1967, which restricted employment of foreigners, the Kenyanization of Personnel Bureau, which was established to Africanise top positions in the public service, and the introduction of work permits to regulate the number of foreigners working in Kenya's private sector.

[16] Himbara (1994) presents a comprehensive analysis of the Africanisation policy in Kenya.

Even though Asian investment was stymied by political hostility and discriminatory policies, it still accelerated from the 1950s forward.[17] The restriction of retail and wholesale commerce to Africans pushed many Asians into light industries, where they continue to dominate to date. Asian industrialists also exploited the independent government's half-hearted commitment to Africanisation, and built partnerships with bureaucrats via shadow directorships that countered attempts to Africanise, and protected Asians against state intransigence. A government commission also encouraged public servants to own and participate in business.

At the time, it was felt that the private sector could not meet the development and re-distributive expectations in the country. For this reason, the independent government mounted extensive interventions through the parastatal sector and public ownership of firms. By 1990, the government held majority interests in 135 parastatals and minority ownership in another 120[18]. These parastatals became burdensome to the exchequer and absorbed as much as 5.5 percent of Kenya's GDP in subsidies in 1994/95. At the same time, the government embraced import substitution policies through which high tariffs and other import restrictions were used to protect what were perceived as infant industries. An overvalued currency also helped subsidize manufacturing activities at the expense of other important sectors such as agriculture. State corporations propped up by these import-substituting interventions were inefficient, inward looking and burdened by excess capacity. Over the years, rather than contribute to Kenya's development, these state corporations became a drain on the exchequer and objects of privatisation in the 1980s and 1990s. It also turned out that a policy that allowed public servants to engage in business encouraged conflicts of interest, abuse of office and corruption. This state of affairs, where public servants straddle between public offices and private business, still exists and is often blamed for fuelling abuse of public office and deepening corruption.

#### *2.3.3.2 The Property Rights Regime*

For years, Kenyan inventors were forced to apply for patents in the UK before seeking registration in Kenya (Maitha & Kimuyu 1980). This was hard and costly, and a major disincentive to local innovations. It also encouraged the stealing of intellectual property by those with better access to the patenting infrastructure, usually foreigners living in Kenya. In 1989, the government of Kenya enacted an Industrial Property Act that came into force in 1990, and led to the establishment of the Kenya Industrial Property Office. This law was repealed in 2001 and the Kenya Industrial Property Institute (KIPI) was established as a corporate body under the Ministry of Trade and Industry. KIPI administers industrial property rights, including patents, industrial designs, utility models, and trade and service marks. Local innovations have been increasing since the establishment of KIPO and KIPI.

However, mechanisms for enforcing contracts in Kenya are inadequate, and parties to exchange situations do not always use formal mechanisms for resolving business disputes. Courts take long to pass judgements, and such judgements are not always considered objective. Legal fees are also high, and lawyers are subject to manipulations.

[17] It was hard for Asians to obtain Kenyan citizenship, and capital held by non-Kenyan Asians did not qualify for protection under the Foreign Investment Protection Act.
[18] The total share of GDP from these 255 parastatals was 11.6 per cent. See also Bigsten and Kimuyu, (2002).

Parties to dispute situations often choose to use informal mechanisms such as negotiating and threatening, which are inefficient. In the extreme case of failure to reach a resolution, parties are forced to use parallel dispute resolution mechanisms, such as forceful evictions or organised thuggery. Financial institutions cannot always liquidate assets pledged as collateral in debt transactions and although titling of land should normally increase its collateral value, holding of titles in Kenya does not always confer rights of transfer due to the existence of multiple residual claimants and complicated land sale approval procedures[19].

There have been major judicial reforms in the last two years, and more reforms are underway. However, Kenya's judicial system is still rated very poorly because cases take long to settle and verdicts are often not based on facts or evidence. The system is also not predictable, and businesspeople are not always confident that their interests and rights will be protected. Commercial courts do not always assist in settling corporate disputes. Kenyans do not generally abide by the rule of law, and insecurity is rampant. There is a lucrative market for security, and the self-provisioning of security is common among firms and households, but property rights remain contestable.

Although there are institutions for protecting intellectual property, property rights in Kenya are weak, not always enforceable, and limit the extent to which investors can engage in productive activities. These property rights arrangements are an impediment to productivity.

#### *2.3.3.3. Regulatory Structures*

Until the early 1990s, the Kenyan economy was highly regulated and controlled. Administrative controls such as those related to the allocation and use of foreign exchange became common following the balance of payments problems precipitated by the oil price escalations of 1970s and the expansionary policies that followed. Dwindling foreign exchange reserves made the tightening of administrative controls on the economy more necessary. Tariff levels increased, and import licences became more restrictive. The government also introduced highly protective no-objection certificates that allowed importers to ensure that goods that were similar to those they planned to import were not produced in Kenya. Since these moves were also expected to have price effects, price controls were tightened in 1972. Many goods sold in the country were subject to the general price control order that required the price controller to issue administratively determined price ceilings, many of which were pan-territorial. Imposition of price controls on agricultural products served the purpose of protecting the interests of urban constituencies. Those on manufactured consumer products and inputs, many of them agricultural, were meant to protect farmers and consumers in general.

However, administratively determined prices were often out of step with market developments, offered poor reward for entrepreneurship, reduced the incentive to control costs (because the basis for the setting of prices was the costs) discouraged exports[20], and undermined agricultural and industrial production.

[19] These procedures include presentations and decisions by land boards that do not have objective ways of deciding on whether to approve or disapprove land transfer, and which require approval of such transfers by family members related to the titleholders. See also Pinckney and Kimuyu (1994).

[20] This outcome is associated with possibility that Kenyan authorities would demand a lowering of domestic prices for firms exporting at lower than the domestic prices. See also Bigsten and Kimuyu, 2002)

Administrative interventions reduced domestic competition and shifted the structure of incentives against exports. These controls also induced uncertainty since importers could not plan their importation programmes. In cases where the imports related to industrial feedstocks, the controls were a major impediment to manufacturing as there were no guarantees that the Central Bank would favourably consider foreign exchange applications. Administrative interventions not only distorted incentives between imports and exports of manufactures, but led to strong subsidisation of manufacturing at the expense of agriculture and other sectors.

Tariff reforms under structural adjustment began shifting from high protection to policies that would promote the use of local resources and more employment. A flexible exchange rate was also pursued so that real exchange rates were allowed to depreciate in accordance with market developments. There was also a dismantling of the quantitative import restrictions and a freeing of prices. Trade reforms altered the relative prices in the economy against the previously highly protected manufacturing sector. All price controls were abolished in 1994, and the Price Control Act replaced by a Restrictive Trade Practices, Monopolies and Price Control Act. The foreign exchange markets were also liberalised during the early 1990s in a process that began with the introduction of bearer certificates, the licensing of foreign exchange bureaus to allow persons earning foreign currencies to hold accounts for such currencies with commercial banks. The dismantling of controls and the freeing of markets has been a boon to efficiency and productivity.

#### *2.3.3.4 Business Support Institutions*

When the government of Kenya became convinced of the importance of exports in growth and development and embraced trade liberalisation and export promotion programmes, it introduced a wide range of export support interventions. The major examples of these schemes were the bonded warehouse or manufacturing under bond (MUB) schemes, export processing zones (EPZ) and duty and VAT exemption schemes encapsulated in the Export Promotion Programmes Office (EPPO). While the EPZ and MUB schemes targeted new investments, the EPPO targeted existing manufacturers. Except perhaps for the combined effect of the EPZ and the African Growth and Opportunities Act (AGOA) of the United States of America, the export impact of the platforms has been difficult to discern. Recent research has revealed that, between 1993-98, the cumulative share of exports accounted for by the combination of MUB and EPZ amounted to just over 1% of total exports from Kenya. Exporters using the more flexible EPPO duty and VAT exemption programmes contributed 35% of total exports, more than 50% of exports eligible for EPPO, and over 75% of exports of manufactures. Utilisation of the EPPO programme peaked in 1994 when its share of exports was 38% but has since been declining (Glenday and Ndii, 2003). Although the MUB initially showed considerable potential and was especially attractive for contract garment manufacturing targeted at the USA market, the platform suffered when the USA authorities revoked Kenya's quota for pillow cases, shirts and tee shirts on account of the perceived transhipment of Indian garments[21]. Researchers have suggested that the MUB would have suffered a similar fate even without the quota restrictions, due to the appreciation of exchange rates and real wages.

[21] By 1997, only 10 firms survived, out of an initial total of 70 that were operating at the time of the imposition of the quota restriction.

Other business support organisations include the Investment Promotion Centre, a one-stop window into investment opportunities in Kenya, and the Export Promotion Council, which is charged with the responsibility for helping firms based in Kenya to push their products into external markets.

There are also other specialised public organisations catering for the specific needs of different sectors. Included among these are the Horticultural Crops Development Authority, the Capital Markets Authority, the Kenya Dairy Board, Kenya Plant Health Inspectorate Services, the Kenya Sisal Board, the Kenya Sugar Board, the National Irrigation Board, the National Tea Zones Development Authority, the Tea Board of Kenya and the Water Services Regulatory Board. Kenya has also numerous research organisations targeting specific sectors. Examples of these include the Coffee Research Foundation, the Kenya Agricultural Research Institute, the Kenya Forest Research Institute, the Kenya Marine and Fisheries Research Institute, the Kenya Sugar Research Foundation and the Tea Research Foundation.

Kenyan businesses also enjoy support from business associations such as the Kenya Association of Manufacturers, the Federation of Kenya Employers (which runs a productivity promotion unit) and the National Chamber for Commerce and Industry. There are also numerous other business associations defined around specific sectors and helping champion matters of interest to the different sectors. The recently established Kenya Private Sector Alliance (KEPSA), an apex body of all business associations, is tasked with organising a collective private sector effort for lobbying the government so that it can make business-friendly reforms and administrative interventions.

However, the less organised but important small enterprise sector has little voice and is hardly represented in these business associations. Concerns from this burgeoning segment of the business community are not tabled in policy debates, and mechanisms for organising the myriad actors in this segment are lacking. Within the agricultural sector, the smallholder subsector that dominates plantation and large-scale agriculture faces challenges similar to those faced by the small business sector. The cooperative movement played a major role in organising smallholder agricultural production through specific crop cooperatives. However, liberalisation of the agricultural sector destroyed traditional incentives for cooperating, such as opportunities for interlinking produce and credit markets that ensured regular availability of farm inputs through different tiers of the cooperative movement. The establishment of the Cooperative Bank did not solve the problems of financing smallholder agriculture, whose only collateral is crop sales. Smallholders prefer to sell their produce to middlemen, who often pay on a cash basis but have little interest in organising input credit for client farmers. Financing problems reduce the productivity of small businesses and smallholder agriculture.

Overall, there is adequate support for businesses through government platforms and business associations whose combined effect on productivity is likely to be positive.

#### *2.3.3.5 Integration with Regional and World Markets*

Kenya has an open economy that is well integrated into the regional and world markets. It strives to abide by most international trading protocols, such as those associated with General Agreement on Tariffs and Trade (GATT)/World Trade Organisation (WTO). It has taken advantage of opportunities arising from the likes of the AGOA of the United

States of America. The AGOA was signed into law in October 2000, giving duty-free access to the US market to a list of products originating in Africa. In order to qualify, countries had to put into place a set of procedures that were designed to prevent trans-shipment. In January 2001, Kenya became the first African country to meet all of the requirements for registration under the AGOA.

Kenya is also subject to the Multi-Fibre Arrangement (MFA) that came into force in 1974 and regulates trade in manufactured fibres and wool products within the restrictive framework of market disruption. It is a complex institution whose interactions with the General Agreement on Tariffs and Trade (GATT) led to the development of a quota system on clothing and textiles. A call by the developing world to end the MFA led to the Agreement on Textiles and Clothing (ATC) under the Uruguay Round, which provides for a ten-year phasing out of the MFA during which member countries of the WTO would integrate textiles and clothing into the general WTO trading rules. Kenya is also subject to European trading rules, as the European markets are important for the country's horticultural, agricultural and fishery products.

Kenya trades with the EU, the US, and the Africa Region, especially its neighbouring countries. In nearly all cases such trade is governed by bi-lateral or multi-lateral arrangements: the Cotonou Agreement for the EU, the AGOA for the US, and COMESA or the EAC for African trade. The AGOA has already had a significant impact. Through the Export Processing Zone, Kenya is part of the buyer-driven global commodity or value chains for textiles and garments. Some of the products produced in the EPZ are part of a decentralised production network in which chains of large retailers, brand-name merchandisers, and trading companies play a major role in setting up production networks in multiple exporting countries. In this global chain arrangement, fashion-oriented clothing companies do not own any production facilities but instead make their profits by designing fashion garments carrying their labels, produced in the developing world but made to buyers' specifications.

Regionalism has a long history in East Africa, and Kenya has been an active player in that history. The East African countries of Kenya, Uganda and Tanzania have very close cultural, industrial, commercial and historic ties.

There was evidence of integration as early as 1919. Significant epochs in East African regionalism in the pre-independence period include the construction of the East African Railway during 1897-1901, the establishment of customs collection centres in 1900, and the formation of the East African Currency Board and Postal Union. Pre-independence Kenya also took part in the formation of the first Customs Union in 1919, the East African Governors Conference in 1936, and the East African Tax Board and the Joint East African Common Services Organisations Agreement in 1961-66. After the attainment of independence in 1963, Kenya was a signatory to an East African Treaty that established the East African High Commission and the East African Community. This original East African Community had a ten year history during which it began to flounder and was eventually dissolved in 1977, due to differences in the political ideologies followed by the different member countries[22].

[22] Tanzania, which followed a socialist ideology, had major concerns about Kenya's capitalistic tendencies. There was also limited private sector participation, unequal benefits from the community, with Kenya holding the lion's share, and unwillingness by member countries to make sacrifices in support of the community.

A 1997 heads' of state summit launched the first East African Cooperation Development Strategy, which vaunted the roles of market mechanisms, the private sector and civil society in future cooperation. Thereafter, the heads of state signed a treaty re-establishing the East African Community, re-launched in March 2001. At the end of 2004, the community established a common external tariff thereby converting itself to a customs union. The government of Kenya was deeply involved in the negotiations leading to these milestones.

Trade statistics reveal that, although Africa is the most important region for Kenya's exports, the East African region is the most important destination for such exports. Kenya also has strong links within COMESA. Other important regions include Europe, especially Western Europe, and the Far East. In terms of imports, Asia (both Far East and Middle East), is the most important source. Europe is second in importance as a source, especially Western Europe. However, Kenya's trade relations are as far flung as the Americas and Australia[23].

The port city of Mombasa is the entry point for imports destined not only for Kenya but also for other countries in the region, such as Uganda, Rwanda, Burundi and Sudan. The quality of port services at the port city affects economic performance in these countries. The port is therefore part of the nerve system for economies in the region and links the region with the rest of the world. The performance of the port may well determine the level of productivity not only in Kenya but in the region as a whole.

As a former British colony, Kenya has very longstanding trade, educational, cultural and scientific relationships with the United Kingdom and is a member of the Commonwealth. Currently, Kenya is also reputed to contribute the largest proportion of African students registered in colleges and universities in the United States of America. Registration of Kenyan students in foreign countries is a global phenomenon. Due to the presence of a relatively highly skilled labour force, Kenyans find jobs not only in the East African region but also in other regions of the continent. There are, at the moment, Kenyans holding key public positions in Botswana, and Kenyan professionals are found in most countries in Southern Africa. There is also a critical mass of Kenyan students who, encouraged by better opportunities for jobs, are no longer in a hurry to return to Kenya after completing their studies in Western countries. This is posing a major brain drain challenge for Kenya. While the opening up of employment opportunities for Kenyans is good for integration into the global economy, it represents a major human capital leakage that denies Kenya skills that are critical for increasing productivity and overall development.

Foreign owned companies have maintained a presence in Kenya since the pre-independence period, and FDI has been an important instrument for technology transfer. Recent studies (Phillips, Obwona and McMillan, 2000) using a case study methodology based on countries in the region, including Kenya, have confirmed that FDI has a strong impact on domestic investment.

Recently, a few Asian family businesses that started operations in Kenya have gone global. Liberation of trade and other reforms undertaken since the beginning of the 1990s

[23] See also recent issues of Republic of Kenya's Economic Survey. At the time of preparing this report, Kenya was in the middle of getting ready for negotiations under the EU's Economic Partnership Agreements ,which are to shape trade relations between Eastern and Southern Africa and the European Union.

also changed the inward looking strategies, making Kenyan firms better able to participate in external markets. Such participation has a direct link with economic growth as it increases efficiency and productivity.

Overall, Kenya is well integrated into the regional and world markets, and the net productivity effect of such integration is likely to be positive.

#### *2.3.3.6 Invariants*

The equator passes right through the middle of Kenya, so that the country enjoys considerable sunshine, and solar energy is available throughout the year. Kenya also has two rain seasons, a long rain season running from mid-March to June, and a short rain season between mid-October and early December. This means two cropping seasons under rain-fed agriculture. The tropical location means that under irrigation it is possible to produce short season crops many times throughout the year.

The Great Rift Valley runs from the border with Somalia in the North into Tanzania in the South. At the bottom of the valley are lakes such as the dead Magadi, and Lakes Nakuru, Naivasha and Baringo which are full of flamingos. There are also hot springs and geothermal sources in Ol Karia, which is also at the bottom of the valley.

Kenya also borders the Indian Ocean to the east, creating a long coastline with good beaches that are a major attraction for tourists. The coast is also a convenient ocean link with the rest of the world. Kenya has also the second highest mountain in Africa (Mt Kenya) within its borders and shares the highest mountain in Africa (Mt Kilimanjaro) with Tanzania. Although Kenya does not have many rivers, the Tana River that originates on the eastern slopes of the Rift Valley runs eastwards to the Indian Ocean. Most of the country's hydro potential is found along the Tana River. Together with Uganda and Tanzania, Kenya forms the East African region. It shares Lake Victoria, the second largest fresh water lake in the world, with its two East African neighbours. Its land area is a little more that half a million square kilometres, which is slightly larger than Uganda but smaller than Tanzania. Kenya is therefore not short of important invariants. In addition to its long beautiful beaches along the coast, it has a wide variety of wildlife that is popular with tourists.

In summary, the combined effect of geography, location, natural resources, openness and integration to the regional and world economy, has a positive impact on productivity.

### 2.3.4 Competition, Social Dimensions and Environment:

There are outstanding entry barriers in the Kenyan economy, but the economy is highly competitive. Income and asset disparities abound, and concerns about environmental degradation have led to appropriate legislation. There are both negative and positive productivity growth sides to this cluster of determinants, whose net effect can only be empirically determined.

Kenya's economy is reasonably free, and market forces generally determine outcomes. Competition is particularly severe in the micro and small-scale sector where entry and exit are free and margins very low. However, there are outstanding entry barriers in some of the sectors, such as heavy capital requirements in the financial markets, huge lump

capital costs and licensing arrangements in the oil markets, and limited job opportunities and the lack of standard qualifications that have made personal contacts and network-based referral systems more appealing in the labour markets.

Differential reward and accumulation systems, the grabbing of public property, corruption, patronage, group interests, dramatic market failures, and business-related networks generate huge income and asset disparities that fuel social unrest. Gender based division of labour discriminates against women, who not only produce food but also attend to a myriad household chores. This unequal division of labour undermines household productivity and strains intra-household relationships, such strain being particularly acute in the more modern households where both husband and wife are educated enough to hold formal jobs. Inheritance practices also discriminate against women, and few of them hold titles to property. These traditional norms reduce women's access to finance and limit their ability to pursue business ideas. Where women's entrepreneurship is critical for production, inadequate access to finance leads to lower productivity.

Dwindling employment opportunities in rural Kenya, and the concentration of industrial activity and central government administration in urban centres have generated a fast urbanisation rate. Many of the urban immigrants leave families behind in the rural villages to go in search of menial jobs. For such urban workers, urban jobs disrupt their families and lead to a generation of Kenyans brought up by single parents, one parent being away most of the time. Although remittances of urban incomes are used to develop farm lands and procure agricultural inputs, emigration from the villages denies farming communities the inputs of persons with better human capital attributes, reducing the efficiency with which rural activities such as farming are pursued.

Kenya ranks among the 20 most ethnically fragmented countries in the world (Phillips, Obwona & McMillan, 2000). It is also ethnolinguistically fractionalised, with more than 40 different ethnic groups and sub-groups speaking as many tribal languages. Some of the ethnic groups are larger than others, and ethnic politics have tended to shape the leadership structure of the country. Ethnicity has always been a decisive factor in accessing key government appointments and public resources. Often, such appointments would be made on narrow ethnic considerations without regard to the requisite qualifications[24]. Although the boarding school system helped bridge tribal boundaries, national schools are pre-independence phenomena and are few, so that their bridging function has had only a limited effect[25]. Ethnic based appointments and promotions undermine the pursuit of excellence and signal that meritocracy is not important. Rather than show results, beneficiaries of such appointments become preoccupied with fulfilling patronage requirements. Such appointments undermine efficiency and productivity.

Since the introduction of competitive politics at the turn of the 1990s, political parties have evolved along ethnic lines, accentuating ethnic differences that have often culminated in ethnic clashes in regions of the country shared by Kenyans of different ethnic origins. On some occasions, such clashes have precipitated displacements,

[24] For example, it was often possible for a medic to be appointed as chief accounting office in the Ministry of Finance, thus encouraging maldistribution of human resources and undermining the efficiency of the public sector.
[25] These school were important in breaking ethnic barriers and forging interethnic networks.

deepened uncertainty, led to the abandonment of farmlands and reduced agricultural production.

Although Kenya has been generally politically stable, socio-economic uncertainties have played havoc with national time preferences so that Kenyans heavily discount the future. For this reason, there is a general tendency to behave short-term and a preference for quick interventions, even where long-term considerations are more appropriate. This state of affairs means that investment that has a long payback or gestation period is shunned.

It also poses a major impediment for inter-temporal transactions such as those related to credit and insurance. Discounting the future, therefore, heavily undermines investment and productivity.

The management of urban waste, including industrial waste, is poor in Kenya. Traffic snarls in the capital city of Nairobi, and poorly maintained automobiles lead to the release of huge clouds of petrochemical fumes. A poor sewerage system means that industrial sewerage is spewed into rivers and other waterways. For these reasons, most Kenyan cities face acute water and air pollution. Farmlands are also susceptible to soil erosion, and open access to public and communal lands constantly exposes such land to over-exploitation. Land pressure in productive regions of the country has made repeated farming and use of riparian areas inevitable, so that farmlands in such regions are prone to the degradation and destruction of waterways.

Concerns about environmental degradation led to the enactment of a National Environmental Protection Act and the establishment of a National Environmental Management Agency (NEMA) that serves as an environmental watchdog. In accordance with the environmental protection law, all new developers of industrial and commercial projects are required to submit environmental impact assessment (EIA) reports to NEMA before commencing development, while on-going projects are expected to file environmental audit (EA) reports annually. There are very few environmental auditors in Kenya, and preparation of EIA and EA reports is costly. These requirements are not always fulfilled and, when they are, the requirements add to the cost of doing business in the country, undermining efficiency and productivity.

We conclude that this cluster of determinants has both negative and positive influences on productivity growth. Considering the potential prevalence of inequality in Kenya and recent environmental concerns, the net outcome on productivity growth is probably negative.

### 2.3.5 Issues Specific to Kenya

While Kenyans of Asian origin dominate large manufacturing, the public service is dominated by Kenyans of African origin. Asian entrepreneurs engage Africans generally

in non-managerial jobs. This structure means a peculiar relationship between the public and private sectors, and between employees and employers at the firm level. The private sector is fragmented and unable to follow a collective agenda. Relationships between public and private sectors lack mutual trust and, similarly, employee and employer relationships are often short-term. Lack of trust in relationships negatively affects

productivity growth. These factors deserve attention in designing productivity improvement interventions in Kenya.

Kenyans of Asian origin dominate the large business sector. On the other hand, the public service is exclusively African. Attempts to build partnerships between the public and private sectors in such circumstances are often undermined by feelings of mistrust. Asian dominance in large manufacturing poses a major challenge in organising the business community and creating a single voice for lobbying the government. It is also reduces opportunities for building an inclusive society free of uncertainty-inducing racial tensions.

Many Asian entrepreneurs engage Africans but generally in non-managerial jobs. Expensive retrenchment laws and trade unionism create incentives for the shortening of labour contracts. As a result, many industrial workers are progressively made permanent casuals as they are taken on for short spells and laid off to circumvent the requirement that they convert to permanent employment. Uncertainty about their continued stay in Kenya makes short term labour relationships appealing to Asian businesses. Short-term relationships, however, give little room for the impartation of skills, reduce opportunities for specialisation, and encourage a distinction between personal and corporate interests. Such relationships do not promote efficiency and productivity.

As a transitional society, tradition and modernity are interwoven. For example, ownership and use of land is still subject to traditional practices that allow secondary claimants, even when adjudication and titling has already assigned such rights to specific individuals. For this reason, land markets in rural Kenya have failed to evolve in accordance with theoretical expectations.

One outcome of this state of affairs is the presence of dramatic failures in factor markets that constrict opportunities for optimal adjustments in factor proportions. For example, there are many rural households with large tracks of land which nevertheless remain poor because they are unable to rent out part of such land for fear that they might lose it, simply because of the absence of institutional mechanisms for supporting land rentals. On the labour market side, households with poor education levels have tended to drop off the labour market. This phenomenon has been compounded by diminished fortunes from commercialised agriculture and the subsequent erosion of casual jobs in rural Kenya. These types of market failures force households to withdraw into subsistence, low-level production with disastrous consequences for overall agricultural productivity.

Because of the lack of insurance markets accessible to the majority of Kenyans, land ownership is pursued for reasons other than economic. This is compounded by a group of Kenyans that, though presently working and living in the cities, grew up in the villages. For this group, land ownership has always had a special appeal as it reminds them of their youth. It also forces Kenyans with urban jobs to keep straddling between urban and rural Kenya and is the reason for the heavy rural-urban-rural traffic.

On balance, these peculiarities would seem to undermine rather than encourage productivity growth in Kenya.

### 2.3.6 Summary

Kenya is an open country that is well integrated with the regional and international markets. The domestic market is relatively competitive, and outstanding entry and exit barriers are limited to a few specific sectors. There are many institutions supporting businesses, and Kenya has important invariants related to her location and topological specifics. These attributes are supportive of productivity growth.

However, although Kenya has some framework for generating knowledge and has a reasonably well-educated population, brain drain presents a major leakage to the country's capability stock. Corruption, government borrowing, and failures in the factor markets do not permit the efficient allocation of resources. Property rights are generally contestable, and enforcement mechanisms are weak. Kenyans discount the future heavily. These attributes undermine productivity growth.

# III. Policies Affecting Productivity

This section discusses government policies likely to have had an impact on productivity, with a specific focus on the outcomes rather than the stated intentions. An attempt is made to categorise the policies either in a narrow sense, a broad sense or the broadest sense, depending on whether their effect is only on productivity increase, promoting economic performance and general growth, or having goals different from growth. We also identify constraints to productivity growth in Kenya and suggest interventions with potential for overcoming the constraints, and state what UNIDO could do to better assist Kenya in increasing growth of productivity.

## 3.1 Policies That Have Shaped Productivity

### 3.1.1 The import-substitution industrialisation policy

An important policy stance in Kenya's development history was the import-substitution strategy (ISI) that was in place well before independence, initially to encourage the few and scattered industries that catered for the needs of the rather restricted settler community market. The ISI also made possible the production of key commodities in Kenya during the war. Although the colonial masters seemed aware that temporary protection of infant industries would tend to become permanent, the desirability of encouraging debutants in Kenya's industrial sector outweighed the perceived danger of such permanence.

The ISI was deepened by the new independent government, and became a central plank of development policy in Kenya. Such deepening was effected through a combination of tariffs and import quotas, supported by foreign exchange allocations and an over-valued currency. Further deepening of the ISI was realised in the early part of the 1970s through the introduction of No-Objection Certificates that ensured that goods approved for imports were not similar to those produced in Kenya. ISI was seen as the natural course for eventual industrialisation. Foreign investors who resumed interest in Kenya after the dust raised by independence had settled, focused on manufacturing rather than agriculture. Much investment shifted from agriculture to industries in order to exploit import substitution opportunities[26]. Some well established trading houses and service agencies also shifted to manufacturing and, a few years after independence, new foreign investment was flowing into other industries, attracted by opportunities for exploiting the business environment resulting from the ISI strategy. The ISI led to rapid manufacturing expansion during the 1964-70 period when textiles and garments, and food and beverages and tobacco became leading sectors.

However, pursuit of the ISI reduced domestic competition, and shifted incentives in favour of the domestic market and against export production. It also distorted incentives between manufacturing imports and exports, and implicitly played out as a strong subsidy for manufacturing activities at the expense of other sectors. The contribution of domestic manufacturing in the overall domestic supply of goods increased significantly. At the

[26] Foreign investment began to dominate such subsectors as footwear, leather, rubber, petroleum, industrial chemicals, paints, soft drinks, meat products and cement (Gerdin 1997, Bigsten and Kimuyu 2002)

same time, export production shrunk substantially[27]. Estimates suggest that over the 1964-84 period, the increased subsidy going to manufacturing was equivalent to 28% of the increase in agricultural output[28]. This policy stance led to rapid growth in manufacturing in the 1970s, increasing the share of manufacturing in Kenya's modern economy from 8.4% to 13% during that decade[29]. This growth was also accompanied by diversification of manufacturing[30].

By the end of the 1970s, the scope for further import substitution had been exhausted as domestic demand slackened due to deceleration in agricultural production. Foreign demand also slackened following loss of regional markets after the collapse of the East African Community. The inward looking nature of ISI also undermined the competitiveness of Kenyan products in the export markets. Even export platforms and compensation schemes mounted after 1975 could not offset the bias against the export of manufactured goods.

Furthermore, the ISI laid little emphasis on the production of intermediate and capital goods, so that the expansion of manufacturing precipitated a rapid increase in demand for imports of intermediate and capital goods by an increasing group of manufacturers of consumer goods. An over-valued exchange rate made imported capital goods relatively cheap, further reducing the incentive for domestic production. It also discouraged technological adaptation, research and development. By encouraging low or no tariffs on machinery, on the one hand, and high tariffs on engineering raw materials, on the other, the ISI policies encouraged imports of whole plants, undermining the development of suitably skilled manpower.

Since foreign investment often results in technology transfer in the form of new skills and equipment, the rapid inflow of ISI-related foreign investment had a definite productivity-increasing impact, at least in the period immediately after independence. However, because manufacturing activities have strong upstream linkages, the productivity consequences are likely to have spread to other sectors of the economy, such as agriculture and service sectors. The impact of the ISI policy at this stage in Kenya's development was generalised and impacted positively not only on productivity but also economic growth and general development.

However, the ISI policy's self-destructive mechanisms began to show up in terms of excess capacity, the reduced competitiveness of Kenyan products in the regional and other outside markets, and an undermining of agricultural development, which is the domestic primary source of industrial feedstock. This policy also reduced the potential for progression from the production of consumer goods to that of intermediate and capital goods. In the long term, the ISI strategy had a negative impact on productivity in Kenya. Given the strong linkages between manufacturing and the rest of the economy, this undesirable outcome was not just limited to productivity, but must have had growth and development implications as well.

[27] Existing literature suggests that, while the share of domestic production in the total supply of manufacturing increased from 50% to 75%, export production shrunk from 40% of the value of manufacturing in 1964 to a mere 10% in 1984. See also Bigsten and Kimuyu (2002)

[28] Sustainability of this arrangement, where agriculture subsidized manufacturing, was only possible while agriculture grew rapidly but became eroded as soon as agriculture slowed down.

[29] These figures are in constant prices.

[30] The new products that resulted from this expansion included pharmaceuticals, electric cables, plastics, vehicle assembly, industrial gases, paper, batteries and rubber. See Coughlin (1990)

### 3.1.2 The Indigenisation Policy

At independence, the industrial sector was dominated by Asian and European firms. Kenyans of African origin had developed the impression that business was for people unable to get white-collar jobs. Even children born of business families preferred and were encouraged to seek such jobs, and most African talents went into white-collar jobs. Furthermore, most Kenyans have a rural background and farming has always been an important economic activity. Independence widened opportunities for greater involvement of Africans in agricultural production through the organised acquisition of large farms and ranches previously owned by settlers. These were bought by groups of farmers and subdivided into smallholdings, leading to rapid expansion of a smallholder agriculture that was directly under the ownership of Africans.

Smallholder agriculture supported by the introduction of high yielding seed varieties and the application of commercial fertilisers, was more productive than large-scale agriculture, so that agricultural productivity increased rapidly after independence. New seed varieties were the outcome of intensive agricultural research in research stations targeting specific ecological zones.[31]

An opinion that Africans were not benefiting satisfactorily from existing economic opportunities put pressure for further legislation to redress the situation[32]. A Kenyanisation of Personnel Bureau was established to assist in Africanising key positions within the public service and state corporations. Work permits were also used to regulate foreign workers joining the private sector. Policy makers also used licensing to discriminate against non-Africans[33]. This desire to leverage Africans also led to administrative decisions that allowed public servants to engage in business.

Unfortunately, Africanising commerce was only partly successful, as only a small number of local entrepreneurs benefited, mostly through exploiting business ties with the country's leadership, and acquiring multiple directorships and shares in on-going manufacturing operations. Public servants officially straddle between public jobs and business interests. Some of the up-coming African industrialists fell out with the political leadership, and fears of provoking the disaffection of the political leaders encouraged successful local investors to invest in less obtrusive activities.

With the progressive disappearance of formal employment that accompanied rapid population growth, Africans began starting micro and small-scale enterprises using funds borrowed from relatives and friends. This segment of the business sector burgeoned as opportunities for employment progressively disappeared. Most of the small African enterprises are therefore self-employment activities, sustained by the low opportunity cost due to the limited alternatives for gainful employment. When the economy picks up, and

[31] Application of commercial fertilizer was based on recommendations that derived from agronomic research on crop-based productivity responses to the application of different doses of fertilizer during planting and top-dressing after germination. The research findings were popularised through agricultural extension and through simple publications made available throughout the country.

[32] An example of legislation was the Trade Licensing Act of 1967 that excluded non-citizens from certain businesses, and the Immigration Act of 1967 that restricted employment of non-citizens.

[33] To date, licensing acts that were put in place to discriminate in favour of Africans, such as the Trade License Act, are still objects of regulatory reform.

employment opportunities increase, the opportunity cost for self-employment increases and many of the self-employment outfits disappear as their proprietors pick up formal employment. Because of such dynamics, the micro and small-scale segment ends-up being dominated by unproductive business activities.

Other than in agriculture and in the public service, the Africanisation of the business sector did not yield the intended results. Asian investments within manufacturing gathered momentum, despite political hostility and discrimination. Recent studies have shown that Asians own the majority of medium and large enterprises and share ownership of very large enterprises with multinationals. Africans, on the other hand, dominate the micro and small-scale enterprises. In addition to not realising its objectives, the broad Africanisation policy encouraged abuse of office, fuelling corruption and undermining public sector productivity and service delivery. The negative impact of this policy was generalised. However, failure to address disparities in economic opportunities means that, other than in agriculture, where Africans dominate and where rapid expansion of smallholder production supported by the introduction of high breed seeds and chemical fertilisers led to increased productivity, the concerns that were to be addressed through Africanisation remain[34]. Furthermore, concerns about racial disparities often accentuate uncertainty, cause non-African Kenyans to be less enthusiastic about investing in the replacement of old equipment, and undermine productivity.

### 3.1.3: Structural Adjustment Policies

There was a realisation at the turn of the 1980s that import substitution was no longer a good development strategy. Some of the distortions that this strategy had generated, such as reduced competitiveness, were also evident. There was also concern about unacceptably low levels of capacity utilisation within industry, so the focus began shifting from protection to efficiency. This was the context in which structural adjustment was introduced in Kenya to address structural concerns and restore macroeconomic balance. The rest of this sub-section is devoted to a discussion of different reforms under structural adjustment.

#### *3.1.3.1 Price decontrols*

Price controls introduced in the 1970s were found to have removed the incentive to control costs that were the basis for setting prices. They also discouraged exports since the price controller's department had the authority to order a lowering of domestic prices if a firm was exporting at a price lower than domestic ones. Price controls were holding back investments and were not helpful in protecting Kenyan consumers. They were therefore abolished in 1994. This abolition made possible the efficient allocation of resources and products, and deepened the role of markets. Because the price controls were generalised, we conclude that their removal had economy-wide implications.

#### *3.1.3.2 Tariff Adjustments*

It was necessary to adjust the tariff rates in order to dismantle high protection that was part of import substitution so as to allow greater use of local resources and permit

[34] Even for smallholder agriculture, the scope for productivity increases seems to have been exhausted through extensive land subdivision, the increased cost of agricultural inputs, and volatile producer prices that tended to reduce gross margins. (not clear whether the meaning requires a comma after 'inputs'.)

competition. Tariff adjustments were also important in encouraging exports and became key instruments of trade policy in Kenya.

Under this intervention, tariff rates were significantly reduced so that by 1996/97, the top tariff rate had been reduced from 170% to 35%. These tariff adjustments fuelled economy-wide changes in relative prices. In particular, the previously highly protected manufacturing sector bore the brunt of reductions in relative prices. Tariff adjustments also increased competition in the domestic market and promoted efficiency[35]. Although inefficient businesses fell by the wayside, the removal of protection was a boon for productivity and growth.

#### *3.1.3.3 Reform of State Corporations*

During 1986-90, the parastatal sector accounted for 16% of Kenya's gross fixed capital formation. The government of Kenya held majority interests in 135 corporations and minority ownership in another 120. The state corporations' share of GDP was 11.6%, and manufacturing was their largest single activity. Unfortunately, the state corporations were always bailed out of financial distress, and indirect subsidies were estimated at 5.5% of the country's GDP in 1994/95. For these reasons, an important plank of the structural adjustment became a parastatal reform programme to privatise state corporations. Privatisation initially proceeded without a clear policy and has been continuing for some time. The results have been mixed. Kenya Airways is often given as an example of the productivity and efficiency benefits of privatisation, but other state corporations that were privatised have not performed as well. The government is still holding on to what it considers strategic corporations, and the parastatal reform programme has been implemented half-heartedly and opportunistically, without a proper legal backing. Only recently, a draft Privatisation Bill was prepared for consideration by the parliament. This bill will put privatisation on a better legal footing. Considering that state corporations are found in all sectors of the economy, the reform has economy-wide productivity implications.

#### *3.1.3.4 Cost Sharing in Education and Health*

One central plank of structural adjustment was the introduction of cost recovery measures that were meant to improve the quality of outcomes in the social sector. The government found it progressively more difficult to expand and maintain health and school facilities from public funds. There was already an increasing level of partnership between the state, parents, local communities and private enterprise in the provision of these services. A policy of cost sharing in health and education was introduced during the later 1980s on a progressive basis[36]. Under this policy, part of the burden for supplying these services was to be shared between the government and households.

Unfortunately, this policy had very significant negative effects on access to, and the quality of, these social services. On education, a combination of cost sharing and increased poverty undermined school enrolment and increased drop out rates and wastage in the system. On health, the number of Kenyans able to access quality health services fell. A system of waivers, exemptions and bursaries that was meant to shield poor

[35] Studies done immediately after the trade reforms revealed that, other than the textile and garments sector that was under the stranglehold of imported second hand and uncustomed clothes, the other sectors were showing improvements in efficiency and productivity.

[36] In the school system, cost sharing was first introduced in primary schools in 1988 and later in secondary and university education.

Kenyans against the negative consequences of cost sharing was poorly administered and abused, so that the beneficiaries of these waivers and exemptions were not always the most deserving. The quality of the social services was also compromised since allocations from the exchequer assumed unrealistic levels of collections from the cost sharing programmes. These structural-adjustment-related policies had damaging effects on human capital development, and reduced the capacity for productivity growth.

### 3.1.4 Export Promotion Interventions

When it became obvious that the ISI was at a dead end, the government of Kenya not only dismantled the tariff and quantitative restrictions on which import substitution was based but also introduced a number of export platforms for promoting exports. Customs and excise legislation in Kenya always made provision for drawing back the import duty content of manufactured exports. These provisions were, however, never fully utilised, partly due to demanding administrative requirements for establishing the duty drawback programme. For this reason, an alternative programme that provided for a flat rate compensation for selected manufactured goods, the Export Compensation Scheme, was introduced in 1974. Its main attraction was administrative simplicity since exporters of eligible goods claimed export compensation on the basis of the value of exports at the published applicable rates[37]. However, its simplicity became the programme's major focus of criticism. It also suffered from delays in the processing of claims, under-funding, and blurred eligibility criteria that led to occasional abuse[38]. There were incidences of over-compensation, and the programme benefited only a few large firms. Because its simple *ad valorem* payment structure failed to take into account the direct compensation and import duties paid on inputs that were incorporated in exports, it fell into the class of subsidies that were prohibited and were candidates for countervailing by importing countries under the WTO/GATT rules. Because of these problems, the scheme was discontinued in 1993 after two decades of operation[39].

#### *Manufacturing Under Bond*

Manufacturing-under-bond (MUB) was established under structural adjustment. It had two major provisions. First, bonded factories were allowed duty-free importation of plant and equipment, spares and raw materials for the manufacture of export goods. Second, the scheme included other investment incentives through favourable income tax treatment of capital expenditure, and imports by MUBs and their purchases of domestic inputs were zero rated for purposes of value added tax introduced in 1990[40]. The special MUB incentives were limited to new factories. However, this was later relaxed to allow bonded manufacturers the choice to locate in rented facilities while still enjoying 100% write off on purchases of machinery and equipment.

The management of the MUBs requires the customs department to physically verify inventories of imported raw materials, manufactured products, waste and scrap metal.

[37] These rates were typically set between 10 and 20 percent. Eligible goods included manufactured goods with a high domestic value addition and were defined to exclude natural resources and agricultural produce. See also Glenday and Ndii (2004).

[38] It was this platform that created an avenue for the now infamous Goldberg scheme through which the exchequer was ripped off to the tune of billions of shillings as compensation for fake gold exports.

[39] The specific legislation was the Local Manufacturer (Export Compensation) Act of 1974. This scheme was therefore the forerunner to other export platforms mounted under structure adjustment.

[40] MUB plant and equipment qualify for 100 percent write off against taxable profits in the year they are put into use. This is in comparison with other enterprises that are offered tax breaks on investment.

There are no restrictions on location as the customs department provides officers for factory inspections at desired locations. The scheme also allows green channel procedures for fast tracking import licensing and reduces delays in obtaining foreign exchange for imports of raw materials. The MUB platform was reasonably attractive to exporters in the 1990s during the period of low real wages and a weak shilling. It has been argued that these conditions allowed contract manufacturing to be more competitive internationally, especially for clothing and household textiles[41].

Recent research, however, reveals a very low level of utilisation of this export platform, and it appears to have become redundant after liberalisation of the foreign exchange markets during the early 1990s.[42] The MUB programme suffered a setback following appreciation of the wage rate and exchange rate so that by 1997 only 10 of the bonded manufacturers were still operating, the rest having closed down (Glanday and Ndii, 2003).

### *Export Processing Zones*

A further export promoting facility was the Export Processing Zones (EPZ), established through the Export Processing Zones Act passed in 1990. The EPZs are gazetted as special corporations allowed to do business only in designated locations. Such locations could be either a single factory or units in an EPZ industrial park licensed and supervised by an EPZ Authority.

Although the primary target was new foreign direct investment, the act allowed Kenyan companies to establish EPZ subsidiaries, subject to the condition that such subsidiaries could not do part of their business inside an EPZ and part outside[43].

The EPZ is an incentive package that includes a corporate tax holiday for an initial period of 10 years, a guarantee that the tax rate will not exceed 25% for the subsequent 10 years, and a VAT and duty waiver on imports of equipment and raw materials[44]. For the purpose of duty and VAT, an EPZ firm is considered outside customs territory. There are no limits on the volume of sales to the domestic market, but such sales are regarded as imports that attract regular duties and taxes[45]. The EPZs are also exempt from foreign exchange controls and enjoy expedited licensing at reduced fees. They are also exempt from rent and tenancy controls, but are subject to all labour laws.

By 1997, there were 11 gazetted industrial park EPZs and five single enterprise EPZs. There were also 5 developed parks with a combined capacity of 70 godowns but only 22 operational enterprises. All except one park are privately owned. The government owned park is the largest and is managed by the EPZ Authority[46]. Like the MUB scheme, the exchange rate and wage conditions were more supportive of exports before 1993. A further major attraction of the EPZs prior to the liberalisation of the foreign exchange

[41] The peak was in 1993 when there were more than 70 bonded manufacturers, many of them producing cotton garments for the US market.
[42] This was especially helpful before liberalisation of the foreign exchange markets in the early 1990s.
[43] There were also specific tax provisions that prohibited tax straddling between EPZ subsidiaries and parent domestic companies through such mechanisms as transfer pricing.
[44] At the time, the company tax rate was 42.5%. Exceptions to the VAT and duty waiver were vehicles and vehicle parts, except where these were used exclusively in the zones.
[45] In order to control potential abuse of the unlimited access to the domestic market, a provision was made for an optional additional 5% duty on domestic sales.
[46] This 340-hectares site located in Athi River, a small industrial town 25 kilometres South of Nairobi, was funded by the World Bank.

market in 1993-94 was the freedom given to them to operate in foreign exchange, as such foreign exchange enjoyed a market premium. This was lost after the liberalisation of foreign exchange markets. Although dominated by garment manufacturers, the EPZs include other activities such as pharmaceuticals, agro-processing, paper and printing, automotive engineering, software development and computer assembly. By 1997, 12 of the 22 EPZ enterprises were fully foreign owned and another two had a nominal 1% domestic shareholding so that majority shareholding was foreign. Only four of these firms were 100% domestically owned[47].

The contribution of the EPZ to export and employment has been assessed as below expectation. Exports from the EPZs accounted for only 3.5% of total manufactured exports (Glanday and Ndii 2003). In the 1993-97 period, the EPZ originating exports grew at an average annual rate of 25%. The overall average growth rate for all manufactured exports was 22%. Employment in the EPZ accounted for barely 1% of total manufacturing employment. The EPZ employment rate was a half that of total employment[48]. Imports of raw material averaged 64% of turnover during 1993-97.

Evidently, there has been poor investor response to the EPZ programme, which appears to have resulted from ineligibility of the EPZ firms for preferential treatment in the important regional market, infrastructure deficiencies, and an unreliable water and power supply[49]. However, given the importance of exports in productivity enhancement, the EPZ has had productivity benefits. These are, however, restricted to firms benefiting from the platform and are therefore not generalised.

### *Duty and VAT Exemption Schemes*

A further platform was introduced in 1990, becoming operational in 1993. Its primary objective was to offer export incentives to manufacturers serving the domestic market. The programme is designed to offer duty and VAT exemptions to imported inputs that are incorporated in the exported products or consumed in the production of exports, and is administered by the Export Promotion Programme Office (EPPO) in the Ministry of Finance.

Initially, businesses with confirmed export orders or those with export track records could apply for duty free imports, submitting input-output ratios to support their applications. The requirement is that such firms reconcile duty-exempt imports with goods produced and exported. Exemptions are given against a performance bond to the value of duties exempted, which is cancelled upon verification and reconciliation of reports. Over time, the programme has been enhanced to improve effectiveness. In order to remove bias against domestic inputs and strengthen backward linkages, indirect exporters are also allowed, under this programme, to apply for duty exemptions on imports used to produce inputs for direct exporters[50].

[47] The UK is a dominant source of EPZ foreign investment and accounted for 60% of the total EPZ investment during 1993-98.
[48] The computation of this rate excludes 1994 when employment in the EPZ grew at a phenomenal rate of 65%.
[49] A 1997 survey of manufacturing firms estimated that firms lost 4.6% of their annual turnover due to frequent power and water outages.
[50] There is provision for these backward linkages going back two stages of production. An example given in Glanday and Ndii (2003) is that of a manufacturer of paperboards who can get import exemptions for imported inputs to make boards supplied to a packaging converter who supplies packaging to an exporter.

During 1993-97, firms utilizing the EPPO programme accounted for more than a third of the total merchandise exports, while processed goods accounted for 53% of total exports. Direct exporters using the programme utilised it for 60-70 percent of their exports. The EPPO reached a plateau in 1994, and activity declined in 1998. After 1994, the duty rate on many intermediate and other raw materials dropped from about 25% to either 15% or lower, lowering the net gain from participating in the scheme. Utilisation of the EPPO is heavily concentrated among large exporters, the top 10 exporters who use the scheme accounting for 50%[51]. The direct exporters cover the entire spectrum of exports from Kenya, so that the programme's impact is generalised. In the 1993-98 period, more than 50% of exports by firms using the EPPO were directed to the COMESA group of countries.

### 3.1.5 More Recent Policy Thrusts

The election of a new government in December 2002 gave impetus to the need to review and recast development policies in Kenya. The new policy thrust is stipulated in the Economic Recovery Strategy (ERS) for Wealth Creation and Employment (Kenya, 2003), the current government's blue print for development. The main pre-occupation of the new government is the creation of additional jobs and the reduction of poverty. The blueprint includes a statement on the fiscal and monetary policy, financial sector reforms, reforms meant to improve public safety, law and order, policies for agricultural and rural development, and interventions for promoting trade, tourism and industry. There are also policies for addressing infrastructure needs, including ICT, and problems in education and health.

The ERS has spawned many other policies, such as the National Export Development Strategy, whose action plan is still underway, renewed impetus on the Millennium Development Goals, policies on micro and small enterprises, and public sector reforms. Of particular interest in the public sector reforms is the introduction of performance contracting that was piloted on some state corporations and rolled out across the entire public sector. More recently, the government has released an investment climate action plan (ICAP), the forerunner to a private sector development strategy intended to make the private sector the engine of growth in Kenya. However, other than an increase in primary school enrolment rates, given a kick-start by a policy of free primary education, it is probably too soon to assess the effects of other policies either stipulated or spawned by the ERS.

In summary, there is no evidence of policies specifically targeting productivity growth. Many of the policies pursued in Kenya have been broad brush in nature, so that their implication on productivity is only implicit.

## 3.2. Constraints to Productivity Growth and Required Interventions

This section discusses government policies likely to have had an impact on productivity, with a specific focus on the outcomes rather than the stated intentions. We will attempt to categorise the policies either in a narrow sense, a broad sense or the broadest sense,

[51] The top 20 firms accounted for 60-70% of the exports by direct exporters.

depending on whether their effect was only on productivity increase, promoting economic performance and general growth or had goals different from growth. We will also identify constraints to productivity growth in Kenya and suggest interventions with potential for overcoming the constraints, and state what UNIDO could do to better assist Kenya in increasing growth of productivity. This is done in the context of the specific clusters of determinants.

### 3.2.1 Creation, Transmission and Absorption of Knowledge

There is very limited use of foreign technology licences and very little R&D. School enrolment has also been declining, as have educational standards.

There is no evidence of a link between institutions of higher learning and industry, and the country's stock of capital is largely outdated. There is also very limited public interest in technical education, even though such education is more relevant in the labour market and is a useful instrument for narrowing the gap between demand for and supply of labour.

To address these shortcomings, the government is determined to attract investment in general and FDI in particular to promote the use of foreign technology. It has somewhat increased the research component of the national budget, but much more remains to be done. The introduction of performance contracting in educational institutions, including in public universities, and free primary education, are other government interventions relevant to the creation, dissemination and use of technical knowledge. In addition to these interventions, the creation of tax incentives on R&D expenditure, putting in place mechanisms for monitoring progress in the implementation and quality implications of the free primary education, and continually monitoring outcomes of the existing educational institutions, are necessary. There is also development value in creating sustainable links between institutions of higher learning and industry, and ensuring that firms willing and able to replace or upgrade old equipment can do so. For this cluster of constraints, UNIDO can assist in the design and implementation of university-industry link projects, bringing in the best practices gathered across the globe. This will complement the recently introduced Technical, Industrial, Vocational Education and Training (TIVET) Programme, a joint effort between the Ministries of Education, Science and Technology (MOEST) and Labour and Human Resources Development (MOL&HRD). This can be done initially on a pilot basis before rolling it out. Such a programme is of high priority, as it would lead to greater use of more modern, more appropriate technology.

### 3.2.2 Factor Supply and Allocation

Kenya has very poor roads, water, telecommunication and electrical and railway services. There has been a very heavy reliance on hydroelectricity, precipitating shortages during seasons of poor rainfall. The national teledensity is very low, and congestion and delays at the port city of Mombasa are common. There is also a mismatch between the costs and productivity of labour, and poor access to debt markets, especially by small operators. The government is developing service charters for concessioning the development of main roads and extending the privatization programme to include the railway and water services. It is also issuing performance contracts for the state corporations, including the Kenya Ports Authority and the Kenya Power and Lighting Company. There are also plans

to increase the use of independent power producers, tap the Southern Africa power pool, and liberalize the telecommunications market. The government is also aligning minimum wages to labour productivity, and there are plans to enact a micro finance bill.

In spite of these planned interventions, factor supply and allocation in Kenya can be further improved by allowing self-providers of electricity to off-load excess power to the national grid, develop mechanisms for attracting private investment in the construction not only of large roads but also of minor roads, and increase fiscal incentives for the use of solar and wind energy. Further productivity gains can be achieved by exploring ways of increasing labour productivity, improving mechanisms for enforcing property rights, introducing more credit rating institutions, and improving the management of savings and credit organizations. For this cluster of interventions, UNIDO could support the government in the identification and removal of constraints to the adoption and use of wind and solar energy. It could also help in the development of a work programme for the National Productivity Centre, which has only recently had staff assigned to it. Prior to the development of the work programme, UNIDO could assist staff at the centre make 'green visits' to similar centres considered best examples of their kind, and provide technical assistance crafted to building local capacity through a counterpart arrangement. Such assistance is of high priority as it would support the government of Kenya in pursuing an activity about which the right decisions have already been made.

### 3.2.3. Institutions, Integration and Invariants

The constraints identified in this cluster of determinants of productivity include inadequate mechanisms for enforcing contracts, inadequate access to justice, weak and difficult to enforce property rights, the weak capacity of business organizations to lobby government for reforms, and limited exploitation of the geographical dividend. It also includes poor coordination of the micro, small and medium scale enterprises. Presently, broad-based legal and judicial reforms are under way. The Kenya National Chamber for Commerce and Industry (KNNCI) is poorly governed and has only a limited capacity to lobby government on policy reforms and organize productivity-related programmes for Kenya's business community. Further interventions would include an improvement in the rule of law, refinement of the property rights regimes, and a tightening of the system of enforcing property rights. It will also be necessary to strengthen the capacity of the Kenya Private Sector Alliance, the apex private sector organization, and develop a framework for coordinating the burgeoning pool of micro, small and medium scale enterprises and giving them a policy voice. Further productivity gains can be achieved by designing and implementing a master plan for increasing the density of activities along Kenya's coastline. UNIDO can help in encouraging coordination of the micro, small and medium scale enterprises, for example, by mounting capacity building programmes and providing some technical assistance to the KNCCI. It could also assist in the development of an investment master plan for the port city of Mombasa and Kenya's long coastline, in order to permit exploitation of this significant geographical advantage. These interventions are of low to moderate priority.

### 3.2.4. Competition, Social Dimension, the Environment and Other Issues

Significant constraints within this cluster of productivity determinants include depletion of rural workers with better skills through the process of urbanization, bottlenecks in attempts to address environmental concerns through environmental audits and

environmental impact assessment reports, and dramatic failures in the land and labour markets. In addressing these constraints, the government has policies for increasing the pace of agricultural and rural transformation, and for increasing the pace of adjudication and titling of land. Further interventions should seek to encourage the growth of rural industrial clusters to stem the flow of Kenyans to urban areas, encourage the National Environment Management Authority to rationalize the filing of the environmental audits, and improve the rules of game necessary for encouraging the development of rental markets for land. For its part, UNIDO can help the government of Kenya to design and implement a master plan for rural industrialization, building on the sessional paper on industrial transformation up to the year 2020. UNIDO could also investigate constraints facing rural rental markets for land, and use the findings to recommend appropriate interventions for getting a start to these markets. Such an intervention is deemed to be of medium to high priority.

These constraints to productivity, together with ongoing policy interventions, and UNIDO's possible future role in ensuring appropriate outcomes are summarized in Table 6 below.

**Table 6: Matrix of Constraints to Productivity, and Possible Interventions**

| Cluster of productivity determinants. | Constraints relevant to policy | Current government interventions | Further necessary interventions | Possible interventions by UNIDO |
|---|---|---|---|---|
| Creation, transmission, and absorption of knowledge | Very limited use of foreign technology licenses | Attracting investment in general and FDI in particular | | |
| | No R&D in Kenya | Increasing research budget | Create tax incentives for R&D expenditures | |
| | Declining school enrolment | Introduction of free primary education | Put in place mechanisms for monitoring progress in implementation, and quality implications | |
| | Declining educational standards | Performance contracts for public educational institutions | Continually monitor outcomes of educational institutions | |
| | Limited link between public universities and industry | Performance contracts for all public universities | Create sustainable links between universities and industry | Assist in the design of, and implement a pilot university-industry link project |
| | Capital stock largely outdated | | Ensure that firms that are willing and able to replace equipment, are able so to do | |
| | Little public interest in technical education | | Revitalize village polytechnics | Carry out a survey of what works and what does not work, and use the findings to recommend revitalization of technical training |
| Factor supply and allocation | Poor state of roads | Service charter for concessioning main roads developed | Develop service charter for attracting investments in minor roads | |
| | Poor railway services | Preparation of Kenya Railways for privatization | | |
| | Congestion and delays at the Port city of Mombasa | Issuance of performance contract for Kenya Ports Authority | | |
| | Very low teledensity and need to improve delivery of telecommunications | Privatizing Telcom Kenya<br>Continuing to liberalize the telecommunications market | | |

| | | | | |
|---|---|---|---|---|
| | Poor water and electricity services leading to expensive self-provision | Issuance of performance contracts for Kenya Power and Lighting Co Ltd.<br><br>Privatization of water services | Allow self-providers to offload excess electricity in the local grid | |
| | Heavy reliance on hydro leading to shortages during poor rainfall | Increasing use of independent power producers,<br>Exploring possibilities of tapping on the Southern African power pool | Increase fiscal incentives for use of solar and wind energy | Support the ministry of energy in identifying and removing other constraint to the adoption of wind and solar energy |
| | Mismatch between the cost and productivity of labour | Rationalizing minimum wage guidelines to align minimum wages with market developments | Explore ways of increasing the productivity of labour | Help government of Kenya develop a work programme for the National Productivity Centre |
| | Costly financial markets | Reducing domestic borrowing to reduce pressure on interest rates | Improve mechanisms for enforcement of property rights<br>Introduce credit rating institutions | |
| | Poor access to debt market by small operators | Preparing a micro-finance bill | Improve the management of savings and credit organizations | |
| Institutions, integration and invariants | Inadequate mechanisms for enforcing contracts<br>Access to justice costly<br>Weak, difficult-to-enforce property rights | Carrying out judicial reforms | Improve rule of law<br>Refine property rights regimes<br>Tighten system of enforcing property rights | |
| | Weak capacity of business organizations to lobby government for appropriate reforms | | Strengthen the capacity of KEPSA, the apex private sector body<br>Develop a framework for coordinating the myriad micro, small and medium scale enterprises | Design a programme for coordinating MSMEs with appropriate incentives for across the board participation |

| | | | | |
|---|---|---|---|---|
| | Limited exploitation of nature's dividend to Kenya | An active tourism attraction programme | Increase the density of activities in the port of Mombasa and its environs | Coordinate the development of an investment master plan for Mombasa |
| Competition, social dimensions and environment | Depletion of workers with better skills from rural Kenya | Increasing the pace of agricultural and rural development | Promote rural enterprises to stem flow of Kenyans to urban areas | Create and execute a rural enterprise programme focusing on manufacturing activities |
| | Attempts to address environmental concerns precipitate bottleneck and increase the cost of doing business in Kenya | | The National Environmental Management Authority to be encouraged to rationalize filing of Environmental Audits | |
| Other issues | Dramatic failures in land and labour markets | Progressive adjudication and titling of land | Improve the rules of game for encouraging development of rental market for land | Initiate a study on constraints to rental markets for land and use recommendations to improve prospects for evolution of such markets |

## IV. Closing remarks

Total factor productivity and average labour productivity in Kenya show a declining trend in the last four decades. The GDP also tracks this declining trend. In 1961, labour productivity in Kenya was less than 5% of that in the USA. Forty years later, this relative labour productivity is even lower: less than 4% of that in the USA. In other words the decline in Kenya's labour productivity is both absolute and relative.

There are major productivity problems related to the creation, transmission and absorption of knowledge. Although Kenya has a well-educated population, the quality of the education does not match the skills needed in the domestic labour market. Very little research and development takes place in Kenya and, although there are key technology relevant institutions, these are either not properly linked with industry or are under-funded. Other problems are associated with factor supply and allocation. Factor misallocation results from a mismatch between supply and demand for skills, poor property rights, heavy transactions costs, and corruption.

Whereas Kenya is fully integrated into regional and international markets, and although the country benefits from its invariants, its institutions are weak and unable to support growth in productivity. Property rights are neither clearly defined nor always enforceable. Ethnic fragmentation and socio-economic disparities pose a major productivity challenge.

Kenya has pursued many policies that have shaped productivity. The most important of these were the ISI and structural adjustment programme. The poor productivity performance suggests that more interventions are desirable. Specifically, additional policies should encourage R&D and create sustainable links between industry and institutions of higher learning. Further interventions can be tailored towards assisting the National Productivity Centre to develop a work programme, coordinating micro and small scale enterprises, developing a master plan for increasing the intensity of industrial/commercial activity along the Kenyan coastline, and developing and implementing a master plan for rural industrialization to arrest the flow of talent to urban centres.

## Bibliography

Ajaya K, A.Bigsten, C. Blattman, l. Cotton, I. Elbadawi, P. Kimuyu, J.M Machart, R. Ngugi, V. Ramachandran, M.E Shah, M.Soderbom, 2004. *Enhancing Competitiveness in Kenya's Manufacturing Sector: The Role of the Investment Climate.* World Bank, KIPPRA and Oxford University.

Abagi O. 1997. A Status Report of the Education System in Kenya: Indicators for Planning and Policy Formulation. An IPAR Special Report, Nairobi.

Bevan D, P. Collier and J.W Gunning.1989. *Peasants and Governments: An Economic Analysis* Oxford Claredon Press.

Coughlin Peter 1991. 'Industrial Development, Technological Change and Institutional Organisation: The Kenyan Case' in Anyang' Nyong'o P and P. Coughlin (edts). *Industrialisation at Bay: African Experience.* Nairobi, Academy Science Publishers.

Gerdin Anders 1997. On Productivity and Growth in Kenya, 1964-94. Unpublished PhD Dissertation, Economics Department, University of Gothenburg.

Glanday G and D. Ndii. 2004. 'Export Platforms in Kenya' in Kimenyi MS, J.M Mbaku and N.Mwaniki (edts) *Restarting and sustaining Economic Growth in Kenya: The Case of Kenya*. Aldershot-UK, Ashgate Publishing Limited.

Ikiara G.K and Z.O.Aura. 2001. 'Industrialisation and Development: The Kenyan Experience' Samanta P.C and R.K Sen (edts) *Realising Africa's Development: A Millenial Analysis.* Kolkata, Centre for Indo-African Development Studies and International Institute for Development Studies

Ikiara G.K. 1988. ' The Role of Government Institutions in Kenya's Industrialisation' in Coughlin P and G.K Ikiara (edts) *Industrialisation in Kenya: In Search of a Strategy.* Nairobi and London, Heinemann and James Currey.

Kayizzi-Mugerwa S and P. Kimuyu 2002. 'Infrastructure and Enterprise Performance' in Bigsten A and P Kimuyu (edts) *The Structure and Performance of Manufacturing in Kenya.* Basingstoke and New York, Palgrave.

Kenya Association of Manufacturers, (1988). *Price Controls: Experiences and Opportunities in Kenya's Manufacturing*. Nairobi, The English Press.

Kimuyu Peter.2004. 'Corruption, Firm Growth and Export Propensity in Kenya'. Submitted to the *International Journal of Social Economics.*

Maitha J.K and P.Kimuyu, 1980.' Technological Development and Patents: the Less Developed Countries' Case' in Khamala (Edt) *Science and Technology for Development Nairobi,* Kenya National Academy for Advancement of Arts and Sciences.

McCormick Dorothy, Peter Kimuyu and Mary Kinyanjui 2004. Textile and Garment Firms: Playing Globally Despite Local Struggles. Policy Briefs, Institute of Development Studies, University of Nairobi.

Njeru E and J.Orodho. 2003. Access and Participation in Secondary School Education in Kenya: Emerging Issues and Policy Implications. Discussion Paper number DP/037/03. Nairobi Institute of Policy Analysis and Research.

Phillips L.C; M.Obwona and M.McMillan, 2002. *Foreign and Local Investment in East Africa: Interactions and Policy Implications.* EAGER Discussion Paper Number 67

Republic of Kenya 2003. *Economic Recovery Strategy for Wealth and Employment Creation.* Nairobi, Government Printer.

Republic of Kenya 2004. Economic Survey. Nairobi, Government Printer.

World Bank 2004. 'Growth and Competitiveness in Kenya. Draft' Africa Region, Private Sector Division.

## Annex: Kenyan Productivity Performance Data

| Year | DY | DKL | DLP | DTFP | DEFFCH | TECHCH |
|---|---|---|---|---|---|---|
| 1962 | 10.20 | -9.00 | 7.19 | 9.9 | 6.5 | 3.1 |
| 1963 | 5.66 | -6.85 | 2.49 | 4.4 | 3.2 | 1.1 |
| 1964 | 6.42 | -8.94 | 3.62 | 5.9 | 6.4 | -0.5 |
| 1965 | 2.83 | -8.68 | -0.17 | 2.8 | 7.8 | -4.7 |
| 1966 | 12.45 | -1.10 | 9.39 | 10.4 | 13.6 | -2.8 |
| 1967 | 2.71 | 0.08 | -0.28 | -0.3 | 1.1 | -1.4 |
| 1968 | 0.68 | 9.26 | -2.35 | -8.6 | -3.2 | -5.6 |
| 1969 | 7.99 | 7.30 | 4.85 | -0.5 | 2.8 | -3.2 |
| 1970 | -8.94 | 14.82 | -11.51 | -20.6 | -15.5 | -6.0 |
| 1971 | 27.42 | 11.14 | 23.35 | 13.5 | 25.0 | -9.2 |
| 1972 | 16.34 | 5.57 | 12.62 | 8.3 | 10.0 | -1.6 |
| 1973 | 1.98 | 8.26 | -1.09 | -6.5 | -7.4 | 1.0 |
| 1974 | 7.78 | 4.60 | 4.43 | 0.9 | -6.7 | 8.2 |
| 1975 | 1.65 | -3.82 | -1.78 | 1.3 | 14.9 | -11.9 |
| 1976 | -0.13 | -2.51 | -3.23 | -1.4 | 15.8 | -14.8 |
| 1977 | 7.17 | 2.64 | 3.55 | 1.5 | -5.1 | 6.9 |
| 1978 | 6.37 | 5.53 | 2.88 | -0.7 | 12.0 | -11.4 |
| 1979 | 11.96 | -4.95 | 8.28 | 11.1 | 14.6 | -3.1 |
| 1980 | 3.35 | -1.09 | -0.62 | -0.1 | 3.6 | -3.6 |
| 1981 | 2.65 | -0.75 | 0.44 | 0.8 | 0.5 | 0.2 |
| 1982 | 2.94 | -4.97 | 0.53 | 2.5 | 1.7 | 0.8 |
| 1983 | 0.44 | -6.73 | -1.72 | 0.9 | 3.0 | -2.1 |
| 1984 | 3.21 | -5.78 | 1.19 | 3.7 | 2.3 | 1.3 |
| 1985 | 1.30 | -0.07 | -0.88 | -0.9 | -4.3 | 3.6 |
| 1986 | 10.97 | -4.09 | 8.58 | 10.8 | 20.3 | -7.9 |
| 1987 | 5.23 | -2.04 | 2.76 | 3.9 | 0.0 | 4.0 |
| 1988 | 7.32 | -3.12 | 4.60 | 6.5 | 4.5 | 1.9 |
| 1989 | 4.55 | 0.92 | 1.71 | 1.1 | 9.0 | -7.2 |
| 1990 | 5.07 | -2.59 | 2.01 | 3.9 | 11.8 | -7.1 |
| 1991 | 1.39 | -4.00 | -1.74 | 1.4 | -7.1 | 9.2 |
| 1992 | -0.10 | -5.76 | -3.07 | 1.6 | -5.4 | 7.4 |
| 1993 | 0.96 | -2.85 | -1.92 | 0.5 | -1.9 | 2.4 |
| 1994 | 1.41 | -1.26 | -1.35 | -0.3 | 7.6 | -7.4 |
| 1995 | 4.51 | 0.24 | 1.79 | 1.6 | 1.7 | -0.1 |
| 1996 | 3.84 | 1.66 | 1.23 | -0.1 | -0.5 | 0.4 |
| 1997 | 2.30 | 2.33 | 1.24 | -0.7 | -5.5 | 5.1 |
| 1998 | 0.90 | 0.80 | -2.28 | -2.9 | -10.4 | 8.3 |
| 1999 | 0.24 | -0.40 | -2.68 | -2.3 | -8.8 | 7.1 |
| 2000 | 2.19 | -0.93 | -0.88 | 0.0 | -3.9 | 4.0 |

Note that: Dy is GDP growth, Dkl is capital deepening, Dlp is labour productivity growth, Dtfp is total factor productivity growth, Deffch is change in technical efficiency and Techch is technical change