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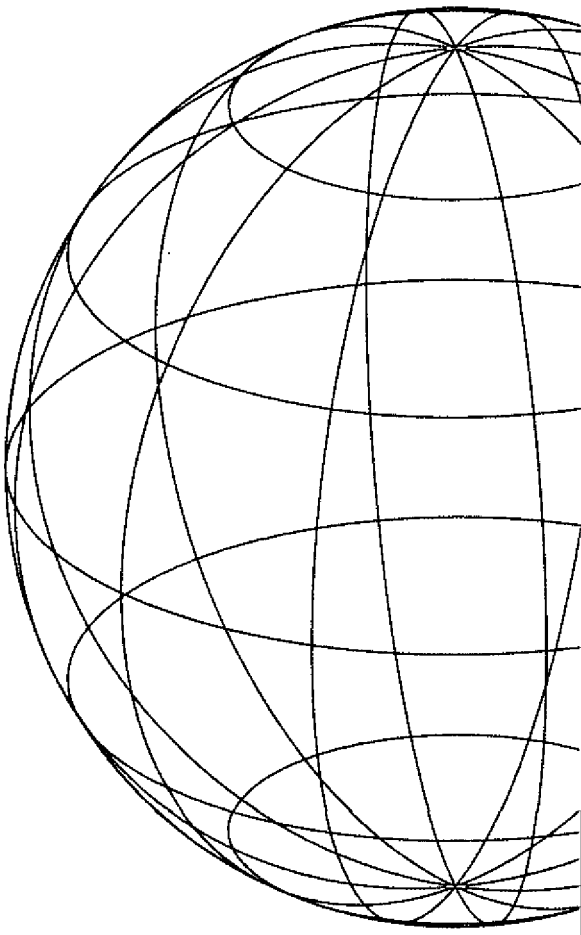
UNIDO RESEARCH PROGRAMME

Productivity Performance in Developing Countries

Country Case Studies

Tanzania



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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna, 2005

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Acronyms and abbreviations

ACP	African, Caribbean, Pacific (Group of States)
AIDS	Acquired Immune Deficiency Syndrome
AGOA	Africa Growth Opportunities Act
BCI	Business Competitiveness Index
BIS	Basic Industrial Strategy
BEST	Business Environment Strengthening in Tanzania
BRU	Better Regulatory Unit
CBI	Cross-Border Initiative
CDR	Commercial Dispute Resolution
CIF	Cost, Insurance, Freight
CIS	Commonwealth of Independent States
CTI	Confederation of Tanzania Industries
EAC	East African Community
EU	European Union
EPA	Economic Partnership Agreement
EPZ	Export Processing Zone
FDI	Foreign Direct Investment
FOB	Free On Board
FSAP	Financial Sector Assessment Programme
GCI	Growth Competitiveness Index
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
HBS	Household Budget Survey
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
ICOP	International Comparison of Output and Productivity
ICT	Information Communication Technology
IMF	International Monetary Fund
ISIC	International Standard Industrial Classification
IPO	Initial Public Offer
MCA	Millennium Challenge Account
MCC	Millennium Challenge Corporation
MDG	Millennium Development Goal
MSMEs	Micro, Small and Medium Enterprises
NACSAP	National Anti-Corruption Strategy and Action Plan
NEPAD	New Partnership for Africa's Development
NER	Net Enrolment Ratio
NMB	National Micro-Finance Bank
NSGRP	National Strategy for Growth and Reduction of Poverty
OECD	Organization for Economic Cooperation and Development
PCB	Prevention of Corruption Bureau
PRIDE	Promotion of Rural Initiatives and Development Enterprises

PRSP	Poverty Reduction Strategy Paper
PSRC	Parastatal Sector Reform Commission
R&D	Research and Development
SADC	Southern Africa Development Community
SAP	Structural Adjustment Programme
SIDP	Sustainable Industrial Development Policy
TANESCO	Tanzania Electricity Supply Corporation
TANU	Tanganyika African National Union
TCCIA	Tanzania Chamber of Commerce, Industry and Agriculture
TFP	Total Factor Productivity
TIA	Tanzania Investment Act
TIC	Tanzania Investment Center
TIN	Tax Identification Number
TRA	Tanzania Revenue Authority
TRAB	Tax Revenue Appeals Board
TRAT	Tax Revenue Appeals Tribunal
TRC	Tanzania Railways Corporation
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
US	United States
URT	United Republic of Tanzania
UTT	Unit Trust of Tanzania
WTO	World Trade Organization

Executive summary

Background and context

The United Republic of Tanzania, comprising the Mainland and Zanzibar, exhibits the typical features of a developing country with a colonial legacy. It is this legacy that came to shape policy making in Tanzania in the immediate post-independence era and for many years afterwards.

The performance of the economy was satisfactory up to the mid 1970s, before a combination of global recession, sharp increases in the price of oil, adverse terms of trade, and domestic policy failures plunged the economy into an unprecedented crisis. In the mid 1980s a major policy shift was made to liberalize the economy in favour of a greater role for market forces and integration into the global economy.

As in many other developing countries, there is concern in Tanzania about low growth rates and low factor productivity. Even when there has been a seemingly impressive achievement in macroeconomic aggregates, progress in poverty reduction has been slow compared to the efforts invested in improving the macro-economy. It is out of this realization that the National Strategy for Growth and Reduction of Poverty (2005/06 – 2009/10) (URT 2005) has put greater emphasis on broad-based growth with a particular emphasis on improving productivity.

Growth of the economy and productivity trends

This study investigated productivity performance in Tanzania, with the growth of the overall economy as the main focus. Growth accounting, a commonly used method to separate the contribution of various factors in economic growth, was used to assess the contributions of physical capital, labour and Total Factor Productivity. In general,, Tanzania experienced growth in labour productivity and Total Factor Productivity for the whole period. There was high capital deepening during 1967-1985, compared to the reform period 1986-2000. If the record of growth is reflected on, this means that capital was less productive during 1967-1985. For the period 1986-2000, labour productivity growth declined marginally by 0.4%, while Total Factor Productivity growth was highest, implying that the impressive growth performance during 1986-2000 can be associated more with growth in Total Factor Productivity.

There was a huge decline in TFP between 1960 and 1990, largely explained by poor incentives for productivity, bad macroeconomic policies and poor investment decisions by parastatals, which resulted in capacity expansions when existing capacities were grossly underutilized. The recovery of TFP in the 1990s shows scope for large gains in future through enhancing the productivity of existing capital stock as well as investing in new technologies. Factor productivity has increased in recent years due to demand side factors and efficiency gains from reforms.

A large productivity gap between the US and Tanzania is attributed to the vast technology gap between the two economies.

Assessment of the determinants of growth

Implementation of reforms in Tanzania was primarily aimed at improving the operating environment. The reforms have, in one way or another, changed the operating environment for the determinants of productivity.

Tanzania established R&D institutions in order to develop local capacity for technological innovations and development. The National Strategy for Growth and Reduction of Poverty recognizes explicitly the role of technology in promoting the goal of sustainable broad-based growth (increased technological innovation, upgrading existing technology and using new technologies). An important strategy in this endeavour is to provide support to institutions that facilitate technology development and transfer.

Another way of promoting the use of technology is by importing it. Tanzania has provided a number of incentives to attract foreign technology in order to improve competitiveness in the economy in general, and productivity of factors like labour in particular. Development of technology through FDI is mainly in the form of capital goods which can be used in direct production and, through learning processes, build local technological capability (reverse engineering). The growing importance of capital goods imports during the period of upsurge in FDI is seen in the dominance of imports of machinery that went into direct production to enhance productivity.

A major turn in the development of human resources in Tanzania was made through adoption of the *Education and Training Policy* in 1995, allowing non-government actors to play a greater role in the provision of education services. As a result of the increased facilities, access increased at all levels of education provision. The government also increased education spending. Between 1995/6 and 2004/05, for example, the education sector budget increased almost two-fold from 2.2% to 4.3% of GDP. Despite these achievements, Tanzania has still a long way to go to reach the performance of comparative countries. The average years of schooling in Tanzania are 3.4. Secondary enrolment is low, with a Gross Enrollment Ratio (GER) of 6%, while tertiary education GER is a paltry 1%.

Another important aspect of human capital development that is often taken for granted is health. Tanzania has invested in health care improvement, targeting both preventive and curative services, in order to maintain the productivity of the labour force. The number of health facilities has increased significantly. The major challenges in health remain the general poverty level that limits the feasibility of cost sharing and the HIV/AIDS pandemic, which undermines productivity and threatens life expectancy as well.

The structure of capital formation by asset type also gives a reflection of investments in physical capital and infrastructure. In real terms total capital formation doubled within ten years. Much of it was in equipment such as industrial equipment in direct production which has the potential to improve productivity.

The structure of Tanzania's economy is dominated by agriculture, while that of manufacturing is dominated by food and beverages, mainly for historical reasons. These structures have not changed for decades, due to limited financial resources to implement structural change.

Since the enactment of the Banking and Financial Institutions Act in 1991 liberalizing the financial sector, there has been a rapid growth of financial institutions in Tanzania. Despite this increase in number, concerns have been raised about their lending policies. Commercial banks have tended to prefer to hold government securities in the form of Treasury bills and bonds, which command high returns and are considered risk free. The second concern is the high cost of lending in the form of unrealistic interest rates.

The Capital Market and Security Act, 1997 led to the establishment of the Dar es Salaam Stock Exchange as another alternative for raising capital. Its scope is, however, limited given the lack of experience, the small number of listed companies, and low market capitalization.

Tanzania has taken a number of measures to improve competitiveness and the regulatory environment. As a result, its ranking is high compared to neighboring economies which were far ahead in the past.

Trade openness is a central element of successful growth strategies. Tanzania has achieved trade openness through a number of policies and programmes. As a consequence of increased openness, imports surged. An increase in imports has many outcomes that have a bearing on productivity, especially in economies like Tanzania that experienced long periods of import compression due to falling import capacity and rationing as a deliberate policy (in order to balance supply and demand for foreign exchange). The openness is mainly explained by imports. This is not a very healthy situation as it leads to a persistent trade deficit. Efforts have thus to be stepped up to increase exports and bring about a favourable trade balance.

An important policy instrument designed to improve efficiency and productivity has been privatisation as an aspect of changing property rights. As a consequence, production and productivity increased due to an increased capacity utilization largely attributed to improved technology. This has in turn improved the quality of goods and led to the increased export of manufactured goods.

Tanzania has implemented a number of policies aimed at sustaining the momentum of economic growth and improving output and productivity. Important policies include the education policy, the industrial policy, the investment policy and the trade policy.

The relationship of Tanzania's education policy to increasing productivity lies in the emphasis on the acquisition of knowledge, especially scientific and technological knowledge, and improving performance in the production and services sector. A well educated and skilled labour force is more creative and can use knowledge more effectively. There is sufficient evidence of the improved productivity of labour in recent years in Tanzania due to increased skills development opportunities in the education sector.

The Sustainable Industrial Development Policy has recorded successes during its first phase of emphasis on rehabilitation and consolidation of existing capacities, largely due to the privatization process. Productivity in manufacturing has improved in recent years.

The investment policy has improved the investment climate for investors in Tanzania, and, through the one-stop Tanzania Investment Center, has greatly lessened administrative bureaucracy in granting permits to potential investors. As a consequence, investment in productive activities, especially manufacturing, have increased, which has resulted in improved productivity.

Tanzania's trade policy has, as its goal, raising efficiency and widening linkages in domestic production, and building a diversified competitive export sector as a means of stimulating higher rates of growth and development. The policy has led to increased openness, mainly through gradual tariff simplification.

Discussion of policies with effect on productivity

Technology, both in hard and soft forms, enhances growth and competitiveness. Rapid advances in ICT have eroded the strength of long standing "comparative advantage" theory in international trade as far as the availability of factor inputs is concerned, at the same time lowering transaction costs considerably. Space, time, and endowments no longer dictate production, since ICT advancement allows easier production of customized goods and services. Lessons can be drawn from developed economies like the US and Japan. It is for this reason that developing countries, Tanzania being no exception, struggle to acquire technology through both local development and importation.

Tanzania's national policies on "Science and Technology", and "Productivity and Incomes" provide a framework for various actors in the economy, both state and non-state, to engage in R&D activities. A system of incentives and rewards has been provided as well as the establishment of support institutions, in addition to having a fully-fledged Ministry of Science, Technology and Higher Education. In total there are close to seventy R&D institutions in the country. Most of these are government-owned.

Training in technology issues is provided at institutions of higher learning. The purpose of establishing these institutions was to enable teaching and research to take place, and the monitoring of technological trends, the production and adoption of new technologies and, in the process, the development of a local capacity for technological innovations and development. As experience in other countries shows, it is higher education in engineering and scientific areas that produces new knowledge and enables its adaptation through tapping into the expanding stock of global knowledge.

A number of problems plague R&D institutions. First, being government owned and given limited government resources and unlimited competing needs, they suffer from inadequate funding. Second, real incentives are lacking to encourage researchers to concentrate on R&D activities. The end result has been that these institutions have not contributed much to productivity improvement – they have not been effective.

Tanzania does not perform as well in the use of ICT, despite some recent efforts, including publishing a National ICT Policy in 2003. The ICT infrastructure is limited, compared to the Sub-Saharan Africa average, and the developing countries' average. Access to ICT infrastructure by the rural population in Tanzania (about three quarters of

the total) is further limited by lack of electricity in such areas thus allowing access only to urban dwellers.

Like many other countries in Sub-Saharan Africa, Tanzania lags behind in technology creation. It spends about 0.2% of GDP on research and development (R&D), below the average of 1.0% for Sub-Saharan Africa, East Asia and the Pacific (1.6%), OECD states, Central and Eastern Europe and the CIS (2.6%), and world average of 2.5%.

Tanzania features as a marginalized country with respect to the Technology Achievement Index, scoring below 0.20 where Finland leads with a value of 0.744. Tanzania needs to invest more in technology diffusion and skills building in order for the majority of the population to benefit from the diffusion of technology.

The education policy has succeeded in increasing access to education. The delivery of education services, however, faces problems related to quality and a low level of investment in higher education, especially in engineering and science, leading to very low enrolment. Current programmes to attract enrolment in these fields are very limited in scope and quantity. It is here that support from institutions like UNIDO is needed to conduct diagnostic studies and pioneer special incentives.

Another problem prevalent in the education system is the poor incentives offered to teachers, especially at institutions of higher learning. The effect has been a brain drain to other countries or their departure to greener pastures such as politics. An examination of real incentives should be a prerequisite to any interventions. This should form part of the diagnostic study where institutions like UNIDO can assist.

The success of Tanzania's industrial policy (SIDP) will largely depend on the implementation of its long-term or third-phase program, that of producing intermediate and capital goods. This requires an immense mobilization of financial resources. The ability of the government is, however, limited to the early phases of the programme. To commit the relatively inexperienced private sector would be equally unfeasible. What remains then is the ability to mobilize external resources. Experience with the Basic Industrial Strategy (BIS) should provide a valuable lesson that the scope is limited.

SIDP implementation relies on actions from other sectors and institutions (fiscal, monetary, trade, science and technology, etc). This calls for proper coordination, which is not abundant in Tanzania.

The factor conditions, such as the state of infrastructure, the availability of fully serviced industrial sites, and the reliability of supply of essential utilities like electricity and water are still so unfavourable to such an ambitious industrialization programme that the policy objectives may not be met.

The trade policy has mainly relied on tariff instruments. Tax reforms which started during the second half of the 1980s have led to the rationalization of the tax structure and tax rates by reducing their number and level. In 1988/89, for example, tariff rate categories were reduced from 18 categories with rates ranging from 0 to 200%, to 7 categories with rates from 0 to 100%. Subsequent tax reforms saw further gradual reductions in tariff rate categories, or bands, from 7 to the current 4 categories with rates ranging from 0 to 25%.

The effect of tariff simplification has been an upsurge in imports, with the trade balance nowhere close to balancing (or imports and exports trends converging). A successful trade policy should, first and foremost, aim at creating the import capacity, i.e., expanding exports, in order to bring a favourable balance. More recent efforts have been made towards this end with energy directed at promoting non-traditional exports.

Though much has been accomplished in the investment climate, the state of complementary services, such as utilities, still leaves room for improvement.

Tanzania has made good progress in many of the indicators of governance, especially in the political sphere, though expenditure management and processing of corruption cases leave much to be desired. The Human Development Index is the indicator where Tanzania has achieved little progress. Globally, Tanzania ranked 162 out of 177 countries in 2004 (quite low compared even to other East African countries Kenya, 148, and Uganda, 146).

The future of investments (and privatization) in Tanzania will depend to a great extent on three factors: access to, reliability of, and cost of electricity; tax issues; and the cost of credit. The government is currently implementing a number of programmes to address these constraints.

Concluding remarks

Reforms in the economy and in sectors like education have greatly helped to improve labour productivity in the recent past. However, the state of technology sets a limit to technological transformation, which is a prerequisite to improving productivity.

The recovery in total productivity in the 1990s indicates scope for large gains in future. Tanzania has thus to institute policies which enhance the productivity of existing capital stock and promote new technologies.

Enhancement of productivity requires a greater role for R&D institutions and their interaction with firms. Such linkage is quite weak in Tanzania. This is an area where institutions like

UNIDO can play a major supportive role. A comprehensive diagnostic study is, however, required. Issues that should be considered include rationalization of the R&D infrastructure.

An overall assessment of strengths and weaknesses shows that Tanzania is relatively strong in all indicators of political governance (political rights, civil liberties, government effectiveness, rule of law, and voice and accountability), except in control of corruption. In terms of investing in people, Tanzania is strong in all indicators: immunization rates, health expenditure, primary education expenditure and primary education completion rate. With regard to economic freedom indicators, Tanzania is strong in regulatory quality, credit rating, days taken to start a business, inflation and fiscal policy but weak in trade policy.

I. Productivity performance in Tanzania: Introduction

1. 1 Overview and Context

The United Republic of Tanzania, comprising the Mainland and Zanzibar, exhibits the typical features of a developing country with a colonial legacy: entrenched poverty, predominance of agriculture, low development of human resources and technology, being a late starter in industrialization, and an unsatisfactory real per capita growth of the economy (Annex 1). It is this legacy that came to shape policy making in Tanzania in the immediate post-independence era and for many years afterwards.

After attaining political independence (Mainland, 1961; Zanzibar, 1964), Tanzania embarked on resolute actions to correct these ills inherited from the colonial order, with priority given to social programmes aimed at eradicating ignorance, poverty and disease., Policies on the development of the economy started with a mixed-economy strategy and import-substitution industrialization much dependent on imports of capital goods, given the absence of a domestic capacity to produce such goods. It was soon realized that this strategy was not leading to quick positive results, as there was a lack of an indigenous capacity to champion the growth process. It was because of this, rather than for ideological reasons, that a "socialist" programme, the *Arusha Declaration,* was adopted in 1967, placing the major means of production and exchange in the hands of the state through economy-wide nationalization programmes. Industrialization, for example, was to be solely pursued through parastatal enterprises.

The performance of the economy was satisfactory up to the mid 1970s, before a combination of global recession, sharp increases in the price of oil, adverse terms of trade and domestic policy failures plunged it into an unprecedented crisis. In the mid 1980s a major policy shift was made to liberalize the economy in favour of the greater role of market forces and integration in the global economy, including the introduction of political pluralism.

Identifying policy regimes

The discussion that follows is based on analysis of the Mainland, where three main policy regimes can be identified (see also section 2).

Independence (1961–1966)

The immediate post-independence era was characterized by a mixed-economy regime with a greater (foreign) private sector role. The development plans being implemented had been drawn up by the exiting colonial regime. Industrial development was characterized by an import substitution strategy.

Regime of controls and rationing (1967–1985)

A policy of "Socialism and Self-reliance" was ushered in with the nationalization programmes that commenced in February 1967. The state assumed exclusive power in formulating policies and guiding production, consumption, investment and exchange decisions. State intervention was intended to guide resource allocation to areas that were thought to accelerate growth. Economic performance, which was greatly influenced by events from the mid to the end of the 1970s, was characterized by a low GDP growth rate, internal and external imbalances, huge fiscal deficits, an overvalued domestic currency, a thriving parallel foreign exchange market, a high inflation rate, and rationing of foreign exchange. By the end of the 1970s, pressure had mounted so much on the domestic economy that a rethinking of alternative development strategies emerged. The recommendation by the International Monetary Fund (IMF), as early as 1981, to restructure the economy and implement a full-fledged Structural Adjustment Programme (SAP) was not accepted. A "mild" reform programme was instead introduced in 1984 in the form of partial liberalization of imports and of some aspects of domestic trade. These, however, could not bail the economy out.

Reform period (1986 –2005)

It was not until July 1986 that a 'true" economic reform programme, *a' la* the International Monetary Fund (IMF) and the World Bank, was adopted because of, among other factors, mounting pressure from bilateral donors who had bailed Tanzania out during the impasse with the two Breton Woods institutions. In 1993 the reforms were intensified following signs of derailment in certain macroeconomic indicators, especially fiscal indicators. Convergence or unification of foreign exchange markets was achieved in that year. Overall economic performance was impressive during this period. Macroeconomic stability was restored, internal and external equilibria nearly achieved, and inflation contained to single digits.

Concern with growth and productivity increase

As in many other developing countries, there is concern in Tanzania about low growth rates and low factor productivity. These have not converged with US levels. The explanations range from pervasive government intervention to a paucity of technological competence.

Emphasizing economic growth for poverty reduction

Even when there has been a seemingly impressive achievement in macroeconomic aggregates, progress in poverty reduction has been slow compared to the efforts invested in improving the macroeconomy. For example, according to the latest Household Budget

Survey (HBS) (2000/01), there was a small fall in income poverty (basic needs) from the 38.6% revealed in the 1991/92 HBS to 35.7% in the 2000/01 HBS. Food poverty decreased from 22% to 19% in the same period and survey. GDP growth, on the other

hand, increased from 1.6% in 1992 to 4.7% in 2001. What this amounts to is that much of the growth had not translated into poverty reduction – it is not only growth that matters, but rather the quality of growth (see for example Thomas *et al*, 2000). HBS 2000/01 also reveals increasing inequality, as measured by the Gini coefficient, from 0.34 during 1991/92 to 0.35 in 2000/01. Furthermore, consumption by the richest 20% increased from 43% in 1991/92 to 44% in 2000/01, while that of the poorest quintile stagnated at 7%. This realization has led the National Strategy for Growth and Reduction of Poverty (2005/06 – 2009/10) (URT 2005) to put greater emphasis on broad-based growth with a particular emphasis on improving productivity.

1.2 Objective of study

This study aims to investigate productivity performance in Tanzania, with the growth of the overall economy as the main focus. The investigation is intended to analyse general factors as well as factors specific to Tanzania.

1.3 Methodology

Secondary data from official government documents have been used. In particular, comparative cross-country TFP data provided by UNIDO were used to discern trends. Primary data were generated through a limited sample survey to validate some of the assertions made.

1.4 Organization of report

In addition to this brief introduction, a description of growth and productivity trends is presented in the next section. Section three provides an assessment of the major determinants of productivity, while section four presents a discussion of policies affecting productivity in Tanzania. Section five, devoted to concluding remarks, completes the report.

II. Growth of the economy and productivity trends

This section presents an analysis of the growth of the economy and productivity trends. The discussion starts with a brief account of GDP growth over the years.

2.1 Record of GDP growth

Growth performance

Table 2.1 shows the growth of the economy since 1965, when the earliest reliable data are available. We can discern patterns which are associated with policy regime shifts as follows: In the period 1965-1966 a mixed-economy strategy was pursued, recording the highest average of 7.8%. The period 1967-1985 was dominated by socialist policies. Here we find a decline of growth to a period average of 2.9%. The third phase, 1986-2004, is one of reforms, with a sub-period average of 3.9% growth. The latter phase can further be sub-divided into two: 1986-1993, which marked the initial phase of reforms, and 1994-2004, which marked the intensification of reforms. During 1986-1993, the average growth was 3.2%, while a growth rate of 4.5% was recorded for the period 1994-2004.

Table 2.1 Growth of the Tanzanian economy: 1965- 2004 (%, Real)

1965	2.7	1981	-0.9	1997	3.3
1966	12.8	1982	1.8	1998	4.0
1967	4.0	1983	-2.6	1999	4.7
1968	5.2	1984	2.0	2000	4.9
1969	1.8	1985	2.6	2001	4.7
1970	5.8	1986	2.0	2002	6.2
1971	4.2	1987	5.0	2003	5.7
1972	6.7	1988	4.4	2004	6.7
1973	3.0	1989	2.6		
1974	2.5	1990	6.2	**Average**	
1975	2.5	1991	2.8	1965-2004	3.6
1976	6.4	1992	1.8	1965-1966	7.8
1977	0.9	1993	0.4	1967-1985	2.9
1978	1.3	1994	1.4	1986-2004	3.9
1979	3.6	1995	3.6	1986-1993	3.2
1980	4.1	1996	4.2	1994-2004	4.5

Source: URT, (various) Economic survey

Growth accounting/diagnostics and productivity changes

Growth accounting is a commonly used method of separating the contribution of various factors to economic growth. Theory identifies sources of growth as an increase in the quantity of inputs (capital, labour) and an increase in the efficiency of inputs (productivity change/technical innovation).

Thus by growth accounting, %Y growth = (% L growth) + (%K growth) + TC

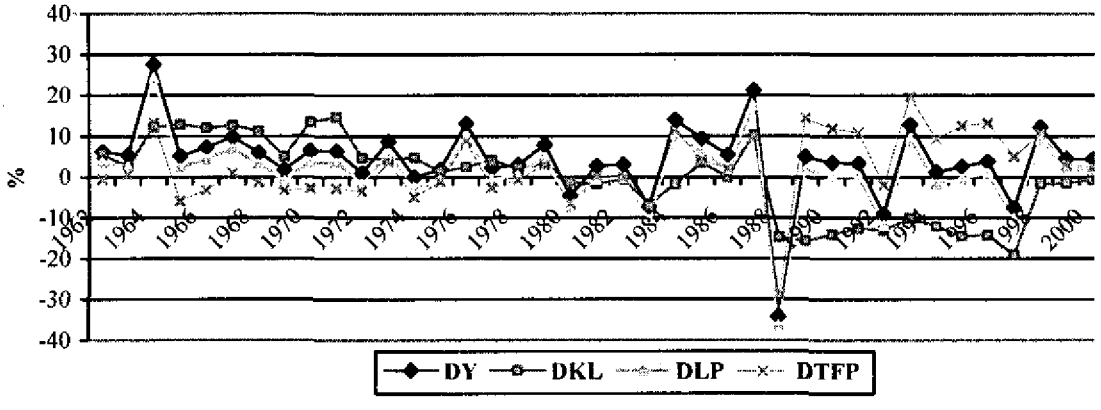
Where:
% = %
Y = Output (GDP)
L = Labour input
K = Capital input
TC = Technical change (or Total Factor Productivity)

TC is usually calculated as residual or "left over" TC = (%Y growth) less (%L Growth) less (%K growth). Rapid technological change induces growth.

Many scholarly works that have attempted to decompose growth focus on growth in output per worker, physical capital (technological progress) and Total Factor Productivity (see, for example, Sachs *et al,* 2004, who found Africa to be the only region to have suffered decline in growth in output per worker, physical capital per worker and Total Factor Productivity during 1980-2000. This is explained by pervasive government intervention and a paucity of technological competence, Pack and Paxson, 2001).

We can assess the association of growth with the factors alluded to on growth accounting. For this purpose cross-country data provided by UNIDO were analysed in order to discern patterns of change over time, as well as changes identified with policy regimes. The trends are plotted in Figure 2.1.

Figure 2.1 Changes in growth and factor inputs in Tanzania 1965-2000



Source: UNIDO data
Note: DY = GDP growth, DKL = Change in Capital – Labour ratio, DLP = Labour productivity growth, DTFP = TFP growth.

Description of changes

The plots in Figure 2.1 show a closely matched experience: a general declining trend for all variables from the early 1960s to around 1983. There are recoveries in 1985, drastic volatility up to 1989 and stability after 1990, with DTFP sustaining positive changes, and

DKL (capital deepening) showing negative trends up to 2000. After an initial rise in the early 1960s, GDP (DY) depicts a declining trend around 1983, before picking up again to positive changes. Total Factor Productivity recorded a dramatic shift around 1988 and generally exhibits sustained positive changes thereafter. This experience is similar to DLP. DKL shows dramatic negative changes after about 1987.

Tanzania experienced a general growth in labour productivity and Total Factor Productivity for the whole period. There was high capital deepening during 1967-1985 compared to the reform period 1986-2000. If a reflection on the record of growth is made, this means that capital was less productive during 1967-1985. For the period 1986-2000, labour productivity growth declined marginally by 0.4% while Total Factor Productivity growth was highest, implying that the impressive growth performance during 1986-2000 can be associated more with growth in Total Factor Productivity, as shown in Table 2.2.

Table 2.2 Changes in the growth of GDP and sources of growth in Tanzania, 1965-2000 by policy regimes

	1965-2000	1967-1985	1986-2000
Capital deepening	-1.6	4.2	0.1
Labour productivity growth	0.7	1.3	-0.9
Total Factor Productivity growth	2.4	-0.3	6.2
GDP growth	3.3	2.8	3.4

Source: Computed from UNIDO data

Influence of regime policies on productivity (TFP)

Regime of controls and rationing (1967–1985)

Mainly due to emerging new forms of inequality and frustration with an inadequate inflow of foreign resources to implement development programmes, the Government, on 5th February 1967, promulgated the "Arusha Declaration", the country's blueprint for socialism. The Government was to exercise effective control over the principal means of production (specified as land, forests, mineral resources, water, oil and electricity, banks, the import and export trade, wholesale businesses, communications, transport, insurance, industries like steel, machine tools, arms, motor car, cement, and fertilizer, and large plantations especially those which provided essential raw materials). State control followed within a day of the Declaration, and nationalization was extended to large commercial buildings. Parastatals were created to run the newly nationalized units.

The equity principle of the Declaration aimed at the egalitarian distribution of income, and free access to public services. Wages and salary bands were greatly compressed. The single ruling party (TANU) was, later in 1972, given supremacy over the government as far as policy and decision making were concerned, and guidelines were issued that decision making processes at production units should follow the ruling party line.

Rationing of both output and factor inputs, especially foreign exchange (which was highly overvalued), was high, given the emerging scarcities. Lastly, industrialization was de-

emphasized in favor of agriculture. A resettlement programme was implemented in rural areas for villagers to settle in designated *Ujamaa* or socialist villages.

The impact of these policies on production and productivity were to be realized sooner or later:

- Tanzanians who were appointed to run nationalized entities had little experience in running such entities and relied instead on the ruling party machinery to make production and consumption decisions, most of which made little economic sense
- Given the low level of skills during the immediate post-independence period, Tanzanians of low skill levels were appointed to man complex production units, and it did not take long to realize that a mistake had been made.
- Agricultural production suffered as well. Following the resettlements in designated villages (within five years about 20% of the population had been resettled), pressure soon emerged on land, and farmers had to travel many miles to find farms, thus losing valuable working hours.
- The lower priority accorded to industry meant that innovativeness and ingenuity were deprived of the laboratory for improving technology, which is essential in increasing productivity. Further, the rationing of foreign exchange through administrative allocation deprived manufacturing firms of essential imported inputs. The success rate for foreign exchange applications dropped from a high 59% for industrial raw materials and 29% for machinery and spares in 1977, for example, to 11% and 4% respectively in 1982. As a consequence, capacity utilization rates fell from high levels of over 70% in the early 1970s to as low as 26% by 1982, and labour productivity declined sharply from positive growth rates to negative rates, such as minus 11% in 1980 (Mbelle 1988). What discouraged productivity was that, as capacity utilization rates fell, more capacity was created thus leading to a thinner allocation of foreign exchange per firm. A good account of this is provided in the textile industry. In 1976, for example, total production capacity was 90 million square meters of cloth, and capacity utilization was 91.9% (actual production at 82.7 million square meters of cloth). Establishment of more state textile firms in the early 1980s increased capacity to 252.1 million square meters. Due to a thinner distribution of resources, actual output fell to 57.4 million square meters, representing a capacity utilization rate of only 22.8% (Mbelle *ibid*)
- Managers and workers in enterprises had little incentive to make sound decisions. To them, any losses made by the enterprises did not translate into personal losses as their benefits were always guaranteed through state subsidies to the parastatals.
- Wage band compression to a factor of nine from fifty (i.e. the highest salaried employee received only nine times what the lowest salaried worker received) depressed the morale of skilled managers, some of whom left the country, thus compounding the skills shortage in the economy.
- Lastly, the system of firing was so cumbersome that the practice was very rare. This led to a build up of employment (and guaranteed retention) even when production was falling. Production units looked like social welfare centers with many employees, and costs incurred not being related to direct production (music bands, and football, netball, basketball and boxing teams, etc).

Reform period (1986–2005)

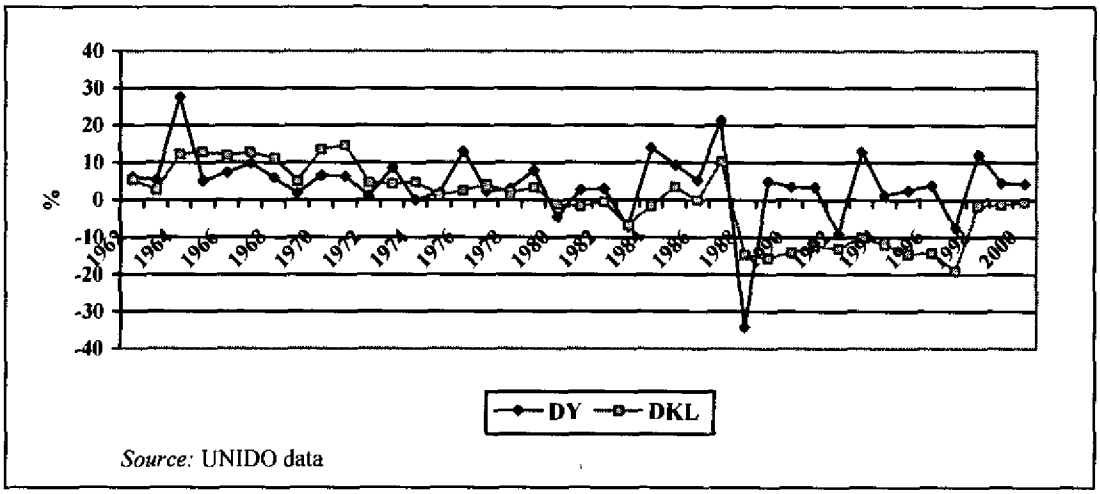
Following a number of unsuccessful homegrown programmes and mounting pressure from donors, Tanzania adopted an Economic Recovery Programme in 1986, typical of IMF/World Bank reform programmes prescribed to countries in an economic crisis. The country has continued implementing incremental reforms until today. The key elements of the strategy included dilution of state control in production and trade, devaluation (100% devaluation from T.Shs. 20 per US dollar to T.Shs. 40.34 in June 1986), raising producer prices and controlling budget deficits. Market forces were to determine the supply and demand of outputs and factor inputs, including foreign exchange. Trade, both internal and external, was made freer. One of the main features of this period was the relaxation of import restriction. Production and productivity picked up, mainly due to the following:

- Increased producer prices (in real terms) motivated farmers. Agricultural output doubled within a year. Export crops fetched more in local currency terms.
- Availability of consumer goods acted as an incentive for farmers and workers alike to increase productivity in order to afford such goods.
- Foreign exchange windows were increased in number, and firms could source imported inputs through an efficient window of their choice. This led to capacity utilization rates picking up, especially in manufacturing, thus leading to high productivity.

For purposes of clarity, Figure 2.1 is separated to depict changes in GDP and the three components of capital productivity, labour productivity and Total Factor Productivity.

In Figure 2.1(a) the plots of GDP growth and capital deepening show different patterns, signifying less covariance. Between 1966 and 1973 there was high capital deepening relative to changes in GDP growth. This is the phase of state-led massive investments in manufacturing, with low capacity utilization rates. Between 1980 and 1989 the pattern of movement matches, but disperses after 1990, signifying that capital did not explain much of the changes in GDP growth.

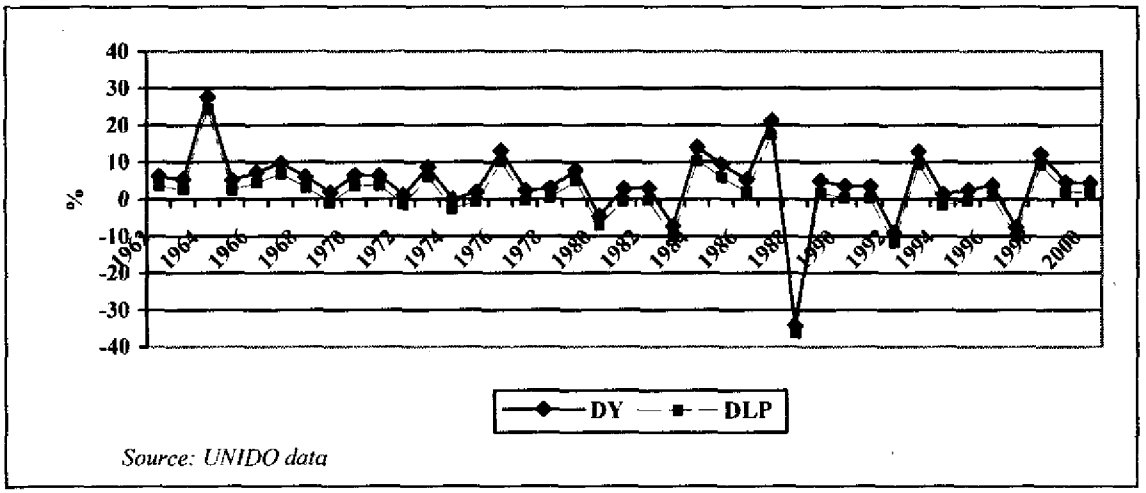
Figure 2.1a Changes in GDP and capital deepening in Tanzania 1965-2000



Source: UNIDO data

Labour productivity on the other hand closely associates with patterns of GDP growth as depicted in Figure 2.1b. The changes, however, do not give the impression of pulling GDP since they have been below GDP changes throughout the period. This is further discussed in Section 3.

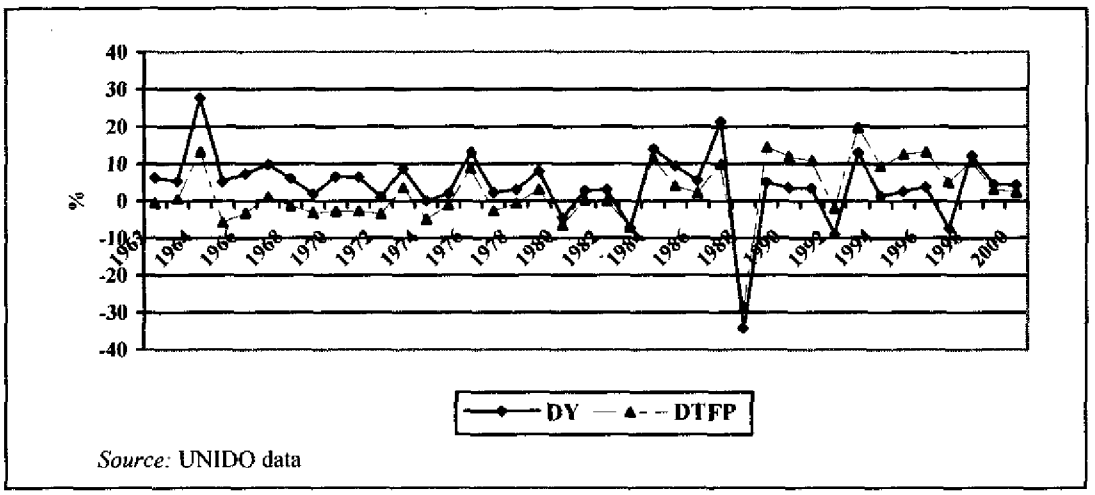
Figure 2.1b Changes in GDP and labour productivity in Tanzania 1965-2000



Source: UNIDO data

The behaviour of the Total Factor productivity curve closely matches that of GDP changes. However, the "pulling effect" of TFP is more pronounced between 1989 and 1998.

Figure 2.1c Changes in GDP and total factor productivity in Tanzania, 1965-2000



Source: UNIDO data

2.2 Comparison of results with those of other studies

There are few studies which have attempted to decompose the growth of GDP in Tanzania in general and manufacturing in particular.

Collins and Bosworth (1996) decomposed the sources of growth for Tanzania for the period 1960-1994. For the entire period, the average annual growth of output per worker

was 0.7%, the increase in physical capital per worker contributing 0.4%. The contribution of education was small, only 0.1%, with the remaining 0.3% of annual growth being attributed to increases in TFP (Table 2.3).

Growth during the decade 1960-1970 was mainly driven by increases in TFP, which contributed 1.2% to the overall annual growth rate per worker of 1.9%. The same can be said of the following decade, though TFP declined to 0.3%. Between 1980 and 1990 TFP declined further to -0.4%. It was the economic reforms which were intensified in the 1990s that reversed the decline in TFP.

Table 2.3 Decomposition of Tanzania's growth, 1960-1994 (Percent -contribution)

Year	Output per worker	Physical capital	Education	TFP
1960-70	1.9	0.4	0.3	1.2
1970-80	1.3	1.0	0.1	0.3
1980-90	-0.3	0.2	-0.1	-0.4
1990-94	-0.2	-0.2	0.0	0.0
1960-94	0.7	0.4	0.1	0.3

Source: Collins and Bosworth

The decline in TFP between 1960 and 1990 was largely explained by the poor incentives for productivity provided under a socialist economy: bad macroeconomic policies that led to shortages of inputs, especially imported inputs due to foreign exchange shortage, and poor investment decisions by parastatals which resulted in capacity expansions when existing capacities were grossly underutilized (see also Mbelle, 1990). The recovery of TFP in the 1990s shows scope for large gains in future through enhancing the productivity of existing capital stock as well as investing in new technologies.

Collins and Bosworth (*op cit*) compared these results with comparable countries in the region as well as other regions in the world (Table 2.4).

Table 2.4 Sources of growth, 1960-1994, Tanzania compared (Contribution of)

Country/region	Output/worker	Physical capital	Education	TFP
Tanzania	0.7	0.4	0.1	0.3
Uganda	-0.3	0.3	0.2	-0.8
Kenya	1.5	-0.3	0.3	1.4
Ghana	-0.2	0.4	0.5	-1.1
Cote d'Ivoire	1.6	1.3	0.3	0.1
East Asia	4.2	2.5	0.6	1.1
South Asia	2.3	1.4	0.3	0.1
Africa	2.3	0.8	0.2	-0.6
Middle East	1.6	1.5	0.5	-0.3
Latin America	1.5	0.9	0.4	0.2
Industrial countries	2.3	1.1	0.3	0.2

Source: Collins and Bosworth (1996)

The contribution of TFP to output growth was well above the African average of -0.6%, though low compared with East Asia (1.1%) and industrialized countries (0.8%). The contributions of education and physical capital were below the average for Africa (0.2% and 0.8% respectively).

Utz (2005) decomposed Tanzania's growth during the reform period (1986-2003). The author constructed a number of scenarios re-estimating the capital stock in 1985 (when socialist policies were abandoned), working with scenarios of 0%, 25% and 50% adjustment in capital stock. These adjustments did affect the decomposition of growth.

The author found the contribution to growth for the period 1990-2003 to be 1.8% by labour productivity, between -0.1% and 0.5% by capital, and between 0.6% and 1.2% by Total Factor Productivity, and compares these results with regional performance as shown in Table 2.5.

Table 2.5 Sources of growth: Tanzania and regional comparisons, 1990-2003 (Percent)

Country/region	Output/worker	Physical capital	Education	TFP
Tanzania	1.8	-0.1 to 0.5	0.5	0.6 to 1.2
World	3.5	1.2	0.3	1.9
Industrial countries	1.5	0.8	.0.2	0.5
China	8.8	3.2	0.3	5.1
East Asia, less China	3.4	2.3	0.5	0.5
Latin America	0.9	0.2	0.3	0.4
South Asia	2.8	1.2	0.4	1.2
Africa	-0.2	-0.1	0.4	-0.5
Middle East	0.8	0.3	0.5	0.0

Source: Utz (2005) Table 18. p.48. Data other than Tanzania are for 1990-2000

The author found the average growth rates to vary very significantly during the 1990s. Output per worker grew fastest in the Asian economies and least in Africa where it declined by 0.2%. The contributions of capital and factor productivity show similar large variations, while the contribution of education to growth shows little variability, ranging between 0.2% and 0.5%.

Tanzania performed well compared to the regional average in Africa. Utz (*ibid*) explains that increased investments in education in the recent past helped improve the contribution of human capital to growth and that factor productivity has increased in recent years due to demand-side factors and efficiency gains from reforms, though doubts whether the increased factor productivity represents technological change that would improve productive capacity on a sustainable basis.

Productivity in manufacturing

Mbelle (1988) analysed the performance of the manufacturing sector in Tanzania in the post-independence period (1961-1987) with a particular focus on the impact of the foreign exchange shortage on manufacturing performance during the economic crisis

period and the subsequent regime of controls and rationing (mid 1970s to 1985). A detailed technical analysis of two industries, textiles and beverages, at both sectoral and firm levels was made. The method of analysis was based on homothetic frontier production functions and generalized Farrel measures of efficiency, as well as input-output analysis and simpler regression analysis.

The findings of this study revealed a number of interesting results. First was the fact that the performance of the manufacturing sector was deteriorating, despite increased investments in the sector in the form of capacity expansion. This happened when the supply of inputs was dwindling, and there was insufficient supportive infrastructure. Employment was instead expanding steadily. The system of allocating the scarce resource, foreign exchange by then, favoured activities that created new capacities at the expense of those supporting the utilization of existing capacities. These actions had an adverse impact on labour productivity.

The availability of imported inputs was found to explain changes in output more than any other input. However, using the frontier production function approach to analyse efficiency, the author found increasing inefficiency in the use of inputs at the level of firms. At the aggregate industry level, evidence of technical regress was found. This had two adverse impacts: increasing costs and lowering productivity.

Computation of coefficients using the input-output technique revealed that firms with low import coefficients received higher foreign exchange allocation than those with high import coefficients. This further reduced productivity through "strangling" the latter while also leading to allocative inefficiency with regard to the scarce resource through favouring the former.

Mbelle and Sterner (1991) analyzed the textile industry in detail, basing on a data set drawn from the regime of controls. A frontier or best-practice production function was used because it had the added advantage of being able to capture technical progress or individual firm efficiency, unlike the traditional average function, which only reflects average performance for the whole industry. Another advantage is that it reflects the development of the best plants each year. It thus shows the rate of advance in productivity at the frontier and hence can provide various measures of relative efficiency.

The authors found the marginal productivity of labour to be very low (elasticity of 0.04) while that for imported inputs was very high at 0.80 (elasticity of capital was 0.16). An increase in the availability of imported inputs by 1% had five times the effect on production of a 1% increase in machine capital. Increased use of labour had practically no effect (due to an already overstaffed management). Efficiency (technical efficiency) was found to be low due to a lack of imported inputs and the low level of capacity utilization.

Ndulu and Semboja (1994) investigated productivity, efficiency and export performance in the manufacturing sector in Tanzania. Productivity was assessed in terms of domestic prices. Three measures of efficiency were used: partial factor productivity, a modified measure of labour productivity and a simple measure of investment productivity.

The authors found variations in output to be totally explained by changes in factor inputs and that productivity growth in the manufacturing sector was statistically insignificant.

This was explained partly by the cyclical instability of actual production. The large fluctuations in labour productivity were mainly influenced by output variations. In terms of efficiency, about 40% of manufacturing activities generated negative value-added.

Further, they found the incentive structure during the first half of the 1980s to be grossly biased against exports (the real official exchange rate, commercial policy instruments such as quantitative restrictions and related exchange controls which served as explicit and implicit taxation of exports). It was only during the latter part of the 1980s that exports started to pick up as a result of the various measures instituted, such as real currency devaluation, export promotion measures, reduced anti-export bias and the streamlining of export procedures.

Szirmai *et al* (2001) investigated manufacturing performance in Tanzania using time series analysis. The International Comparisons of Output and Productivity Project (ICOP) methodology was used, with comparative US labour productivity as a benchmark.

In general the authors found a large productivity gap between the US and Tanzania and attributed this to the vast technology gap between the two economies. Using 1976 as the base year, the authors traced trends in labour productivity. There was a rapid initial increase after 1965, reaching a peak in 1973 and later declining steadily throughout the 1970s and 1980s, probably due to continued retention of workers when output was declining. By 1990 the level was half that of 1973.

Comparative labour productivity in manufacturing showed that Tanzania was catching up with the US productivity level until 1973, mainly due to increases in the amount of capital per worker. After 1973 there was a comparative decline in productivity, which evened out in 1983. The authors note that, compared to low-income economies in Asia, Tanzania started at a much higher level in the 1960s but ended up doing worse later (the Asian economies started at a lower level than Tanzania and recorded little changes over time, but caught up in productivity in the 1980s).

III. Assessment of the major determinants of productivity

3.1 Reflections

From the results in the previous section, one can draw conclusions about the effect of reforms. Years of controls and confinement were associated with a falling performance in the major determinants of growth, while reform years were associated with recovery. In this section we assess developments during the reform period (after 1986).

Implementation of reforms in Tanzania was primarily aimed at improving the operating environment. Significant areas include trade liberalisation, financial sector reforms, privatisation, civil service reforms, decentralisation, and tax reforms. The relevant enactments include the National Investment (Promotion and Protection) Act 1990, the Banking and Financial Institutions Act 1991, the Loans and Advances Realization Act 1991, the Public Corporations Act 1992 and the Amendment Act 1993, the Foreign Exchange Act 1992, the Privatisation Trust Act No. 7 of 1997, the Financial Laws Miscellaneous Amendments Act 1997, the Tanzania Investment Act 1997, the Tanzania Revenue Authority Act 1997, the Capital Market and Security Act No. 5 of 1994 amended by the Capital Market and Security Act No. 4 of 1997, the Mining Act 1998, the Land Act 1999, and the Economic Processing Zone (EPZ) law 2002. All these have, in one way or another, changed the operating environment for the determinants of productivity.

3.2 Technology issues, FDI

Technology

Technology, both in hard and soft forms, enhances growth and competitiveness. Rapid advances in ICT have eroded the strength of long standing "comparative advantage" theory in international trade as far as the availability of factor inputs is concerned, at the same time lowering transaction costs considerably. Space, time and endowments no longer dictate production as ICT advancement allows the production of customized goods and services more readily. Lessons can be drawn from developed economies like the US and Japan. It is for this reason that developing countries, Tanzania being no exception, struggle to acquire technology through both local development and importation.

Development through local research and development (R&D) institutions in Tanzania

National policies on "Science and Technology", and "Productivity and Incomes" provide a framework for various actors in the economy, both state and non-state, to engage in R&D activities. A system of incentives and rewards has been provided, as well as the establishment of support institutions such as the National Institute for Productivity, the Institute of Production Innovation, the Centre for the Development and Transfer of Technology and the Commission for Science and Technology, and the presence of a fully-fledged Ministry of Science, Technology and Higher Education. In total there are close to seventy R&D institutions in the country, most of them government-owned.

The National Strategy for Growth and Reduction of Poverty (URT 2005) recognizes explicitly the role of technology in promoting the goal of sustainable broad-based growth (increased technological innovation, upgrading and use of new technologies). An important strategy in this endeavour is to provide support to institutions that facilitate the development and transfer of technology.

Training in technology issues is provided at institutions of higher learning, especially engineering faculties such as at the University of Dar es salaam and specialized technical colleges, the Dar es salaam Institute of Technology, and Arusha and Mbeya Technical Colleges, as well as other research and development (R&D) institutions. The purpose of establishing these institutions of higher learning was to enable teaching and research to take place, as well as the monitoring of technological trends, the production and adoption of new technologies and, in the process, the development of a local capacity for technological innovation and development. As experience in other countries shows, it is higher education in engineering and scientific areas that produces new knowledge and enables its adaptation through tapping into the expanding stock of global knowledge.

A number of problems plague these local institutions. First, being government owned, with limited government resources and unlimited competing needs, they suffer from inadequate funding. Second, there are few real incentives to encourage researchers to concentrate on R&D activities. The end result has been that these institutions have not contributed to productivity improvement.

A survey of 100 respondents carried out by the author of this report in 2005 on the effectiveness of R&D institutions revealed the following:

- Less than 10% of the respondents reported having some information and/or contacts with R&D institutions.
- Only 10.9% of firms acknowledged receiving support in production-related technology from research and training institutions (89.1% did not). Only 9.1% saw the support to be effective.
- Only 12.7% received such support from other technology-development institutions. With regard to effectiveness, only 16% found the support effective.
- Finally, 40% of the respondents confirmed ease of accessing information.

ICT

Tanzania does not perform as well in ICT use, despite some recent efforts, including the publication of the National ICT Policy in 2003. The ICT infrastructure is limited to the following numbers per 1,000 people, with the average for Sub-Saharan Africa in brackets:

- 5 telephone mainlines users (15),
- 19 cellular subscribers (39),
- 4 TV sets, 4.2 personal computers,
- 2.3 internet users (9.6)

Compared to other regions and comparable countries, the performance is also poor. For telephone mainlines, the average for developing countries is 96, for least developed countries 7, for East Asia and the Pacific 142, for Latin America and the Caribbean 166, and for Kenya 10. For cellular subscribers the average for these regions is 101, 159, 191 and 42 respectively, while the averages for internet users are 40.9, 60.9, 81.2 and 12.5 respectively.

Access to ICT infrastructure by the rural population in Tanzania (about three quarters of the population) is further limited by lack of electricity in such areas, so that such access is the privilege only of urban dwellers.

Like many other countries in Sub-Saharan Africa, Tanzania lags behind in technology creation, despite making deliberate efforts in the recent past. In terms of expenditure, Tanzania spends about 0.2% of GDP on R%D, below the average of for Sub-Saharan Africa (1.0%), East Asia and the Pacific (1.6%), OECD, Central and Eastern Europe & CIS (2.6%) and a world average of 2.5% (UNDP 2004).

The World Bank Institute (2004) reports the results of the Technology Achievement Index, which compares the creation and diffusion of technology and the building of a human skills base. The results show great disparities in dynamism of technological progress in developing countries. Tanzania features as a marginalized country, scoring below 0.20, with Finland leading with a value of 0.744. The interpretation is that Tanzania has to invest more in technology diffusion and skills building and that the majority of the population has yet to benefit from the diffusion of technology.

Development through FDI

Another way of promoting the use of technology is through importing. Tanzania has provided a number of incentives to attract foreign technology in its investment policy. It launched the National Investment Promotion Policy in 1996 with the following objectives:

- Maximum mobilization and utilization of domestic resources
- Maximum promotion of export orientation on domestic production of goods and services to enhance the development of a dynamic and competitive export sector
- The encouragement of inflows of external resources to complement national efforts
- Encouragement and facilitation of the adoption of new technologies in activities that have an especially direct bearing on productivity, quality and increased competitiveness
- Enhancement of a transparent legal framework that facilitates the promotion of, and gives due guarantees for protection to, all forms of investment activities
- Deregulation of the investment approval process

In order to achieve investment transformation, specific sectoral policy objectives were spelled out in agriculture, the mineral sector, industry, tourism, transport, communications, energy, and social services.

Since enactment of the Investment Act, the investment climate has been improved on an incremental basis, with major refinement in 1997 (Tanzania Investment Act of 1997). As

one of the outcomes, FDI increased from USD 148.64 million in 1996 to USD 154.63 in 1997, reaching a peak of USD 463.4 million in 2000 (5% of GDP). By 2004 FDI amounted to USD 260.2 million as shown in Table 3.1. The upsurge of FDI between 1999 and 2001 was primarily from large inflows into the mining sector, and privatisation of two large parastatals, the National Bank of Commerce in 2000 and the Tanzania Telecommunications Company in 2001.

FDI is a significant source of investment finance. This source was very significant during 1999-2000 for the reasons stated. In recent years FDI inflows have declined in absolute terms (see section four).

Table 3.1 Inflows of FDI into Tanzania 1993-2004

Year	Value in US$ million	Annual % change	FDI/Total inv (%)
1995	150.9	..	14.7
1996	148.6	-1.5	14.2
1997	154.6	-4.0	14.4
1998	172.2	11.4	13.1
1999	183.8	6.7	41.3
2000	463.4	152.1	30.0
2001	327.4	29.3	22.5
2002	240.4	26.6	13.3
2003	247.8	3.1	11.0
2004	260.2	5.0	10.0

Source: URT (2005) Economic Survey 2004. Percentages computed

The role of FDI extends beyond improving capital to improving competitiveness in the economy in general and factors like labour in particular. Development of technology through FDI is mainly in the form of capital goods which can be used in direct production and can, through learning processes, build local technological capability (reverse engineering).

The structure of imports in recent years is shown in Table 3.2. There are two noticeable features in Table 3.2. One is the growing importance of capital goods imports during the period of upsurge in FDI and the second is the dominance of imports of machinery in total capital goods imports (compared to the other components – transport equipment, and building and construction equipment). These then represent machinery that goes into production to enhance productivity.

Table 3.2 Structure of Tanzania's imports (%) 1995-2004

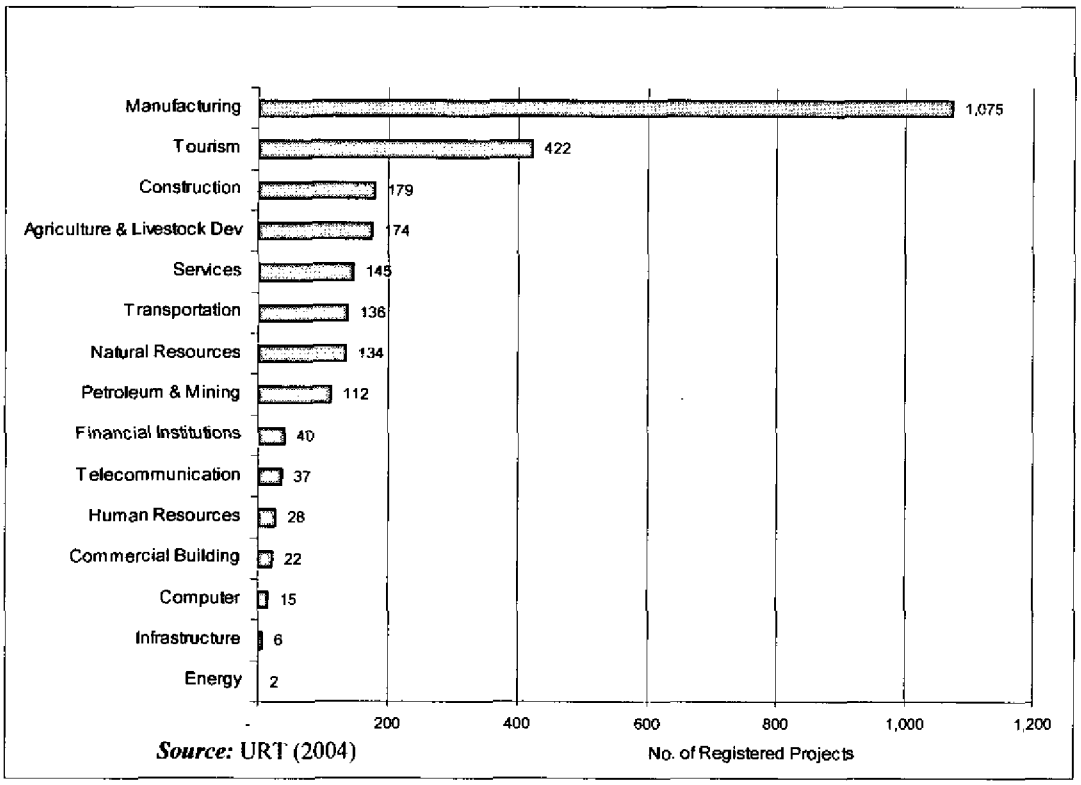
Year	Capital Goods	Intermediate Goods	Consumer Goods	Total (USD Mill.) (FOB)*
1995	35.7 (53.3)	38.2	26.1	1,340.5
1996	35.9 (45.1)	38.2	25.9	1,212.6
1997	28.3 (40.0)	28.9	42.8	1,148.0
1998	34.3 (49.0)	17.1	48.6	1,382.1
1999	51.4 (44.2)	11.7	36.9	1,497.9
2000	46.7 (44.0)	11.1	42.2	1,366.3
2001	47.4 (54.9)	18.4	34.2	1,560.5
2002	47.7 (51.1)	18.1	34.2	1,511.3
2003	42.1 (50.9)	25.3	32.6	1,933.5
2004	42.0 (52.3)	21.9	36.1	2,280.8

Key: *Since 1990, Tanzania reports imports on free on board basis (..) of which machinery other than transport machinery

Source: Computed from URT, Economic Survey 2003 and 2004

The sectors which attracted investments most are manufacturing, tourism and construction as shown in Figure 3.1.

Figure 3.1 FDI by sector in Tanzania 1990-2003



Source: URT (2004)

3.3 Investment in human capital, physical capital, infrastructure

Human capital

Education

Education enables a person to be creative and acquire knowledge. The link between education (improvement in the quality of human capital) and increased productivity has been demonstrated by rigorous econometric work in the 1970s, such as that of Griliches, 1995 and Ranis *et al*, 2000, who concluded that improvement in the quality of human capital enhances productivity and absorptive capacity and that investment in tertiary education has a higher pay off in terms of economic growth. It thus makes both economic and social sense to invest in education.

A major turn in the development of human resources in Tanzania was brought about by the adoption of the *Education and Training Policy* in 1995, allowing non-government actors to play a greater role in the provision of education services (see also section four). The policy broadly advocates "enhancement of partnership in the provision of education and training through the deliberate efforts of encouraging private agencies to participate in the provision of education and to establish and manage schools and other educational institutions at all levels" (page xii).

The relationship of this policy to productivity increase lies in the emphasis on the acquisition of knowledge, especially scientific and technological knowledge, and its contribution to improving performance in the production and services sector. A well-educated and skilled labour force is more creative and better able to use knowledge more effectively.

The response from the private sector was impressive at primary, secondary and tertiary levels. The number of primary schools increased by 30% from 10,927 in 1995 to 14,257 in 2005; secondary schools increased from 595 in 1995 to 1,755 in 2005, an increase of 194.9%. By 2005, private secondary schools numbered 549 (31.2% of the total). In higher education, institutions accredited by the "Higher Education Accreditation Council" to offer degree level courses increased from only two public universities in 1995 to 25 in 2005, of which 17 or 68% are private.

As a result of increased facilities, access increased at all levels of education provision. For example, enrolment in primary schools (grades 1-7) increased from 3,877,643 in 1995 to 7,541,208 (of whom 48.9% are girls) in 2005, a 94.5% increase (achieving a Gross enrolment rate of 109.9% and a net enrolment rate of 94.8%), well on trajectory to achieving the Millennium Development Goal (MDG) in primary education. Primary education is compulsory and free. Enrolment in secondary schools (Forms 1-6) jumped from 196,375 in 1995 to 524,325 (of whom 46.6% are female) in 2005, an increase of 167% within a period of ten years (URT 2005). NSGRP targets for universal secondary education start with having at least 50% of boys and girls aged 14-17 years enrolled by 2010. To this effect, a comprehensive Secondary Education Master Plan has been operationalized after recognising that primary education is not sufficient to enable Tanzania to meet the challenges of development and globalization.

Enrolment in higher education institutions rose from 7,897 in 1995 to 25,937 in 2005. The government also increased education spending. Between 1995/6 and 2004/05 the education sector budget increased almost two-fold from 2.2% of GDP to 4.3% of GDP. Despite these achievements, Tanzania has still a long way to go to reach the performance level of comparative countries'. The average years of schooling in Tanzania are 3.4, lower than its East African partner Kenya (5.08) and emerging main trading partner South Africa (7.22). Secondary enrolment is again low, with a GER of 6% compared to, for example, Kenya with 31%. The situation in tertiary education is not different where the GER is a paltry 1% compared to Kenya, 4%; Uganda, 3%; Botswana, 5%; and South Africa 15% (Utz 2005).

Health

Another important aspect of human capital development often taken for granted is health. It need not be emphasised that ill health leads to low production (hence low productivity) due to loss of man-hours through absenteeism, recuperation and attending the sick. Tanzania has invested in health care improvement, targeting both preventive and curative services. The number of health facilities has increased over the past ten years from 194 hospitals to 220 in 2005, dispensaries from 3,832 to 4,622, and health centers from 343 to 433. The major challenges in health remain the general poverty level that limits the feasibility of cost sharing and the HIV/AIDS pandemic, which threatens life expectancy as well.

Though these efforts may seem commendable, Tanzania does not perform well in human capital development compared to comparable economies and regional averages as shown in Table 3.3.

Table 3.3 Comparative performance in human capital

Country/region	Education index	Life expectancy
Tanzania	0.62	43.5
Kenya	0.74	45.2
Uganda	0.7	45.7
Sub-Saharan Africa	0.56	46.3
Latin America and the Caribbean	0.86	70.5
East Asia & Pacific	0.83	69.8
OECD	0.94	77.1

As seen in Table 3.3, Tanzania performs well in the education index only when compared to the Sub-Saharan African average, (This index measures relative achievement in both adult literacy and combined primary, secondary and tertiary gross enrolment). Tanzania has to draw lessons from the performance of other countries, both within the region and outside, in order to improve her human capital.

Infrastructure

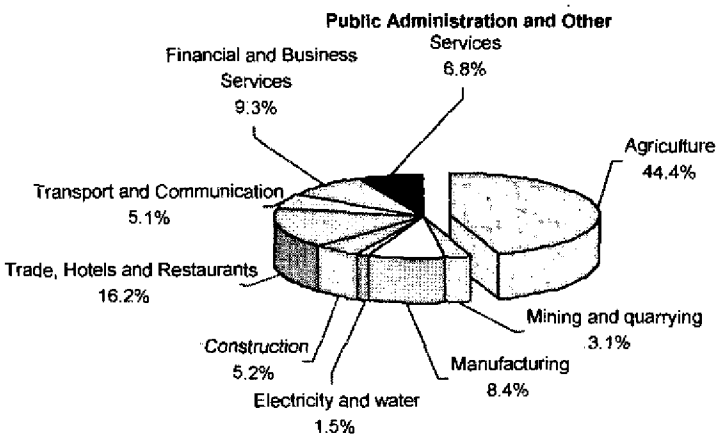
The structure of capital formation by asset type also gives a reflection of investments in physical capital and infrastructure. In real terms total capital formation doubled within ten years from T.Shs. 334,829 million in 1994 to T.Shs. 670,264 million in 2004 (URT 2005), of which T.Shs. 78,539 million (11.7%) was spent on roads and bridges and T.Shs.326,555 million (48.7%) on equipment, thus making the two asset types account for over 60% of total capital formation in the economy during 2004. Of capital formation in equipment, 67.5% is industrial equipment for increasing productivity, and 32.5% transport equipment.

Factor allocation: structural change of the economy and manufacturing performance under different policy regimes

GDP structure

The structure of Tanzania's economy is dominated by agriculture, whose contribution to GDP in 2004 was 44.4%, followed by trade, hotels and restaurants (tourism is reported here) with 16.2% as shown in Figure 3.2.

Figure 3.2 Mainland Tanzania: Sectoral composition of GDP, 2004 (at constant 1992 prices)



Note: * excluding Bank Service charges

The structure of the economy has not changed in the past decade or so, despite the many incentives offered to investors to effect diversification. Massive investments in the mining sector in recent years have improved the contribution of this sector, though, given the small base, it is unable to make a significant impact on structural change (Table 3.4).

Table 3.4 Mainland Tanzania: sectoral contribution of overall GDP (percent), 1993 – 2004 (at constant 1992 prices)

Economic activity	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Agriculture	49.3%	49.6%	50.7%	50.6%	50.1%	49.1%	48.9%	48.2%	48.0%	47.5%	46.8%	46.4%
Crops	36.3%	36.5%	37.7%	37.6%	37.3%	36.5%	36.4%	35.7%	35.8%	35.5%	34.8%	34.6%
Livestock	6.9%	6.9%	6.8%	6.7%	6.7%	6.6%	6.5%	6.4%	6.3%	6.1%	6.1%	6.0%
Forestry and Hunting	3.3%	3.3%	3.3%	3.3%	3.2%	3.1%	3.1%	3.1%	3.0%	2.9%	2.9%	2.8%
Fishing	2.9%	2.9%	2.9%	2.9%	3.0%	2.9%	2.9%	2.9%	3.0%	3.0%	3.0%	3.0%
Mining and Quarrying	1.1%	1.3%	1.4%	1.5%	1.7%	2.0%	2.1%	2.2%	2.5%	2.7%	3.0%	3.2%
Manufacturing	8.2%	8.1%	7.9%	8.0%	8.1%	8.4%	8.3%	8.3%	8.3%	8.4%	8.6%	8.8%
Electricity and Water	1.6%	1.6%	1.6%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.6%	1.6%	1.6%
Electricity	1.4%	1.4%	1.4%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.4%	1.4%
Water	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Construction	4.6%	4.6%	3.8%	3.9%	4.1%	4.3%	4.5%	4.6%	4.8%	5.0%	5.2%	5.5%
Trade, Hotels and Restaurants	15.7%	15.7%	15.7%	15.6%	15.8%	15.9%	16.1%	16.4%	16.5%	16.6%	16.8%	17.0%
Transport and Communication	5.2%	5.1%	5.3%	5.1%	5.2%	5.3%	5.4%	5.4%	5.4%	5.5%	5.4%	5.4%
Financial and Business Services	10.5%	10.6%	10.3%	9.9%	10.3%	10.5%	10.4%	10.4%	10.2%	10.0%	9.9%	9.7%
Finance and Insurance	3.9%	4.0%	3.7%	3.4%	3.8%	4.0%	4.0%	3.9%	3.8%	3.7%	3.6%	3.5%
Real Estate	6.2%	6.2%	6.3%	6.2%	6.2%	6.2%	6.2%	6.2%	6.1%	6.0%	6.0%	5.9%
Business Services	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Public Administration and Other Services	8.8%	8.7%	8.2%	8.0%	7.9%	7.8%	7.7%	7.7%	7.5%	7.3%	7.2%	7.1%
Public Administration	5.9%	5.7%	5.2%	4.9%	4.9%	4.8%	4.6%	4.5%	4.4%	4.2%	4.1%	3.9%
Education	1.1%	1.1%	1.1%	1.1%	1.1%	1.2%	1.1%	1.2%	1.2%	1.2%	1.2%	1.2%
Health	0.6%	0.6%	0.6%	0.6%	0.7%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
Other Services	1.2%	1.2%	1.2%	1.2%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
Less Financial Services indirectly measured	-5.0%	-5.3%	-4.8%	-4.2%	-5.0%	-5.2%	-5.1%	-5.0%	-4.8%	-4.7%	-4.6%	-4.6%
Total GDP (factor cost)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: National Bureau of Statistics

Table 3.5 shows the influence of policy regimes on some macro-aggregates. It can be seen that the period of controlled policies (1967-1985) can be associated with the low growth of the economy as well as low growth of the manufacturing sector. In terms of transformation of the economy, the structure has remained more or less the same, with the dominance of the agriculture sector, mainly because of its historical legacy. As a typical colony, Tanzania was designated an exporter of raw materials. Little was done by the colonial order to diversify the economy. As such, Tanzania inherited an agro economy at independence and had insufficient resources to champion industrialization.

Table 3.5 Tanzania: Performance of economy and structural change under different policy regimes

	GDP growth	Growth of Manufacturing	Share of agriculture in GDP	Share of manufacturing in GDP	Share of services in GDP
1961-1966	7.8	15.5	49.0	5.0	46.0
1967-1985	2.9	0.5	45.7	9.1	45.2
1986-2004	4.0	4.0	47.5	8.3	44.2

Source: Computed from Economic Survey (various)

Structure of Manufacturing

The manufacturing sector (ISIC 3) is often seen as the champion of technological change (and thus of increased productivity) if its structure is dominated by metals and engineering activities. As can be seen from Table 3.6, the manufacturing sector in Tanzania is dominated by food, beverages and tobacco, which rank first in all three policy regimes. During the liberalization regime (1986-2004), these activities expanded even more, to account for close to 60% of total manufacturing value-added.

Table 3.6 Structure of manufacturing value-added in Tanzania under different policy regimes (percent)

ISIC Revision 3	1961-66	Rank	1967-85	Rank	1986-04	Rank
151-4; 155, 160 (Food, beverages and tobacco)	42	1	32.6	1	58.5	1
171-2 [32] Textiles & leather	25	2	23.0	2	16.1	3
201 + 210 [33-34] Wood, furniture, paper printing & publishing	12	3	10.4	5	3.7	5
242 + 252 [35] Chemicals, petroleum, rubber & plastic products	8	5	16.2	4	4.2	4
269 [36] Non-metallic mineral products	3	6	0.6	6	17.5	2
(n.c) [37-9] (Basic) metal products, machinery, equipment & other manufactures	10	4	17.2	3	--	
Total manufacturing	100		100		100	

Key: [..] Former ISIC Code
n.c not classified
-- grouped together with ISIC 269
Source: Computed from Economic Survey (various)

The structure of manufacturing again reflects the historical legacy. At independence in 1961, Tanzania inherited an economy with no significant industrial activities. There were only 220 registered establishments, mainly foreign-owned, dealing in weaving, pottery, smith and wood works. The newly independent government embarked on rapid

industrialization with import substitution of consumer goods, and giving priority to the beverage and textile industries. This structure has continued to dominate to date.

In 1975 the Basic Industry Strategy (BIS) was launched as the country's 20-year industrial strategy (1975-1995), with two main emphases:

- Industrial activities that produce basic needs for the majority of the people, e.g. textiles and foot wear
- Structural transformation: iron and steel, metal working and engineering, and chemicals, etc.

The goal of effecting structural change towards capital and intermediate goods industries has not been realized. Tanzania has failed to attract foreign capital to finance the over ambitious BIS, especially the second component.

The need to effect structural transformation in manufacturing was again echoed in 1996 when the Sustainable Industrial Development Policy (SIDP), spanning 1996-2020, was launched as the second long-term strategy to succeed the Basic Industrial Strategy (BIS). SIDP was greatly influenced by the government's decision to phase itself out of investing directly in productive activities and let the private sector play a leading role.

In the short term (1996-2000) SIDP prioritized rehabilitation and consolidation of existing industrial capacities, creating and sustaining an enabling environment (trade, fiscal and monetary policies, investment promotion, development of infrastructure, land policy, human resources development to improve skills, consolidation and strengthening of technology, and R&D institutions and activities, etc.)

Priorities in the medium term (2000-2010) are the creation of new capacities with clear competitive advantages for export, and the promotion of the intermediate goods, light capital goods and machine making industries, while, in the long term (2010-2020), the priority is to promote full-fledged investments in basic capital goods industries.

The first phase of SIDP has recorded some successes, largely due to the privatization process.

Financial support institutions

The financial system in Tanzania is like other such systems elsewhere, with financial institutions at the centre stage. On the deposit side there are retail depositors, corporate depositors and government depositors, while borrowers are individuals, corporate borrowers and government borrowers.

Since the enactment of the Banking and Financial Institutions Act in 1991, which liberalized the sector, there has been a rapid growth of financial institutions in Tanzania, from two state-owned commercial banks and two non-bank financial institutions in 1996 to 28 commercial banks and five non-bank financial institutions in 2005. New foreign banks have been established, and micro finance institutions have been developed to support small and medium size enterprises. The national Micro Finance Policy was introduced in 2001. The government, in partnership with the World Bank and the private sector, has initiated a project that will increase access to finance by MSMEs.

Despite the increase in the number of financial institutions, concerns have been raised about their lending policies. Commercial banks have tended to prefer to hold government securities, as shown in Table 3.7.

The current focus of the Bank of Tanzania is to control inflation. One of the policy instruments deployed to achieve this is to mop up excess liquidity in the economy. As a consequence, the rate on government securities has gone up (by over 10%) thus attracting many commercial banks to invest heavily in Treasury bills and bonds, which are risk free securities. With such risk-free government papers commanding high returns, commercial banks find no incentive to invest in alternative ventures such as "high risk" agriculture.

Table 3.7 Commercial banks lending by sectors in Tanzania (percent)

Sector	1996	1998	2000	2002	2004
Agriculture	2.9	2.7	2.8	8.2	8.9
Mining & Manufacturing	10.7	12.0	13.4	18.0	19.2
Tourism	0.3	0.5	0.8	1.5	1.8
Trade	7.7	11.0	12.1	17.6	21.3
Govt securities	62.6	55.1	54.7	35.6	28.0
T.Shs. Million	360,420	448,463	691,610	749,084	1,341,486
Memo items: T.Shs./USD 1	620.2	716.1	888	1047.4	1107.3
Treasury bills yield, average	15.8	16.6	8.5	4.4	8.0

Source: Computed from URT (2005) Economic Survey 2004

Table 3.8 shows low lending to productive sectors compared with the dominance of government securities holding. Note that, while agriculture accounts for about 50% of GDP, it received less than 10% of commercial banks loans throughout. Since agriculture in Tanzania is almost totally dependent on rainfall, it is seen as being risky, which discourages lending to this sector. The financing of trade increased almost three fold between 1996 and 2004 as the services sector expanded to claim a higher GDP share.

The second concern of the financial institutions is the high cost of borrowing, mainly in the form of "unrealistic" interest rates as shown in Table 3.8.

Table 3.8: Tanzania: Average nominal interest rates (percent), selected years

	1997	1998	2000	2002	2004
Discount rate	20.5	20.7	13.1	9.4	12.6
Deposit rates					
Savings	12.78	12	7.1	3.5	2.4
Fixed	29.0	13.1	9.1	4.0	4.4
Lending rates					
Short term	24.5	28	19.1	14.8	15.7
Medium & long	21.5	26	21	16.8	14.1
Spread					
Short term	11.72	16	12	11.3	13.3
Med. & long term	-7.5	12.9	11.9	12.8	9.7
Lending rate (short term) less discount rate	4.0	7.3	6.0	5.4	3.1
Memo item: inflation rate	16.1	12.9	6.0	1.0	4.2

Source: URT (2005) Economic Survey 2004, computations for spread and last row

As can be seen from Table 3.8, real deposit rates have been maintained throughout the period under consideration, though for savings only in 2000 and 2002.

The main area of concern is the spread, i.e., the difference between lending and deposit rates, especially for short-term transactions where it ranges between 11.3% and 16%. This is an indication of the high cost of administering loans by commercial banks, which in turn can reflect inefficiency, and of the fact that competition in the financial market is far from perfect. The cost at which commercial banks acquire loanable funds from the Central Bank (discount rate) is another area of concern. For the period under consideration it ranges between 9.4% and 20.7%, far above the inflation rate if the aim is to realize the real rate. The Central Bank, for its part, claims that it does not set the discount rate, rather that it is determined by the market.

Pricing of commercial loans

The pricing of loans by commercial banks in Tanzania is computed as follows:
Loan (i) = Risk free (i) + Credit Risk Premium

where:

Loan (i) = interest rate paid by borrower

Risk free (i) = one year Treasury Bill rate

Credit risk premium = the four "Cs" of credit risk (character, capacity, collateral and covenants, i.e. terms and conditions contained in the loan agreement).

It is the credit risk premium that is at the discretion of commercial banks. Currently, commercial banks charge an average of 5.2% (compared, for example, with South Africa where it is 1.9% lower), the reason being an historical reflection of credit risk in the economy, where currently about 3.7% of all loans become non-performing (Wet, 2005). It is for this reason that commercial banks prefer government borrowers since these are considered risk free.

A number of commercial banks and non-bank financial institutions have responded to the micro finance policy by offering a variety of micro credit products to the extent of even targeting salaried employees outside their institutions. This is in addition to institutions, such as Savings and Credit Cooperatives, PRIDE, etc., which had been offering micro credit before the policy was passed. It is difficult to assess the impact of this policy, given the fact that many commercial banks only show a sectoral break down. However, evidence from isolated studies shows the impact of micro credit to be positive in increasing productivity and alleviating poverty. The beneficiaries, however, point out the high cost of borrowing in the form of high interest rates as an impediment to further borrowing.

One of the outcomes of the policy was the creation of the National Micro Finance Bank, which was hived off from the hitherto sole commercial bank, the National Bank of Commerce, when it was privatised in 2000. The loan portfolio of NMB has expanded. As with other micro credit schemes, there are concerns about the short repayment period, the small size of the loans (about USD 50) and the high effective interest rate (reaching as high as 40% when computed on an annual basis).

As a consequence of the Capital Market and Security Act, 1997, the Dar es salaam Stock Exchange was born, as another alternative for raising capital. Its scope is, however, limited given its lack of experience, compared, for example, to Kenya where the Nairobi Stock Exchange has been in operation since the 1950s. Also, the number of listed companies is small, only eight with a total market capitalization of T.Shs. 2,493.6 billion or about USD 2,195.3 million as of early August 2005. This means that total market capitalization is just about twice the commercial banks' lending. The listed companies are Tanzania Oxygen Limited, Tanzania Breweries, Tanzania Tea, the Tanzania Cigarette Company, Simba, Dar es salaam Handling Company, KA, and East Africa Breweries Limited.

Partly in response to the campaign to increase share ownership, the Government launched the Unit Trust of Tanzania (UTT) to hold in trust certain shares of privatised firms and ensure that the shares were widely distributed among Tanzanians, who were offered a discount of 30% per share if they subscribed. The response from the public was high, with the first ten weeks of Initial Public Offer (IPO) (up to July-end 2005) realizing T.Shs. 90.2 billion, more than the combined amount realized during earlier IPO subscriptions (T.Shs. 83.2 billion).

3.4 Institutions, integration and invariants

Many initiatives have been undertaken with regard to institutions, integration and invariants.

Private sector development, regulatory structure and support to business

Tanzania has, in the recent past, implemented a number of measures to develop the private sector, improve the regulatory framework and increase competitiveness. Notable among such initiatives is the Business Environment Strengthening in Tanzania (BEST) Programme, developed to implement reforms in order to improve the business environment and influence the performance of the private sector in Tanzania. The programme was initiated by the government, with full private sector participation.

The BEST programme has, among other aims, that of improving regulatory and administrative constraints on private sector operations and government service delivery processes and attitudes. The programme has five components which target the implementation of reforms within government and the private sector: achieving better regulations, improving commercial dispute resolution, strengthening the Tanzania Investment Centre to effectively facilitate both foreign and local investors, and changing the culture of Government. The fifth component, BEST-AC, deals with advocacy and is focussed on providing support to the private sector through direct funding and other support services. The BEST programme has not yet been implemented in full, in particular BEST-AC. It may therefore be too early to assess its impact. However, going by the wide consultations of stakeholders in its formation and the fact that the programme covers much of the concerns of the private sector, it is expected that BEST will de-bottleneck many of the constraints and lead to higher productivity.

In 2000, the Tax Revenue Appeals Board (TRAB) and the Tax Revenue Appeals Tribunal (TRAT) were established with the aim of addressing the concerns of taxpayers. The Better Regulatory Unit (BRU) and Commercial Dispute Resolution (CDR) have been strengthened and finalized to support the BEST programme. In addition there have been reforms in business licensing. Initiatives have begun for registration of businesses and assets held in the informal sector.

A number of business associations have been formed by the business community. These include the Confederation of Tanzania Industries, and the Tanzania Chamber of Commerce Industry and Agriculture. There is a structured mechanism to support business in the form of annual investor round tables with external investors (chaired by the President of Tanzania).

Integration into world economy

Tanzania launched her trade policy in 2003. The policy relies on a number of instruments to achieve the stated objectives (see section four). These instruments include:

(i) Tariff-based (ad valorem) instruments like tariffs and taxes
(ii) Non-tariff barriers/measures such as pre-shipment inspection, customs valuation and standards
(iii) Trade defense instruments such as safeguards, subsidies, anti-dumping and rules of origin
(iv) Trade development instruments including special processing zones, export processing zones, investment codes and rules, export facilitation, and export development and facilitation

(v) International policy instruments such as regional arrangements, WTO Agreements, bilateral initiatives

The instruments are ranked in descending order thus: investment promotion, tariffs and taxes, export processing zones, standards and quality, subsidies, export development and promotion, preferential treatment, and rules of origin. Reforms in trade and the tax system, exchange rate liberalization, privatization, and the promotion of foreign direct investment have led to an increase in imports into Tanzania.

A conventional way of measuring this is the degree of openness computed as:

Openness = (Exports + Imports)/GDP

In 1983, before any liberalization measures were adopted, the coefficient of openness was 16.8%. This rose to 22.4% in 1984, when the economy was partially liberalized, to close to 50% in 2004. Whether openness causes higher growth or not is still, however, an empirical question (there are different country experiences), but there seems to be general agreement that trade openness is a central element of successful growth strategies. Tanzania has achieved trade openness through:

- Trade liberalization (starting in 1984 and intensified in 1986 and 1993)
- Promotion of economic processing zones (EPZs)
- Unilateral trade reforms
- Participation in bilateral agreements (12 in number)
- Participation in cross-border initiatives: this is a programme for stimulating cross-border trade among countries in the Eastern, Central and Southern Africa regions. Fourteen countries participate in these initiatives
- Participation in regional trade agreements such as the East African Community, the Southern Africa Development Community (SADC), and the Indian Ocean Rim.
- Participation in other arrangements, such as SADC – EU EPA within the framework of ACP-EU cooperation, the New Partnership for Africa's Development (NEPAD), and the US Africa Growth Opportunities Act (AGOA)

As shown in Figure 3.3, the openness is mainly explained by imports. This is not a very healthy situation as it shows the persistence of trade deficits. Efforts have thus to be stepped up to increase exports and bring about a favourable trade balance.

Figure 3.3 Mainland Tanzania: Share of Foreign Trade in GDP, 1993-2004

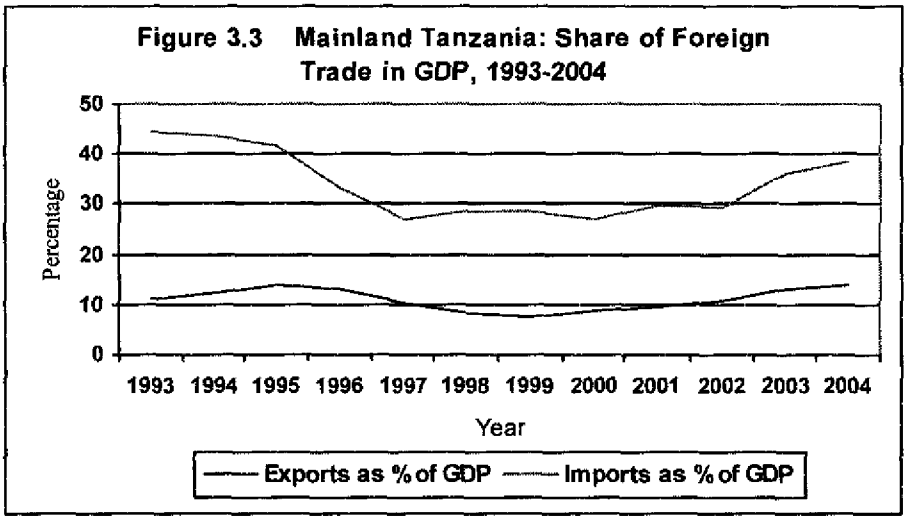


Table 3.9 shows the consequence of increased openness, an upsurge in imports. An increase in imports has many outcomes that have a bearing on productivity, especially in economies like Tanzania that experienced long periods of import compression due to falling import capacity, and rationing as a deliberate policy – in order to balance supply and demand for foreign exchange (see Mbelle 1988). First, imports of consumer goods increase the quantity and quality of such goods in the economy. This acts as an incentive for actors in the economy to produce/increase production – and hence increased productivity – in order to raise their effective demand. Second, the increased inflow of intermediate inputs solves critical bottlenecks in the utilization of current productive capacities, and hence leads to increased production/productivity. Lastly, more inflows of capital goods, especially in the form of machinery, lead to capacity expansion, which in turn leads to increased productive capacity and hence increased productivity.

Table 3.9 Mainland Tanzania: Imports (C.I.F) by major categories, 1993-2003 (Millions of US$)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Capital Goods:	*632.9*	*656.5*	*554.2*	*501*	*563.6*	*764.9*	*693.2*	*638.2*	*754.7*	*547.3*	*644.9*
Transport Equipment	262.3	242.3	209.7	202.7	253.1	253.1	231.8	228.5	189.6	164.3	194.1
Building and Construction	103.5	107.5	49.2	42.5	85.1	137	121.6	128.8	159.5	93.6	128.7
Machinery	267.1	306.7	295.3	255.8	225.4	374.8	339.8	280.9	405.7	289.4	322.1
Intermediate Goods:	*296.2*	*290.4*	*609*	*531*	*382.9*	*303.4*	*319.6*	*319.4*	*440.2*	*311.3*	*484.7*
Oil	167.2	149	193.8	158.4	173	126.8	148.1	142.6	220.5	150.2	284.1
o/w: Crude Oil	71.96	79.77	115.2	69.9	104.8	63.6	77.9	0	0	0	0
White	95.24	69.19	78.6	88.5	68.2	63.2	70.2	142.6	220.5	150.2	284.1
Fertilizers	11.3	11.7	11.7	23.3	22.6	13.8	10.8	16.8	15.5	11.9	20.6
Industrial Raw Material	117.7	129.7	403.4	349.3	187.3	162.8	160.7	159.9	204.2	149.2	179.9
Consumer Goods:	*312.2*	*359.5*	*377.7*	*361.8*	*373.1*	*520.4*	*559.9*	*576.7*	*531.1*	*382.3*	*438.6*
Food and Food stuffs	93.7	127.5	44.2	52.7	97	180.9	230.7	183	169.2	114.4	125.1
All Other Consumer Goods	218.5	232	333.5	309.1	276	339.5	329.2	393.8	361.8	267.9	313.5
Miscellaneous	*224.1*	*198.6*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total	1465.4	1505.0	1540.8	1393.8	1319.5	1588.7	1572.6	1534.3	1726.0	1241.0	1568.2

Source: Bank of Tanzania, Economics Survey 1998 & 2003

3.5 Competition, social dimension and environment

Competitiveness

Competitiveness involves the macroeconomic environment, public institutions and technology. Two indices are commonly used in ranking countries: the Growth Competitiveness Index (GCI) and the Business Competitiveness Index (BCI). GCI gauges the macroeconomic environment, the state of the country's public institutions and the level of technological readiness. The BCI, on the other hand, examines company-specific factors that improve efficiency and productivity.

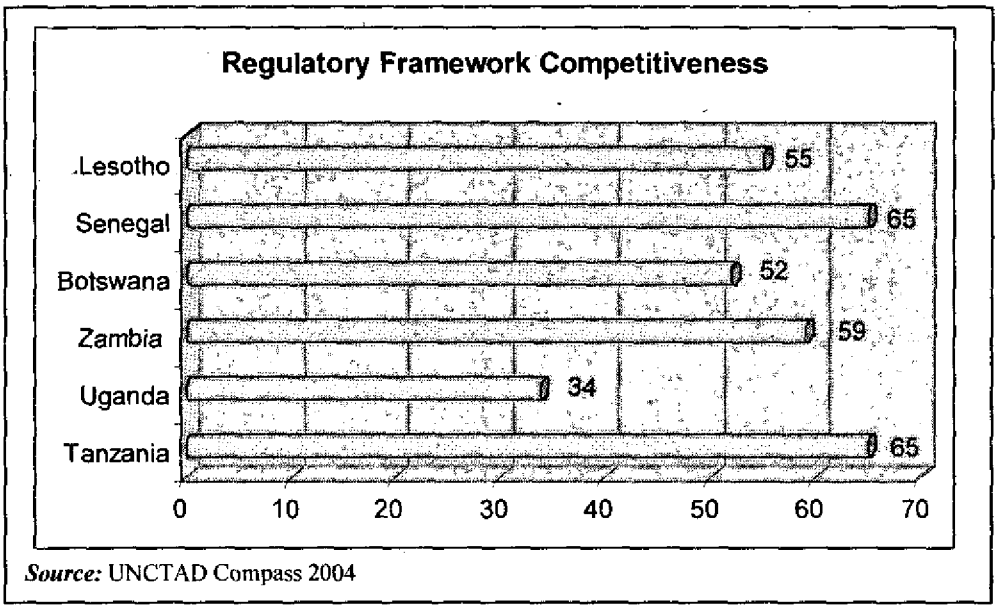
According to the *Global Competitiveness Report 2004-2005*, Tanzania was placed at the bottom quintile in the GCI ranking in 2004, at 80th position out of 104 countries, having dropped from 69th position in 2003. The other two EAC members, Uganda and Kenya, improved their standings – from 83rd to 78th for Kenya and from 80th to 79th for Uganda. This change was caused by Tanzania's falling in both the public institutions index and the technology index (despite gaining in the macroeconomic index by four positions, from 76th in 2003 to 72nd).

In the Business Competitiveness Index ranking Tanzania fell from 68th position in 2003 to 90th in 2004 (Kenya 63rd and Uganda 71st), having dropped in the company operations and strategy index and in the quality of business environment index.

At the regional level, the prospects seem good for Tanzania in terms of the GCI. It ranked 9th (ahead of the other two EAC members) out of a group of twenty-five countries in Africa (Algeria, Angola, Botswana, Cameroon, Chad, Egypt, Ethiopia, Gambia, Ghana, Kenya, Madagascar, Malawi, Mali, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Senegal, South Africa, Tanzania, Tunisia, Uganda, Zambia and Zimbabwe).

The regulatory environment has also been improved quite substantially. The end result is an environment comparable to countries such as Lesotho, Botswana and Senegal, which had in the past been far ahead of Tanzania, as Figure 3.4 shows (score out of 100).

Figure 3.4 Tanzania: Regulatory framework competitiveness



Source: UNCTAD Compass 2004

Income inequality

High levels of income inequality (Gini coefficient of above 0.47) limit the effects of growth on poverty reduction. Tanzania is a low income-inequality country, mainly because of a long history of socialist programmes (see section 1). According to the HBS 2000/01, there was a marginal increase in income inequality between the last two surveys (1991/92 and 2000/01) from 0.34 to 0.35. It was also revealed that the consumption of the

richest 20% rose from 43% during 1991/92 to 44% during 2000/01, while that of the poorest quintile stagnated at 7%. It is important for Tanzania to contain growing inequality because of its impact on poverty. Poverty leads to low production and productivity.

Environmental concerns

Tanzania is endowed with land resources, a coastal zone and a number of rivers and inland lakes. Land use patterns include grazing land (50.1%), forests and woodlands 43%), small scale cultivation (4.4%), large scale farming and plantations (0.7%), and other uses, swamps and urban land (1.8%) (Berry *et al,* 1982). About 25% of the total land area is gazetted as National Parks (twelve in number covering 5.4%), game reserves (eighteen in number, covering 6.6%) and Game Controlled Areas (covering 13%). Tanzania relies mainly on land-based natural resources, and is also endowed with a variety of ecosystems where rare and endemic species of flora and fauna are found.
It is this richness of environmental resources that puts Tanzania, home to Mount Kilimanjaro, the highest mountain in Africa and the world famous Serengeti National Park, among the world's leading tourist destinations, About 15% of the total land area is designated as world heritage.

The main environmental concerns in Tanzania are land degradation caused by soil erosion (which affects agricultural land, open land and grazing land and is thus location-specific), deforestation (estimated at around 1.7% per annum), livestock overstocking and consequent localized overgrazing, urban and industrial pollution, over-fishing and destruction of fish habitats through unsound fishing methods, coastal erosion, urban and industrial pollution, and poaching and encroachment in designated wildlife areas. A threat to biodiversity is posed by human activities in the form of poaching, unsustainable harvesting of forest resources, bush fires and bad farming practices.

As one of the consequences of this degradation, Tanzania's placing in the Environmental Sustainability Index is low, at 80th position among 142 countries in 2002 (WEF 2002), below its East Africa partner Uganda (76th position), though above another partner Kenya (89th position).

The concern with environmental degradation is based on its negative impact on natural endowments and the loss of output and income, for example from tourism. In agriculture, for example, given the low level of technology and bad farming practices such as extensive farming, degradation leads to low productivity, which has an overall negative impact on GDP and export earnings, given the importance of agriculture in the economy (see section three).

These environmental concerns have been addressed through action plans and legal instruments as well as awareness campaigns on reforestation and good farming practices, etc., targeted at the general population.

Tanzania has a coherent and comprehensive National Environmental Policy, which addresses environmental issues and especially the environmental concerns. In addition, the National Environmental Management Council serves as a watchdog to ensure compliance to this policy and the achievement of sustainable development.

3.6 Issue specific to Tanzania: Privatization

Privatisation, as an aspect of changing property rights, has been an important policy instrument designed to increase efficiency and improve productivity. It is widespread in both developed and developing countries.

The upsurge of public enterprises in developing countries, either through the creation or the nationalisation of private entities was well intended: to generate employment, make goods available at a cheaper price, correct a weak indigenous private sector and promote the transfer of technology. Experience, however, showed that most such enterprises performed poorly and imposed a burden on government budgets.

In order to correct the poor performance of public enterprises, governments initially experimented with a number of measures, such as changing management teams without changing the form of ownership. The very limited success led to an investigation of the only remaining alternative, that of changing ownership through reverting to private ownership. But privatisation, however desirable, proved complicated and only when it was properly executed did it bring about the desired outcomes. (See section four.)

The obstacles to privatisation experienced in developing countries include less-enabling country conditions (illiquid indigenous entrepreneurs who are unable to purchase enterprises that are on sale, rudimentary capital markets and unsupportive financial institutions), resistance from stakeholders on social grounds (fearing the consequent unemployment, growing inequity etc) and the bad state of the enterprises (heavy debt burden, bad balance sheets, their outdated technology, etc).

In order to correct these problems, countries have used a combination of measures, such as the governments absorbing the debts and introducing financing facilities to enable people to acquire shares, creating formal social safety nets in order to cushion the impact on retrenches, and mounting massive education programmes to sensitise the people and drum up support for privatisation.

As pointed out in section 1, Tanzania embarked on a massive nationalization in 1967 and the subsequent formation of new parastatal organizations up to the 1980s, the aim being to ensure state control of the "commanding heights of the economy". Although these policies were welcomed, given the material conditions of Tanzania at that time, such as the lack of indigenous entrepreneurs with sufficient capital to invest, the performance of many of the state enterprises, numbering over 425 in all, was not satisfactory (due to factors such as overstaffing, and sharp competition from an emerging private sector and from imports, etc.). Throughout the 1980s, about 50% of the parastatals were making losses and had to be bailed out by government subsidies, thus operating on a soft budget constraint. By 1990 they had made about USD 100 million in losses (about 3.7% of GDP) and were indebted to the government by USD 352 million, yet they continued to receive government subsidies while paying no dividends. Over 70 such corporations had halted operations and the rest were operating at a capacity utilization rate of around 20% (PSRC, 2004).

Following this widespread poor performance, an assessment was made and a decision reached by the government to restructure the parastatals in order to enable them to operate

as viable commercial entities. This restructuring would involve improving their efficiency, thus releasing pressure on the government budget, resuscitating ailing and closed parastatals in order to increase employment, giving a greater role to the private sector, and expanding share holding by the private sector and general public. In 1992 the Public Corporations Act was passed, allowing private sector participation in the ownership and running of parastatals.

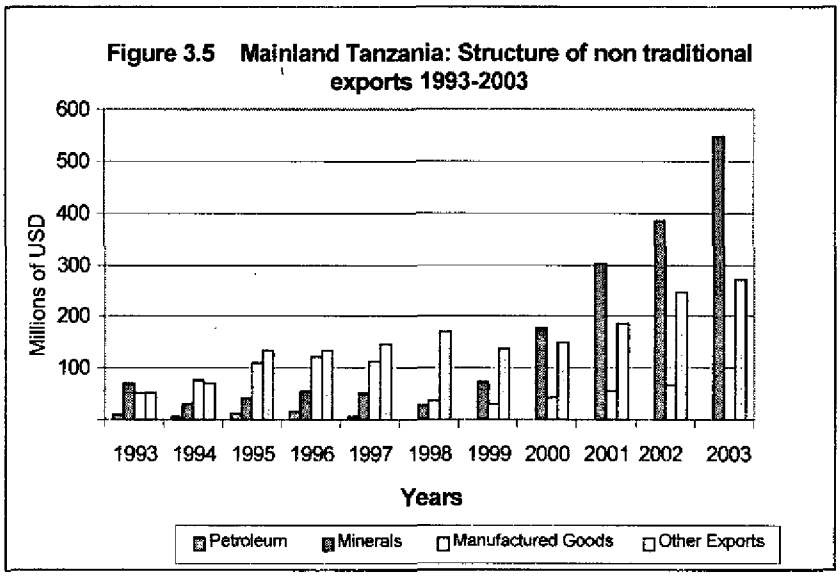
Following the amendment of the Public Corporations Act in 1993 to create the Parastatal Sector Reform Commission (followed in 1997 by the Privatization Trust Act), a total of 811 divestiture transactions were completed by 2004, of which 312 were divestiture units and 499 non-core assets (URT 2005). Between 1995 and 2004, a total of 219, out of an earmarked 400 state enterprises, were privatised.

Privatization strategies included:

- Management and employee buy-out (MEBO) of 20 parastatals
- Sale of shares
- Joint ventures
- Lease (short period) – negotiations are on-going for the Tanzania Railway Corporation
- Concession (long period)
- Liquidation

Among the benefits of privatisation that have been realized are:

- Contribution to government revenue: during 2001/02, for example, sixteen of the privatised parastatals paid T.Shs. 129.6 billion to the government, equivalent to 12.4% of domestic revenue.
- Less stress on government finances as subsidies to state enterprises have been reduced: effective 1992, the government stopped subsiding parastatals, thus saving about USD 100 million per annum, which can be channelled to productive ventures.
- Modernization of technology: most machinery had a vintage of 25-30 years. These were overhauled by the new owners. A good example is Tanzania Breweries Limited.
- Improved production and productivity in privatised parastatals, e.g., container terminal rose from 10 tonne per hour / in 2001 to 25 tonne per hour in 2003; sugar production at Kilombero sugar company increased from 29,000 tonnes in 1998 to 98,000 tonnes by 2002.
- Increased quality of manufactured goods.
- Increased export of manufactured goods (non-traditional exports). To be able to export is a function of both the capacity to produce and the ability to maintain quality, which are both aspects of competitiveness. From Figure 3.5 it can be seen that manufactured exports have been increasing steadily (after a slump in 1998 and 1999) as well as exports of minerals, largely due to increased FDI. In 2004 mineral exports had increased to USD 686.5 million from USD 552.2 million in 2003 (a 24.3% increase) and manufactured exports to USD 110.6 million from USD 83.8 million in 2003 (a 32% increase).



- Non-traditional exports have assumed greater importance mainly due to increased investments in quality assurance.
- Investments in privatised parastatals worth T. Shs 531 billion and USD 725.9 million were made for parastatals privatised between 1993 and 2003.
- Employment creation both on-site and off-site: resuscitation of more than 70 public enterprises which had been closed.
- Ordinary Tanzanians have been able to acquire shares in privatised companies, some of which have been listed on the Dar es Salaam Stock Exchange.
- Ordinary Tanzanians have been paid dividends from their share holding (e.g., a total of T.Shs. 136 billion during 2001-2003).

Studies of privatization in Tanzania have mainly focused on analyzing the balance sheets of privatized entities and output trends. In this regard it has been found that production and productivity increased as capacity utilization rates improved and new technology was introduced.

A good example is provided by the manufacturing sector, as shown in Table 3.10. The productivity of labour improves as it becomes better equipped with capital in terms of either quantity or quality. The increase in productivity in Tanzania is largely attributed to the improved quality of capital equipment through the introduction of modern technology.

Table 3.10 Tanzania: Productivity trends in manufacturing (T.Shs. Million)

	2000	2001	2002	2003	2004
Employment	84,589	91,519	91,385	89,600	89,826
Value-added	441,482	530,125	568,700	625,085	701,057
Productivity	5.2	5.8	6.2	7	7.8
% increase	-	11.5	6.9	12.9	11.4

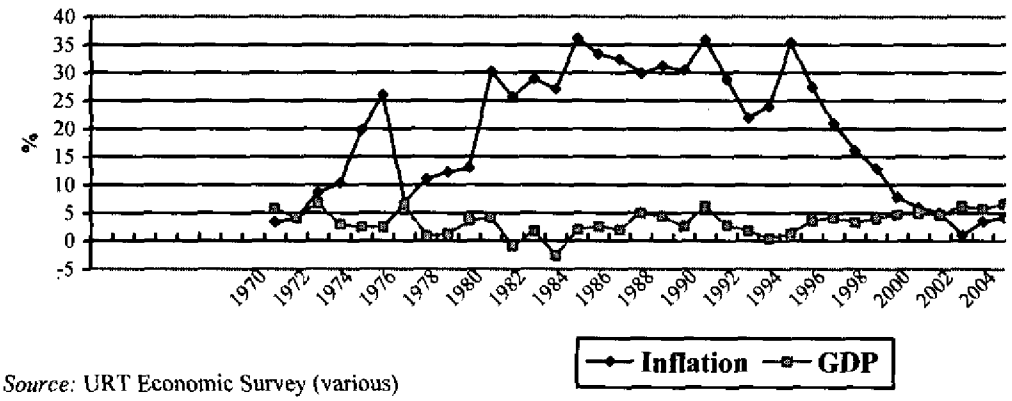
Source: URT (2005) Economic Survey, Productivity and % computed

Firms now earn profits and contribute to government revenue through taxes and dividends, unlike in the pre-privatization era when they made losses and operated on a

soft budget constraint. Such success stories include Tanzania Breweries Limited (TBL) and the Tanzania Cigarette Company Limited. These two firms explain much of the improvement in capacity utilization and production increase in Tanzania's manufacturing sector in recent years. For example, in 1992, before privatization, TBL produced 49 million liters of beer, with a capacity utilization rate of around 20% and output per worker of less than 177 hectoliters. When TBL was privatized in 1993, output rose to 57 million liters of beer and capacity utilization to 65%. By 2003 production had reached 175 million liters, with a capacity utilization rate of 90%, and productivity per worker close to 1,000 hectoliters (with the sacrifice of two-thirds of employees). TBL is today the largest contributor to government revenue.

Though there are no rigorous studies on the impact of privatization on the economy, one can allude to criteria like fiscal performance and inflation, given the fact that the ailing parastatals which reflected on the budget deficit were mainly financed through monetization of the deficit. A declining budget deficit and lower inflation are some of the consequences of privatization.

Figure 3.6 Trends in GDP growth and inflation rate in Tanzania, 1970-2004 (percent)



Source: URT Economic Survey (various)

The purpose of plotting GDP growth and the inflation rate is to discern their patterns. In theory, inflation has a destabilizing effect on growth. Credible macroeconomic policies that aim at containing inflation, such as cutting down subsidies to parastatals, generally lead to improved output and productivity. Inflation climbed steeply from 1979 (the economic crisis period) and remained at high levels up to 1994 before decreasing steadily towards 2004. A number of studies attribute inflation in Tanzania to government deficit financing, through monetization. Halting subsidies to parastatals favours the increase of productivity (of course inflation is also caused by agricultural decline, especially food crop production, food forming about 70% of the consumer basket).

IV. Discussion of policies with effect on productivity

The liberalization phase (post-1986) saw a number of policies being made in order to sustain the momentum of economic growth. Some of these have significant potential impacts on productivity.

4.1 "Cross-cutting" Policies

Some policies, referred to here loosely as "cross-cutting", have multiple effects: direct impact, broad impact and hypothesized consequences on productivity, and can be thought of as all-round. These are education policy, industrial policy and trade policy. They are discussed in this section.

(a) Education policy (1995)

The 1995 comprehensive "Education and Training Policy" includes the following general aims related to productivity increase – out of a total of nine aims:

- To guide and promote the development and improvement of the personalities of the citizens of Tanzania, their human resources and the effective utilization of those resources in bringing about individual and national development
- To promote the acquisition and appropriate use of literary, social, scientific, vocational, technological, professional and other forms of knowledge, skills and understanding for the development and improvement of the condition of man and society
- To develop and promote self-confidence and an inquiring mind and a readiness to work hard for personal self-advancement and national improvement
- To enable and expand the scope of acquisition, improvement and upgrading of the mental, practical, productive and other life skills needed to meet the changing needs of industry and the economy
- To promote love and respect for work, self- and waged-employment and improved performance in the production and services sector

The Education policy has succeeded in increasing access to education. The delivery of education services, however, faces problems related to quality and investment in higher education, especially in engineering and science areas. As pointed out in section two, there has been a rapid increase in enrolment. This, however, outpaced available resources in terms of classrooms, quality teachers, and teaching and learning materials. With regard to expanding enrolment at tertiary level, special programmes need to be designed in order to attract students into science-based subjects. Currently such programmes are very limited in scope and number.

Another problem prevalent in the education system is the poor incentives offered to teachers, especially at institutions of higher learning. The effect has been a brain drain to other countries or a movement to greener pastures such as politics. The only two government universities, the University of Dar es salaam and the Sokoine University of

Agriculture, lost 17.3% and 21% respectively of their most productive academic staff due to the brain drain (World Bank Institute 2004).

(b) Sustainable Industrial Development Policy (SIDP), 1996

The success of SIDP will largely depend on the implementation of its long-term or third-phase program, that of producing intermediate and capital goods. This requires an immense mobilization of financial resources. As seen so far, the ability of the government is limited to the early phases of the programme. To expect commitment from the relatively inexperienced private sector would be equally unfeasible. What remains then is the ability to mobilize external resources. Experience with BIS should provide a valuable lesson that the scope is limited.SIDP implementation relies on actions from other sectors and institutions (fiscal, monetary, trade, science and technology, etc.). This requires proper coordination skills, which are not abundant in Tanzania.

Lastly, the factor conditions such as the state of infrastructure, the absence of fully serviced industrial sites, and the reliability of supply of the essential utilities of electricity and water, are still not favourable to meeting the policy objectives of such an ambitious industrialization programme.

(c) Trade policy

Tanzania's National Trade Policy (2003) restated the mission of the trade sector to "stimulate the development and growth of trade through enhancing competitiveness aiming at rapid socio-economic development". The overall goal of the policy is to raise efficiency and widen linkages in domestic production, and build a diversified competitive export sector as the means of stimulating higher rates of growth and development. The main objectives of the policy are:

- To stimulate a process of trade development as a means of triggering higher performance and capacity to withstand increased competition in the domestic market
- To achieve economic transformation towards an integrated, diversified and competitive economy capable of participating effectively in the multilateral trading system
- To stimulate and encourage value-adding activities on primary exports as a means of increasing national income, even on the basis of existing levels of output
- To stimulate the flow of investment into export-oriented activities where Tanzania has a comparative advantage
- To help attain and maintain the long-term current account balance and the balance of payments

The trade policy has relied mainly on tariff instruments. Tax reforms, which started during the second half of the1980s, have led to rationalization of the tax structure and tax rates by reducing their number and level. In 1988/89, for example, tariff rate categories were reduced from 18, with rates ranging from 0 to 200%, to 7, with rates ranging from 0 to 100%. Subsequent tax reforms saw further gradual reductions in tariff rate categories

or bands from 7 to the current 4 categories, ranging from 0 to 25% (Table 4.1). There were also reductions of excise duties and other taxes, notably sales and income taxes.

The existing four import tariff bands applicable in Tanzania are classified according to the degree of processing of imports. As such, the tariff rates rise the higher the degree of processing, so that goods for final use (consumer goods) attract the highest rate, and raw materials the lowest rate. The four tariff rates are as follows:

- 0% – meritorious goods, inputs for the agriculture and pharmaceutical industries, raw materials, and capital goods;
- 10% – semi-processed intermediate goods (semi-processed inputs and spare parts other than those for motor vehicles);
- 15% – processed intermediate goods (fully processed inputs and motor vehicle spare parts)
- 25% – finished/ consumer goods.

Table 4.1 Gradual tariff simplification in Tanzania: 1988/89 – 2001/02

	1988/89	1990/91	1992/93	1993/94	1997/98	1999/00	2001/02
Tariff bands	7	5	5	4	5	5	4
Customs duty (%)	0, 15, 20, 25, 40, 60, 100	0, 20, 30, 40, 60	0, 10, 20, 30, 40	5, 20, 30, 40	0, 5, 10, 20, 30	0, 5, 10, 20, 25	0, 10, 15, 25
Sales tax rates* (%)	--	0, 20, 30, 40	--	0, 5, 15, 25, 30	0, 5, 10, 25	20	20
Excise duty rates** (%)	--	10, 25, 30, 50, 60, 75, 80	--	--	--	30	--
Marginal income tax rates (%)	15-55	7.5-40	30-May	--	--	17.5-30	--

*VAT at a uniform rate of 20% replaced sales tax as from July 1998 (fiscal year 1998/99).

**For some commodities the rates are of specific form (e.g., Tshs. per quantity or weight or length).

— no measures taken

Source: Ministry of Finance (various), Financial Statement and Revenue Estimates

The effect of tariff simplification has been the upsurge in imports, with the trade balance nowhere close to balancing, or imports and exports trends converging (see Figure 3.3.). A successful trade policy should aim, first and foremost, at creating import capacity, i.e. expanding exports in order to bring a favourable balance. There have been more recent efforts towards this end with energy directed at promoting non-traditional exports.

4.3 Policies with direct impact on productivity

R&D and adoption of new technologies

Though there are many enabling national frameworks for R&D and the adoption of new technologies, the impact of the existing infrastructure is not very supportive, mainly due to limited funding. The intake of science (engineering) students at institutions of higher learning and technical colleges is still low compared to demand. The proportion of engineering students in total enrolment at universities is quite low compared to enrolment in other subjects. In 2002/03, for example, at the University of Dare es salaam, the only institution offering degree programmes in engineering in Tanzania, out of a total enrolment of 7,369 students only 1,082 (14.8%) were pursuing degree programmes in engineering. On the one hand, government resources for offering scholarships are limited and, on the other hand, the high general level of poverty limits the ability of households to afford higher education. R&D institutions also suffer from low funding by the government. This has limited the level of activities as well as interaction with firms. The private sector, on the other hand, nascent as it is, sees investment in R&D activities as risky and unaffordable despite its desirability.

In order to encourage R&D activities, Tanzania needs to take a number of measures to strengthen R&D institutions so as to improve their effectiveness. The regulatory environment also needs to be further improved. Lastly, the system of rewards for R&D results should be improved, moving towards more tangible effects rather than mere certificates of recognition.

The private sector in Tanzania has limited resources for R&D. In this regard it should be encouraged to play a proactive role in networking with both local R&D institutions as well as participating in joint venture arrangements with outside R&D institutions, including firms on the frontier of new technologies.

Tanzania needs to strengthen her information infrastructure if the country is to play a proactive role in the fast globalizing world economy. Rural electrification, the review of ICT policy, and supporting IT training capacities will go a long way towards improving ICT indicators.

4.4 Policies with broad impact on economic performance and growth

(a) Investment policy (1996)

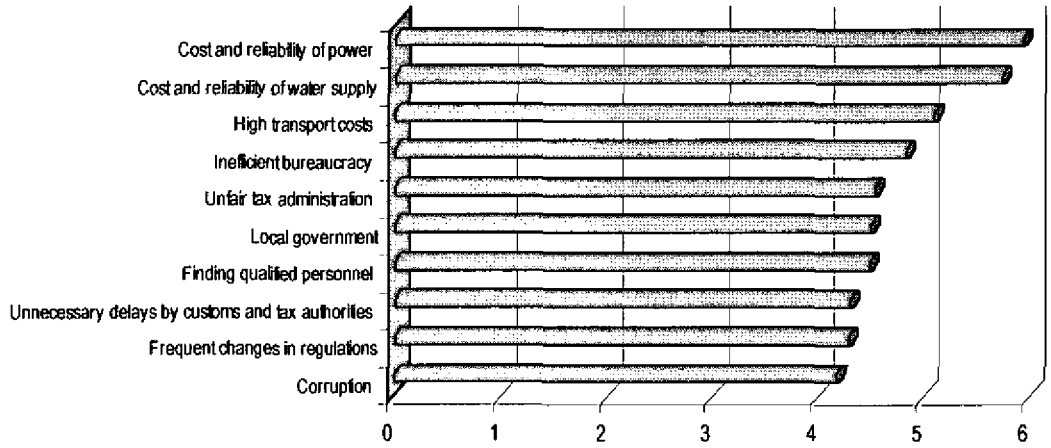
In pursuing the last objective, by Acts Supplement No.7 of 3rd October 1997, the Tanzania Investment Act, 1977, was enacted: "an act to make provision for investment in Tanzania, to provide for more favourable conditions for investors, and for related matters". The Tanzania Investment Center was established, a one-stop center for investors with, among other functions, the following:

(i) initiate and support measures that will enhance the investment climate

(ii) collect, collate, analyze and disseminate information about investment opportunities and sources of investment capital;
(iii) identify investment sites, estates or land, together with associated facilities for the purposes of investors and investments;
(iv) in general assist all investors to obtain all the necessary permits, licenses, approvals, consents, authorizations, registrations and other matters, and to enable certificates issued by the Center to have full effect;
(v) provide, develop, construct, alter, adapt, maintain and administer investment sites, estates or land together with associated facilities, create and manage export processing zones;
(vi) provide and disseminate up-to-date information on the benefits or incentives available to investors;
(vii) carry out and support local investment promotion activities;
(viii) perform any other functions which are incidental to the attainment of the objectives of this Act.

Though much has been accomplished in the investment climate, the state of complementary services, such as utilities, still leaves room for improvement. A survey by TIC conducted in 2004, asking firms to rank the top ten constraints to business, revealed the following constraints: less availability and reliability of power and water, poor state of physical infrastructure, inefficient bureaucracy, unfair tax administration, frequent changes in government regulations, and corruption, as shown in Figure 4.1.

Figure 4.1 Top ten constraints to business in Tanzania, 2004



Source: TIC

The future of investments in Tanzania will depend to a great extent on three factors: access to electricity and its reliability and cost, tax issues and the cost of credit. The

government is currently implementing a number of programmes to address these constraints (see discussion on privatization).

(b) Privatization

Though there have been commendable achievements with privatization, a number of problems continue to be faced. These include:

- Heavy indebtedness of enterprises earmarked for privatization which scares potential buyers
- Resistance, such as through court injunctions (about 170 in number currently), especially for enterprises which had many employees
- Lack of capital, especially for local buyers, thus delaying or failing to revamp the privatized enterprises within the agreed time frame. Leather factories and sisal estates are a case in point.
- Some investors giving incorrect information about their technical and financial ability, thus failing to honor divestiture agreements
- Outdated technologies in some of the enterprises earmarked for privatization, thus requiring initial massive capital investment to overhaul the technology in use. This discourages potential buyers.
- Lack of title deeds: out of 700 title deeds only 400 could be ascertained.
- The general level of poverty in Tanzania which limits the participation of many more Tanzanians in acquiring shares
- Some parastatals were not remitting worker contributions to the pension fund. The government has thus to make good T,Shs 18 billion (about USD 18 million) in order not to delay the pension benefits of retirees and retrenches.
- Low awareness of the issue of privatization among the general public
- Slowness in the privatization of important corporations such as the Tanzania Electric Supplies Corporation, the National Insurance Company and the National Micro Finance Bank.
- Delays in completing the establishment of regulatory bodies. So far only three have been established and are functioning fully: the Tanzania Communication Regulatory Authority, the Surface and Marine Transport Regulatory Authority and the Tanzania Civil Aviation Authority.

In particular, less successful privatized firms in Tanzania show similar experiences:

- Long time lag between the termination of government support of the public enterprise and the date of offering it for sale. In between, further depreciation of machinery and cannibalization of assets had been the order of the day.
- Being located outside the commercial city, Dare es salaam, thus presenting potential investors with a number of logistical problems
- They are energy-intensive firms. This is probably, due to the high electricity tariffs

Efforts have been directed towards solving some of the problems. These include:

- Completion of the formation of the remaining regulatory bodies for utilities and service enterprises: the Energy and Water Utilities Regulatory Authority, the Fair Competition Commission and the Fair Competition Tribunal
- Finalizing amendment of respective sectoral laws
- Improving awareness among the general public of the benefits of privatization
- Bid bond requirement

- Promoting sale of shares through the capital market
- More rigorous screening of bidders to gauge their financial capacity and commitment
- Instituting legal procedures against defaulters
- Rigorous debt collection procedures to follow up on investors who default on contractual payment

Three areas of government efforts need to be pointed out as they address some of the commonly cited problems.

Tax issues

Concerns with tax issues have included Tanzania having too many taxes, most of which are of a "nuisance" nature, and too narrow a tax base so that principal revenue sources are subjected to high tax rates with the attendant risk of tax evasion and businesses complaining of "harassment".

Tanzania has implemented and continues to implement a number of measures designed to address these concerns. In July 1996, the Tanzania Revenue Authority (TRA) was formed in order to improve revenue administration and collection. This was followed by the introduction of value-added tax (VAT) in 1998, which provided an opportunity for further rationalization and simplification of the tax regime. A Taxpayer Identification Number (TIN) has also been introduced.In addition, more than seven taxes have been abolished, some taxes such as corporate income tax have been reduced, and a large tax payer window has been introduced. The review of the tax structure is done with the participation of the private sector. The use of cheques in payment of taxes has also been introduced.

As a result of these measures, the tax base is now wider, taxes are lower and more uniform, revenue collection has increased by more than five times over the past five years, and a culture of trust has been cultivated between tax payers and the TRA.

High cost of power

The main concern has been the monopoly power of the single supplier of power, the Tanzania Electricity Supplies Company (TANESCO), a parastatal. The government is set to liberalize the power sub-sector by 2010 and conclude at least three "Production Sharing Agreements". The Energy and Water Utilities Regulatory Authority is to be formed during the 2005/06 financial year. Apart from encouraging private suppliers domestically, efforts are at an advanced stage to purchase electricity from neighboring countries (starting with Uganda and Zambia during 2005/06) for feeding into the national grid system. This is expected to increase the reliability of supply and lead to lower tariffs as supply increases from low cost sources – neighboring countries.

Other actions include:

- Restructuring of power sub-sector

- Development and promotion of utilization of indigenous energy sources and diversification
- Regular update of power systems master plan
- Issuance of guidelines and regulations for reducing energy losses in transportation, transmission and distribution, hence prospects for reducing cost
- Encouraging private generation and distribution
- Expediting the implementation of power projects
- Development and promotion of indigenous energy sources.

Expensive credit

The government has established a Credit Rating Agency to enhance the efficiency of financial intermediation in the country. One of the expected outcomes is a reduction in the cost of operations, which is expected to lead to lower interest rates charged to borrowers.

The Financial Sector Assessment Programme, in particular, is looking into ways of deepening financial sector reforms in order to realize lending rates that lower the cost of borrowing (and deposit rates that encourage savings).

4.5 Policies with hypothesized consequences for growth in the broadest sense: *Governance*

Governance, specifically good governance, is associated with high income growth, national wealth and social achievements. Empirical work has shown that there is a significant correlation between governance and socio-economic outcomes. Governance permeates political, social and economic spheres. Good governance promotes competitiveness, which is a critical feature of globalisation.

Governance issues are at the centre stage of policy making in Tanzania. The Tanzania Development Vision 2025 envisions good governance permeating the national socio-economic structure, thereby ensuring a culture of accountability, rewarding good performance, and effectively curbing corruption and other vices in Tanzania by the year 2025. The National Framework on Good Governance defines good governance as the exercise of official powers in the management of the country's resources in an effort to increase and utilize such resources for the betterment of life. It identifies the focus areas as:

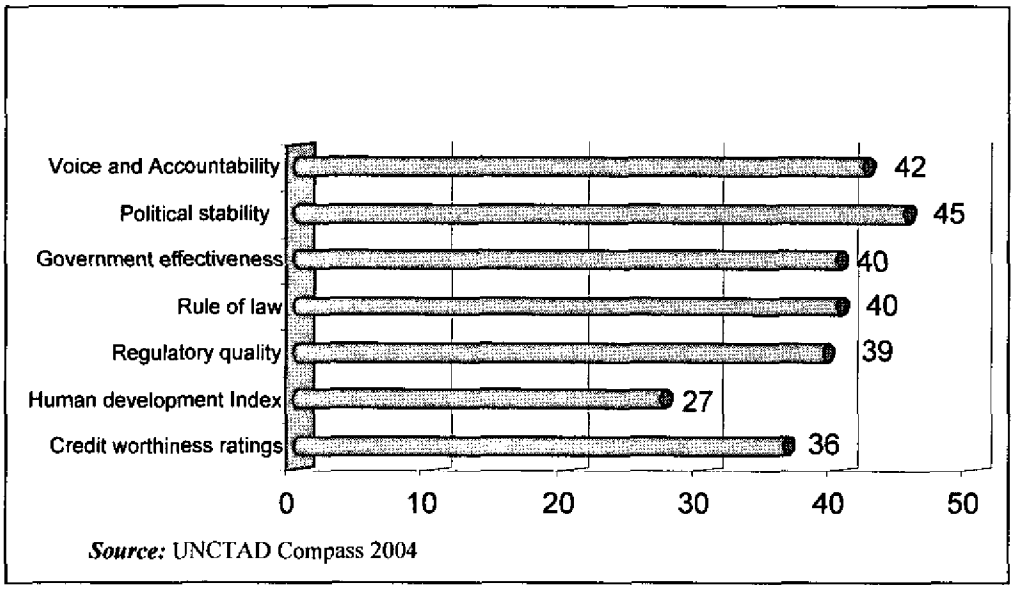
- Participation of the people in decision making for social, political and economic development
- Private sector and regulatory framework
- Constitutionalism, rule of law and administration of justice, and protection of human rights
- Promotion of gender equality
- Accountability, transparency and integrity in the management of public affairs
- Electoral democracy
- Capacity of the public sector to deliver public services efficiently and effectively

The National Strategy for Growth and Reduction of Poverty identifies good governance as

one of the three major clusters of poverty reduction outcomes (together with the growth and reduction of income poverty, and the improvement of quality of life and social well-being). Good governance is the bedrock for the other two outcomes to take place. Corruption is to be effectively addressed through instituting effective regulations and mechanisms regarding petty and grand corruption through strengthening anticorruption institutions such as the Prevention of Corruption Bureau (PCB), as well as implementation of the National Anti Corruption Strategy and Action Plan (NACSAP).

Tanzania has made good progress in many of the indicators of governance, especially in the political sphere, though expenditure management and processing of corruption cases leave much to be desired. The indicator where Tanzania has achieved little progress is the Human Development Index (HDI) (Figure 4.2). Globally also, Tanzania ranked 162 out of 177 countries in terms of HDI in 2004 (quite low compared to other East African countries Kenya, 148, and Uganda, 146) (UNDP 2004).

Figure 4.2 Tanzania governance performance



Source: UNCTAD Compass 2004

4.6 Overall analysis of strengths and weaknesses

An independent and comprehensive assessment was made by the Millennium Challenge Corporation (MCC) in 2004 in what is known as Millennium Challenge Account (MCA) threshold programme. The programme targets countries at "threshold" i.e. committed to undertaking the necessary reforms to improve policy performance. Sixteen policy indicators were considered, the threshold requirement being that countries should not score "substantially" below the mean on any of the indicators. Over thirty candidate countries were considered.

Only two countries, Bolivia and Georgia qualified in all the indicators, thus becoming eligible to benefit from MCA. Seven countries, Albania, East Timor, Kenya, Sao Tome and Principe, Tanzania, Uganda and Yemen missed one or two of the indicators, thus becoming eligible only to share USD 40 million.

Tanzania missed on two of the indicators, as shown in Figure 4.3. The assessment, with 0% being worst, 50% median and 100% the best, was as follows:

Ruling justly: failed in one indicator, control of corruption

- Political rights: Tanzania ranked 4th with a score of 64%
- Civil liberties: Tanzania ranked 3rd with a score of 87%
- Government effectiveness: Tanzania was ranked 0.27 with a score of 73%
- Rule of law: Tanzania was ranked 0.29 with a score of 73%
- Voice and accountability: Tanzania was ranked 0.15 with a score of 59%
- Control of corruption: Tanzania was ranked -0.19 with a score of 31% (failed).

With respect to *investing in people* the assessment showed that Tanzania passed in all indicators:

- Immunization rates: rank 89, scoring 77% (median 74.5)
- Health expenditures: rank 2.16 scoring 58% (median 1.78),
- Primary education expenditure: rank 2.11, scoring 61% (median 1.90)
- Primary education completion: rank 60 scoring 46%. (median 63.5%),

In *economic freedom indicators,* Tanzania failed in trade policy

- Regulatory quality: rank 0.14 (median 0.00), score 64%
- Credit rating: rank 24.1 (median 19.9), score 72%
- Days to start a business: rank 35 (median 47), score 77%
- Inflation: rank 4.48 (median 20) score 53%
- Fiscal policy: rank -1.24 (median -3.89), score 84%
- Trade policy: ranked 5th (median 4), score 3 5%.

The failure in the two indicators is explained by systemic issues. With regard to corruption, the low ranking is attributed to delays in processing corruption cases. Between 2000 and 2005, for example, there were 6,190 reported cases. Out of this number, evidence could not be found for 1,892 cases (30.6%), hence cases were closed, leaving 4;298 (69%) prosecutable cases. By 2005, 3;643 cases (84:8%) were still under investigation. Out of 655 cases in courts, judgment had been delivered on only 112 (17.1%). Of these, in only 44 rulings were the suspects found guilty and jailed (PCB files). Reasons for such delays are given as insufficient infrastructure (court rooms, magistrates, low funding, etc), but corruption cannot be entirely ruled out as contributing to the low conviction rate. The government has allocated enough financial resources to solve the bottlenecks, beginning in 2005/06.

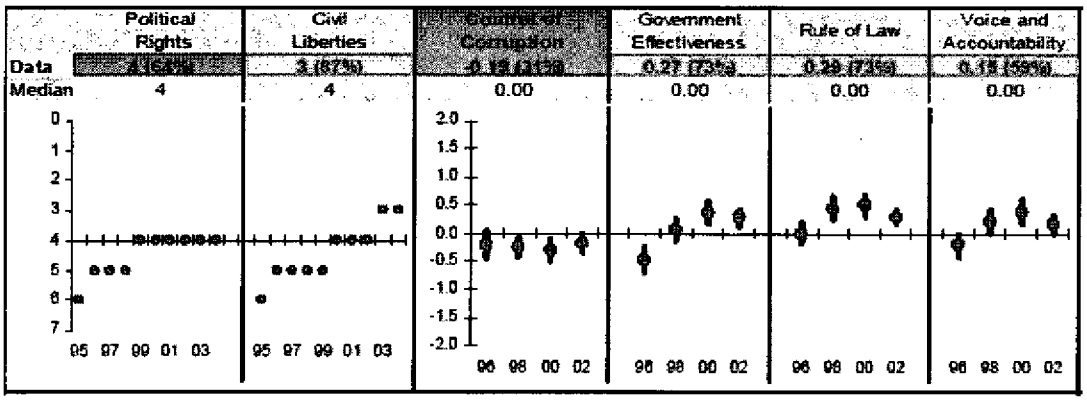
The trade policy is not very strong because of the persistent deficit in the trade account. Efforts to improve the situation have included promotion of non-traditional exports 9 (see also section 3).

These weaknesses notwithstanding, Tanzania has immense opportunities for improving productivity, given current liberalization policies and inflows of FDI. The threats include competition for FDI from neighbouring economies. It is thus important for Tanzania to stay the course of reform.

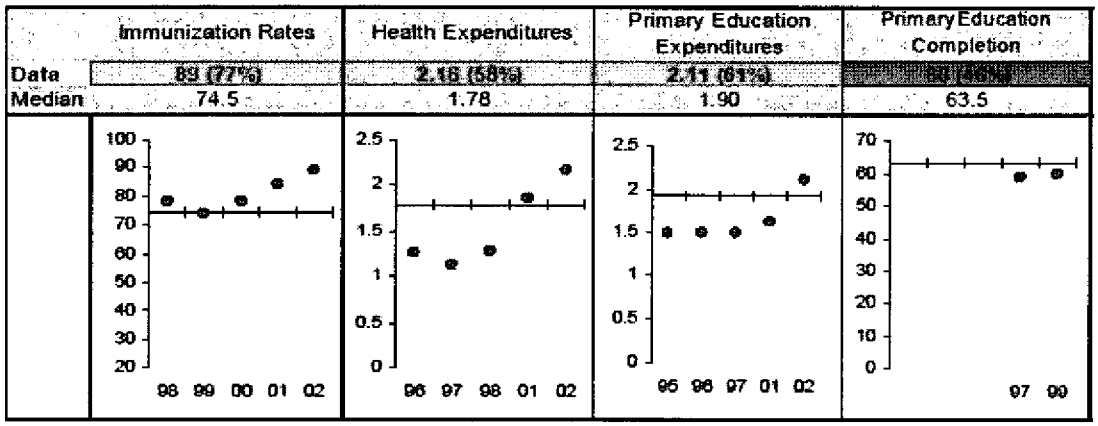
Figure 4.3 Tanzania: Millennium challenge corporation assessment

Tanzania

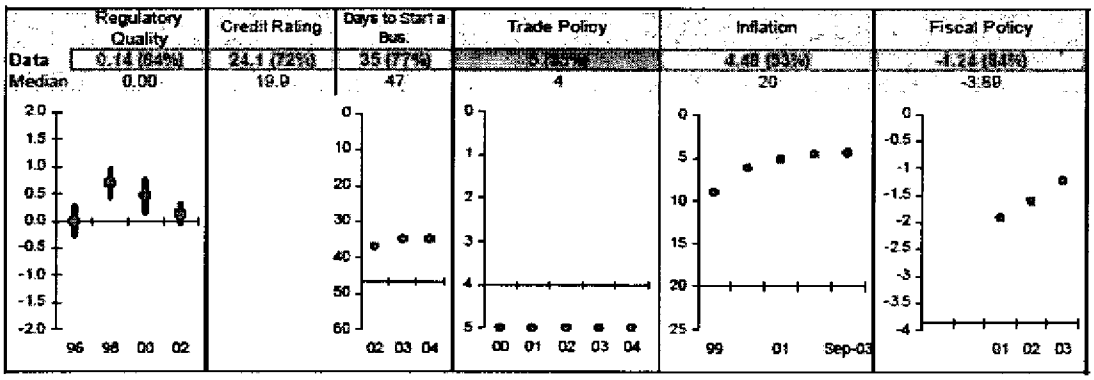
Ruling Justly



Investing in People



Economic Freedom



Note. The Board of the MCC will consider performance under these indicators plus qualitative and other materials in choosing countries eligible to submit compact proposals to MCC. The first number is the country's score and percentage in () is their ranking relative to other candidate countries (0% the worst, 50% the median, and 100% the best.) Graphs: higher is better, the horizontal-axis has been drawn through the median, the red dot is the data point, and the blue vertical bar is the standard error. Indicators highlighted in green are above the median as currently calculated and those in red are below. Medians may change as new data becomes available.

V. Concluding remarks

Tanzania has experienced cycles in growth performance during its post-independence period. Policies have had an impact on this trend. It is for this reason that the country has stayed the course of reform in the 1990s and beyond in order to protect growth. Important reforms in the economy and in sectors like education have greatly helped to improve labour productivity in the recent past. However, the state of technology in agriculture, the mainstay of the economy, is still low. In order to improve GDP performance, technological transformation of agriculture is a prerequisite.

There was a huge decline in Total Factor productivity between 1960 and 1990, largely due to bad policies. This was followed by a reversal in 1990, which indicates the scope for large gains in future. Tanzania has thus to instate policies which enhance the productivity of existing capital stock and promote new technologies.

Enhancement of productivity requires a greater role for R&D institutions and their interaction with firms. Such a link is quite weak in Tanzania. This is an area where institutions like UNIDO can greatly play a supportive role.

Bibliography

Berry, L., A. Mascarenhas and S. Steward (1982) "East African Country Profile: The United Republic of Tanzania", Worcester, MA, Clark University

Center for Global Development (2004) "MCA Threshold Programme, Country Selection", Report

Collins, S and B. Bosworth (1996), "The Empirics of Growth" Brookings Institution

Griliches, Z (1995) "Technology, Education and Production Sector Public Expenditure Review" Report to the Government of Tanzania

Hausmann, R, D. Rodrik and A. Velasco (2004) "Growth Diagnostics", Harvard University

Kikeri, S., J. Nellis and M. Shirley (1994) "Privatization: The Lessons of Experience", The World Bank, Washington DC

Mbelle, A.V.Y. (1988) "Foreign Exchange and Industrial Development: A Study of Tanzania", Published Ph.D. thesis, Gothenburg School of Economics and Commercial Law

Mbelle, A.V.Y. (1990) "Efficiency Performance Under Structural Adjustment Programmes: The Case of Textile Manufacturing in Tanzania", *Tanzania Journal of Economics*, Number 1, 1990.

Mbelle, A.V.Y. and T. Sterner (1991) "Foreign Exchange and Industrial Development: A Frontier Production Function Analysis of Two Tanzanian Industries" *World Development,* Vol.19 No.4, pp 341-347

Mbelle, A.V.Y. (2001) "Macroeconomic Policy and performance of the Manufacturing Sector in Tanzania: Has Liberalization helped? An Econometric Approach" in Szirmai A. and P. Lapperre (*eds.*) *The Industrial Experience of Tanzania*, Palgrave, pp 300-317

Morrissey Oliver (2003) Private Capital Flows to Sub-Saharan Africa: Managing Volatility with an Application to Tanzania, *ESRF Seminar.* Dar-es-Salaam.

Ndulu, B.J and J.J. Semboja (1994) "Trade and Industrialization in Tanzania: A Review of Experience and Issues" in Helleiner, G.K. (*ed*) *Trade Policy and Industrialization in Turbulent Times*, Routledge, London and New York.

OECD (2002) Attracting Foreign Direct Investment for Development: FDI and Domestic Private Sector Development in Africa, the experience of Tanzania. *Global Forum on International Investment.*

Pack, H. and C. Paxson (2001) "Is African manufacturing Skill Constrained?" in Szirmai, A and P. Lapperre (*eds*) *The Industrial Experience of Tanzania*, Palgrave, New York

Ranis, G., F. Stewart and A. Ramirez (2000) "Economic Growth and Human Development", *World Development* Vol. 28 No. 2, pp. 197-219

Sachs, J.D, J. W. McArthur, G. Schmidt-Traub, M. Kruk, C. Bahadur, M. Faye and G. McCord (2004) "Ending Africa's Poverty Trap," *mimeo*

Szirmai, A, M. Prins and W. Schulte (2001) "Measuring manufacturing Performance in Tanzania: GDP, Employment and Comparative Labour Productivity, 1961-95" in Szirmai A and P. Lapperre (*eds*) The Industrial Experience of Tanzania, Palgrave, pp 73-113.

Thomas V., M. Dailami, A. Dhareshwar, D. Kaupfmann, N. Kishor, R. Lopez and Y. Wang (2000) *The Quality of Growth*, Oxford University Press

UNCTAD (2003) "*Good governance in Investment Promotion and Facilitation: Tanzania Advisory Report*" Geneva.

UNCTAD (2003) *The Development Dimension of FDI: Policy and Rule-making Perspectives*, Geneva.

United Nations Industrial Development Organization (UNIDO) (2003): *Africa Foreign Investor Survey 2003: Motivations, Operations, Perceptions and Future Plans-Implications for Investment Promotion.* Vienna

UNIDO (2000), *Industry for Growth Into the New Millennium*, Vienna.

UNIDO (2002), Industrial Development Report 2002/2003: *Competing Through Innovation and Learning*, Vienna.

UNIDO (2003): *International Yearbook of Industrial Statistics 2003*, Vienna.

United Nations Development Programme (UNDP) (2004) *Human Development Report 2004*, UNDP, New York

United Republic of Tanzania (URT 1996) *Sustainable Industrial Development Policy (SIDP), 1996-2020,* Ministry of Industry and Trade, Dar es salaam

URT (1997) *Tanzania Investment Act, 1997* Dar-es-Salaam December.

URT(1999) *The Tanzania Development Vision 2025*, President's Office, Planning and Privatization, Dar es salaam.

URT(1999) The National Framework on Good Governance, President's Office, Planning and Privatization, Dar es salaam, December

URT (2000) *Poverty Reduction Strategy Paper*, Dar es salaam.

URT (2002) *Household Budget Survey 2000/01*, National Bureau of Statistics Tanzania, Dare es salaam

URT (2003), *National Trade Policy Background Papers*, Ministry of Industry and Trade, Dar es salaam, February.

URT (2003) *National Trade Policy: Trade for a Competitive Economy and Export-led Growth,* Ministry of Industry and Trade, Dar es salaam, February.

URT (2003), *Small and Medium Enterprise Development Policy*, Ministry of Industry and Trade, Dar es salaam, April.

URT (2003), *The Economic Survey 2002*, President's Office, Planning and Privatization, Dar es salaam.

URT (2003), *Speech by the Minister for Industry and Trade*, 2003/2004, Dar es salaam.

URT (2003) *Poverty and Human Development Report 2003*, Dar es salaam

URT (2004) Economic Survey 2003, President's Office, Planning and Privatization, Dar es salaam

URT (2004) "Experience with Privatization in Tanzania", Parastatal Sector Reform Commission, Dar es salaam

URT (2005) *National Strategy for Growth and Reduction of Poverty*, Office of the Vice President, Dar es salaam, June

URT (2005) *Economic Survey 2004*, President's Office – Planning and Privatization, Dar es salaam, June

URT (2005) *Poverty and Human Development Report 2005;* Dar es salaam

URT/UNDP/UNIDO (2001), *Tanzania: Sustainable Industrial Development and Competitiveness,* Dar es salaam.

Utz, R (2005) "Tanzania: Recent Growth Performance and Prospects", AFTP2

USAID/Tanzania (2003) "Tanzania Investor Roadmap: Primers on Regulations", Report.

Wet, J.D (2005), "An Overview of Banks' Pricing Mechanism on Deposits and Loans", Paper Presented at the Tanzania bankers Association Conference, 8th March 2005, Dar es salaam.

World Bank Institute (2004) "Fostering Innovation, Productivity and Technological Change: Tanzania in the Knowledge Economy" Washington

World Economic Forum (WEF) (2004) *The Global Competitiveness Report 2003-2004*, Oxford University Press, New York

World Economic Forum (2002) "Global Leaders for Tomorrow", Environment Task Force

Annex 1 Tanzania: Economic and poverty indicators at a glance, 2004

Population (million)	35.6
GDP (T.Shs. million) Real	2094515.0
Real GDP Growth (%)	6.7
Agricultural GDP, real (%)	44.4
Agricultural real growth (%)	6.0
Manufacturing GDP, real (%)	8.8
Manufacturing real growth (%)	8.6
Inflation (new basket base 2001=100) (%)	4.2
Exports (fob) USD million	1333.5
Imports (cif) USD million	2280.8
Official Exchange Rate (T.Shs. per USD 1) (Dec)	1049.81
Investments/GDP ratio	21.0
Domestic Revenue/GDP, %	13.0
Government Expenditure/GDP, %	24.4
Percentage of Population below food poverty line (2000/01)	19.0
Percentage of population below basic needs poverty line	36.0
Percentage of total consumption by poorest 20% of population	7.0
Gini coefficient	0.35
HDI rank, 2004 (out of 177 countries)	162

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