

Industrial Restructuring in Africa During the 1990s: Outcomes and Prospects*

Paul Bennell**

1. Introduction

Since the advent of political independence, many governments in Africa have looked to the manufacturing sector as the main vehicle of structural transformation and reduction of dependence on primary exports. However, it is now generally accepted that “misguided attempts to promote industrialisation without regard to comparative advantage or stage of development have led to inefficient use of resources in many countries” (World Bank, 1992:122). During the 1970s, almost one-third of African countries had negative average annual rates of manufacturing output growth and, in another quarter, these growth rates stagnated at below 2.5 percent.

An important objective of the economic reform programmes that are currently being pursued in almost all African countries is to eliminate the “inefficient use of resources” by industrial enterprises. It is clear that the industrial sector in most African countries is being profoundly affected by this process of reform which has accelerated markedly during the 1990s. However, there has been remarkably little independent analysis of just how successful industrial restructuring in Africa has been. Two reviews of structural adjustment programmes undertaken by the World Bank in 1992 and 1994 concluded that industrial restructuring had been successful in the majority of countries under scrutiny and that this was particularly so among those countries that had most consistently pursued comprehensive macroeconomic reforms (see World Bank, 1992a and 1994). But other economists outside of the World Bank have been less sanguine and some have argued that “structural adjustment programmes damage the prospects for industrialisation” (Stoneman, 1994:104) and may, in fact, be leading to wholesale de-industrialisation.

The purpose of this paper is to review the industrial performance of African economies during the 1990s and to then discuss the principal reasons why this performance, particularly with respect to the manufacturing sector, continues to be so poor in the majority of countries. The discussion will be structured as follows. Section 1 outlines the broad objectives of industrial restructuring as these have been interpreted by the World Bank. Section 2 addresses the weaknesses of the main data sources that are generally relied upon in assessing the industrial sector. Section 3 reviews the performance of the industrial sector, looking specifically at the following indicators: output growth, share of GDP, the sectoral composition of output, private and foreign investment, exports, and employment and training. Section 4 then analyses the principal factors that have affected the performance of the industrial sector, focusing in particular on investment, exports, and productivity. Finally, in Section 5, the prospects for the industrial sector and the role of government policy are briefly considered.

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** University of Sussex, Sussex, United Kingdom, email: P.S.Bennell@sussex.ac.uk. The views expressed in this paper are those of the author and no responsibility for them should be attributed to the African Development Bank.

2. The Objectives of Industrial Restructuring

Industrial restructuring has been and continues to be a key objective of most economic reform or 'adjustment' programmes that have now been introduced in most African countries. The overall objectives of industrial restructuring are to shift resources into industrial activities (i.e. conventionally defined as mining and quarrying, manufacturing, and utilities) that have a clear comparative advantage coupled with "the achievement of an overall size of the industrial sector that reflects a country's relative capacity for engaging in manufacturing via-a-vis other economic sectors" (World Bank, 1992b:127). Achieving international competitiveness is therefore of paramount importance and enterprises unable to reach the "best practice frontier" should be phased out.

The role of government is to take actions that address the root causes of the low social profitability of industrial investments. In particular, barriers must be removed that prevent enterprises from taking steps that increase their efficiency. There are three types of barriers: (i) Those that weaken enterprise discipline by shielding enterprises from adjustment pressures. More specifically, a variety of "policy distortions" result in a lack of competition, "soft budgets" for state owned enterprises, and agency problems (in particular poor government control over public enterprises) that allow managers of industrial enterprises to operate at low levels of efficiency. Thus, competition policy is nearly always a central feature of industrial restructuring strategies. (ii) Factor mobility. Productive inputs (labour and where, possible, capital) must be able to be reallocated within and between sectors. (iii) Resources. The ability to carry out restructuring is predicated on the availability of key resources that, without appropriate government interventions, will not be forthcoming. These include managerial and technical skills, information, infrastructure, and finance.

During most of the 1980s, the World Bank and the IMF saw industrial restructuring in Africa as being part and parcel of the overall process of macroeconomic stabilisation and changing the incentive structure for the economy as a whole (in particular between the tradable and non-tradable goods sectors). This was broadly in line with Bank thinking that comprehensive industrial restructuring should only be embarked upon once macroeconomic stability had been achieved. Consequently, the initial phase of industrial restructuring has concentrated on the removal of discipline barriers by correcting "distorted incentive structures". In particular, trade liberalisation (lower, more uniform tariffs and removal of quantitative restrictions, most notably import licensing) coupled with substantial real exchange rate devaluations seek to (i) reduce and ultimately eliminate high rates of effective protection thereby creating a competitive market environment and increased efficiency; (ii) reduce excessive dependence of manufacturing enterprises on intermediate and capital imports but, in the short run, improve the availability of key imports in order to achieve rapid increases in production through higher capacity utilisation; and (iii) encourage exports of manufactures.

Industry specific policies have also been concerned to remove other market distortions (such as price controls, investment licensing and other barriers to entry, restrictive labour practices, and reform of public enterprises including privatisation and excessive export incentives) as well as correct market failures that could undermine the required supply response in the medium-long term. Removal of policy biases against micro and small enterprises has also been an overarching objective of industrial restructuring in Africa. In particular, trade liberalisation, privatisation and better access to finance and technical assistance, by creating "a more level playing field", are intended to encourage the rapid development of these type of enterprises which are generally owned and managed by "indigenous" entrepreneurs. This, it is argued, will create a more balanced manufacturing sector which is better integrated with other key sectors (especially agriculture), and well placed to respond to the needs of low income consumers.

It should be stressed that the specific objectives of industrial restructuring programmes have varied considerably depending on the particular set of problems confronting the industrial sector in each country. Among those group of countries that had been effectively de-industrialising during the 1970s (such as Ghana, Tanzania, Uganda and Congo (DRC)), the main short term objective has been to achieve rapid increases in production capacity utilisation in more efficient, priority industries. In other countries, however, industrial restructuring has focused more on attempts to boost private investment in the medium-long term either by using a ‘carrots and sticks’ approach with an already well established private sector (as in Kenya and Zimbabwe) or the wholesale dismantlement of dominant public sector enterprises (as in Mozambique, Tanzania, and Zambia).

3. Data Limitations

The general availability and quality of statistical information on industrial output and other key performance indicators is extremely poor in most African countries. National accounts statistics are notoriously unreliable. For example, a recent World Bank study in Zambia found that the national account figures overestimated manufacturing output by at least 50 percent (see World Bank, 1996a). Surveys of industrial production are generally more reliable, but are regularly undertaken in fewer than fifteen countries. Serious criticisms have also been made about the usefulness of these surveys. In Zambia, “the average error in the index was often as large or larger than average year to year changes in the index. Thus, in most cases it was not possible to sat with degree of confidence that a change in the index from one year to another really meant that production had altered (Kmietowicz, 1989:25). Manufacturing associations in many African countries are equally sceptical about the accuracy of official production and income statistics. For example, the Manufacturers Association of Nigeria (MAN) informed its members that “the softness of and conflicting statistics emanating from official sources render a view of the performance of the economy difficult if not impossible” (MAN, 1995:1).

Similarly, most analyses of foreign investment flows to Africa use IMF data which is extracted from recipient country balance of payments accounts. However, a close examination of the FDI data entries for most African countries reveals that the three main components of FDI (direct investment, reinvestment, and loans) are not consistently reported over time. Therefore, it is not even possible to analyses accurately trends within a single country, let alone for the continent as a whole.

At best, official statistics can be used to identify broad trends in output, export and investment levels. More detailed analysis has to be based on more limited surveys of specific manufacturing industries and types of enterprise in individual countries. During the 1990s, the World Bank sponsored Regional Program on Enterprise Development (RPED) has been by far the largest research activity and has focused specifically on the response of manufacturing enterprises to adjustment policies. The core of the RPED has been periodic, in-depth surveys of around 900 enterprises in four sectors (food, garments, wood and metal goods) in four countries (Cameroon, Ghana, Kenya, and Zimbabwe). Given the scope and quality of these survey data, the following discussion will draw heavily on the RPED research findings.

4. Performance Indicators

Output Growth

In overall terms, the growth performances of both the mining and manufacturing sectors in Africa have been disappointing during the 1990s. Table 1 shows that the annual average growth in industrial output (measured in constant prices) between 1990 and 1995 was negative in over 40 percent of the 46 countries for which data are available (see also annex table 1). Annual growth rates were low (i.e. less than 2.5 percent) in another 14 countries. Only six countries (Mali, Comoros, Lesotho, Mauritius, Tanzania, and Uganda) registered high growth rates averaging over 5 percent per annum. Indices of the volume of industrial production over this period are also available for a limited number of countries. These also reveal a similar pattern of highly variable but generally poor growth (see annex table 2).

The growth performance of the mining sector in the key African countries is presented in Table 2. Mining is widely regarded as a key growth sector in Africa. However, with the exception of Ghana, Mali, and Zimbabwe, output growth in most countries has been low or negative, at least up until 1995. Trends in the volume of production in the largest mining sectors reveal a similar picture. The rapid growth in gold production in Ghana is clearly a success story, but output levels for copper have plummeted in Congo (DRC) and Zambia (see annex table 3).

The performance of the manufacturing sector has also been especially weak, with nearly half of all countries recording negative real growth rates between 1990 and 1995 (see table 3). This picture is even worse if countries such as Angola, Liberia, Mozambique, Sierra Leone, Somalia, and Congo (DRC) which have no output data but where manufacturing industries have been seriously affected by war and civil strife are also included. Furthermore, these aggregate figures tend to disguise the extent to which many manufacturing enterprises in Africa have been fighting for survival during the 1990s. In Ghana, for example, which has had moderately good manufacturing growth rates during the 1990s, "large swathes of the manufacturing sector have been devastated by import competition" (Lall, 1993: 134). In Malawi, which according to World Bank data enjoyed 4.0 percent growth in manufacturing output in 1996, "the manufacturing sector is having a desperately difficult time. Output fell 5.6 percent in 1996 as firms suffered from competition from cheap imports and struggled to cope with the high interest rates government has used to pull inflation down" (EIU, 1997). In Nigeria, the manufacturing sector in 1992 was reported to be "on the verge of collapse with returns to manufacturing activity being "dismally low" in relation to other sectors (Thompson, 1992:35). In Cameroon, a survey conducted in mid-1996 found that 80 percent of industrial enterprises had been unable to increase output levels over the previous year because of numerous obstacles, including primary material supply (99 percent of respondents), deterioration of equipment (86 percent), financing (82 percent) and transport problems (77 percent) (see EIU, 1997). In Kenya, "the last few years have been traumatic. The manufacturing sector has suffered from macroeconomic instability and uncertainty and a deterioration in the business environment" (Bigsten et al, 1995:14).

The World Bank's high profile 1994 publication *Adjustment in Africa* concluded that the industrial and manufacturing sectors in most countries had been "expanding" between 1986 and 1991 as economic liberalisation programmes were implemented. Clearly, however, this positive conclusion does not hold for the 1990s. Not only have industrial and manufacturing growth rates been absolutely low, but they are appreciably lower than during the 1980s. Only four countries (Lesotho, Mozambique, Tanzania, and Uganda) had average annual industrial growth rates in the 1990s that were more than five percentage points higher than those that prevailed during the 1980s.

Table 1: Growth of the industrial sector in Africa, 1990-1995

High	Negative growth Moderate	Low	Zero growth Low	Positive growth Moderate	High
North Africa					
		Algeria		Egypt Morocco Tunisia	
West & Central Africa					
Cameroon Chad Sierra Leone Togo Congo (DRC)	CAR Niger	Cape Verde Nigeria	Burkina Faso Congo Côte d'Ivoire Gambia Guinea Guinea Bissau Senegal	Benin Gabon Ghana Mauritania	Mali
East & Southern Africa					
Burundi Rwanda	Zimbabwe	Ethiopia Mozambique Seychelles South Africa Sudan Zambia	Angola Botswana Kenya Madagascar Malawi	Namibia Swaziland	Comoros Lesotho Mauritius Tanzania Uganda

Notes: High positive/negative growth = +/- >5%,
 Moderate growth = +/- 2.5 - 4.99%,
 Low growth = +/- 0.1 - 2.4%.

Source: World Bank (1997) African Development Indicators.

In two-thirds of countries where this comparison can be made, the difference in industrial growth rates is negative. The corresponding percentage for manufacturing growth rates is 70 percent. Only in one country, Uganda, was the difference in manufacturing growth rates between these two periods greater than five percent.

However, on a more positive note, industrial and manufacturing growth rates were higher during 1995 and 1996 than for the 1990-95 period as a whole in 80 percent and 77 percent respectively of African countries (see annex tables 1 and 2). This improvement was particularly noticeable among the franc zone countries which suggests that the major devaluation of the CFA franc in January 1994 has provided some stimulus, at least in the short term, to industrial enterprises in most of these countries. In other countries (most notably Angola, Ethiopia, Mozambique, and Rwanda), industrial performance improved fairly quickly once wars and other civil strife ended or significantly abated while in others (most notably Gambia, Central African Republic, Liberia, Sierra Leone) growth rates fell as a result of the disruption caused by these kind of shocks.

Figures 1 and 2 show the scatter plots between rates of growth of industrial and manufacturing output, on the one hand, and national output, on the other between 1990 and 1995. Three countries (Rwanda, Sierra Leone, Sudan) which have been seriously affected by civil war and which therefore have extreme outlier values have been excluded from the analysis. With an R-squared value of 0.35, the relationship between industrial and GDP growth is relatively weak. In part, this is a

Table 2: Growth of the mining sector in selected African countries, 1990-1995

High	Negative growth Moderate	Low	Zero growth Low	Positive growth Moderate	High
West & Central Africa					
Benin Cameroon Congo (DRC)		CAR Senegal Chad	Guinea Gabon Mauritania	Congo	Ghana Mali
East & Southern Africa					
Rwanda Zambia		South Africa	Botswana Gabon Kenya Madagascar	Lesotho Namibia Zimbabwe	Ethiopia Mauritius Uganda

Source: World Bank, unpublished data.

consequence of the enclave nature of the mining sector which accounts for a large proportion of industrial output in Africa (see below). The relationship between manufacturing and GDP growth is, however, much stronger (with an R-squared value of 0.61) mainly because growth in manufacturing output is heavily dependent on increases in overall domestic demand. It is also clear that positive GDP growth is closely associated with positive growth in manufacturing output in the majority of countries (i.e. those in quadrant 2). Among the small minority of (five) countries which have had positive GDP growth but negative rates of manufacturing growth (quadrant 1), it is interesting to note that annual GDP growth for all of them remained very low i.e. less than two percent per annum.

The Relative Importance of Industrial Production

The share of industrial and manufacturing in national output is a key indicator of the extent of structural transformation of an economy (see Chenery, Syrquin and Robinson, 1985). On the basis of international comparisons over relatively long periods of time, it is clear that during the early stages of the development process there exists a close and positive relationship between the shares of the industrial and manufacturing sectors in national income as real per capita income increases. In low income countries, therefore, where these shares have fallen appreciably, de-industrialisation may well be occurring.

Over the fifteen year period 1980-1995, the share of industrial output in GDP declined in 20 out of the 36 countries for which data are available (see table 4). In 12 countries, this decline has been sizeable i.e. more than five percentage points. With respect to the manufacturing sector, however, in only 8 out of 29 countries did the share of manufacturing output decline and only in one country (Rwanda) was this decline more than five percentage points.

Figures 3 and 4 plot the relationship between industrial and manufacturing output growth and the changes in the shares of these sectors in national output between 1990 and 1995. It can be observed that with respect to both sectors there are quite a few countries where these shares have fallen but average annual GDP growth has been positive (quadrant 1). Should this situation persist, then de-industrialisation is clearly taking place. Of even greater concern, however, are countries

Figure 1: Growth of industry and GDP

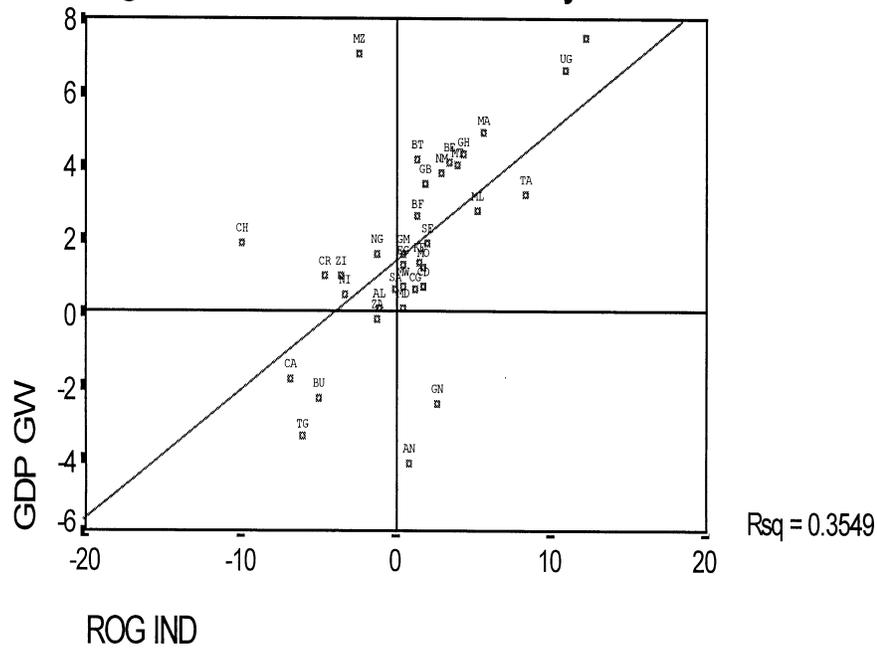


Table 3: Growth of the Manufacturing Sector in Africa, 1990-1995

High	Negative growth Moderate	Low	Zero growth	Low	Positive growth Moderate	High
North Africa						
Algeria			Egypt	Morocco		Tunisia
West & Central Africa						
Chad Congo Togo	CAR	Cameroon Côte d'Ivoire Gabon Nigeria	Niger Gambia	Burkina Faso Ghana Guinea Bissau Mauritania Senegal	Mali	Benin
East & Southern Africa						
Angola Burundi Rwanda Zimbabwe		Ethiopia Malawi South Africa Zambia		Botswana Kenya Madagascar Sudan	Comoros Tanzania Swaziland	Lesotho Mauritius Namibia Uganda

Source:

See Table 1.

located in quadrant 4 where both shares and GDP have fallen and quadrant 3 where shares have increased, but in the context of overall economic decline. The future challenge is for all countries to locate themselves in quadrant 2 with high GDP growth rates and increasing shares of industrial and manufacturing output (assuming, of course, that production in the latter sectors is efficient).

Sectoral Composition of Output

Manufacturing output accounted for less than one quarter of industrial output in slightly more than one-third of African economies in 1996. This is mainly because of the key role of mining (including oil) in these countries. In fewer than 20 percent of economies does the contribution of manufacturing exceed three-quarters of total industrial output. During the 1990s, in nearly half of the countries for which data are available, the share of the manufacturing sector has remained largely unchanged, but has fallen appreciably (i.e. by more than two percentage points) in 36 percent of economies while increasing in only 14 percent. For the continent as a whole, therefore, it appears that there has occurred some shift in industrial production away from manufacturing towards mining and the utility sectors (see figure 5).

Within the manufacturing sector, lack of data and considerable variations between countries make it difficult to draw many firm conclusions about changes in the performance of the main manufacturing industries. However, with a few exceptions, textiles and clothing industries everywhere have contracted significantly mainly because trade liberalisation has resulted in a wave of cheaper imports of new and second hand clothing. There is lot of fragmentary evidence concerning the decline of the textiles sector right across Africa. Even in Uganda which has enjoyed high rates of manufacturing growth in most sectors, the real value of textiles and clothing declined by 8 percent

Table 4: Change in the Shares of Industrial and Manufacturing Output, 1980-1995 (percentage points of GDP)

	< -5	-5 to 10	No change	0.1 to 5.0	5.0 >
INDUSTRIAL					
North Africa					
	Egypt Algeria	Tunisia		Morocco	
West & Central Africa					
	CAR Congo Niger Nigeria Senegal Sierra Leone	Gambia Togo	Benin Cameroon Côte d'Ivoire	Ghana Guinea Bissau Mauritania	Burkina F. Chad Mali
East & Southern Africa					
	Mozambique Namibia Rwanda South Africa	Ethiopia Kenya Madagascar Tanzania Zambia		Botswana Zimbabwe	Burundi Lesotho Malawi Mauritius Uganda
MANUFACTURING					
North Africa					
			Algeria	Morocco Egypt	Tunisia
West & Central Africa					
		Benin Congo Ghana Senegal		Burkina Faso Cameroon Côte d'Ivoire Malawi Nigeria Sierra Leone Togo	
East & Southern Africa					
	Rwanda	Ethiopia Kenya Tanzania	Botswana	Burundi Namibia South Africa Uganda Zimbabwe	Lesotho Malawi Mauritius Zambia

between 1992 and 1995 (Uganda, 1996). Zimbabwe has one of the largest and most efficient textile sectors in Africa, but during 1994 alone, the volume of production fell 65.1 percent (Zimbabwe, 1995). In Kenya, textiles and clothing production fell 27 percent and 17 percent respectively in 1995 (Kenya, 1996). In Nigeria, which had an import ban on clothing for much of the period 1985-95, the Manufacturers Association of Nigeria reported in 1994 that “the textile industry is an emaciated mirror image of its former self” with “an influx of foreign fabrics dumped as well as smuggled into the country” (MAN, 1995:3). In Malawi, production at the Lonrho subsidiary, David Whitehead Ltd. plummeted from 20 million metres in 1989 to 3 million metres in 1994 (Lonrho, 1995). Much of the textile industry in Tanzania is state-owned and has been put into receivership.

Figure 3: GDP growth and changing share of industrial output

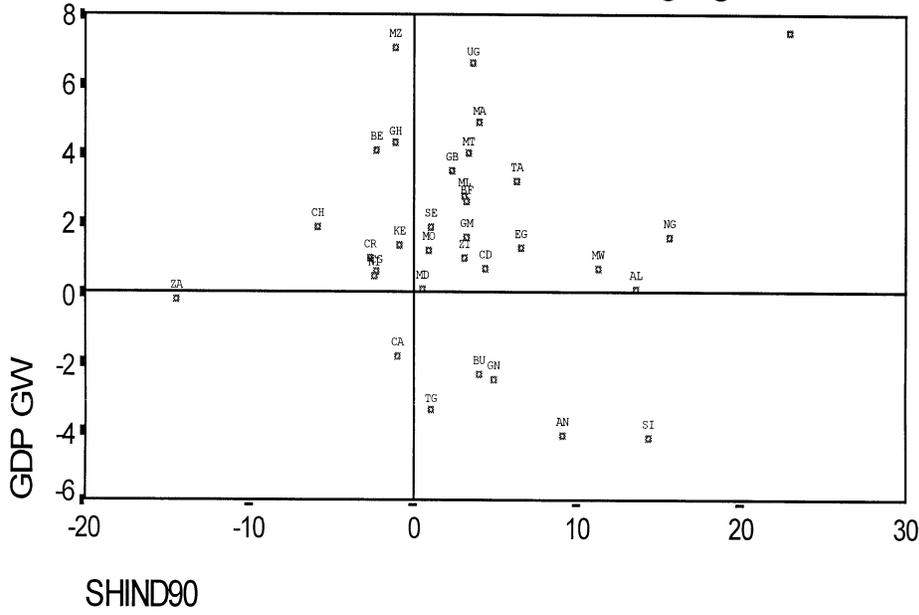
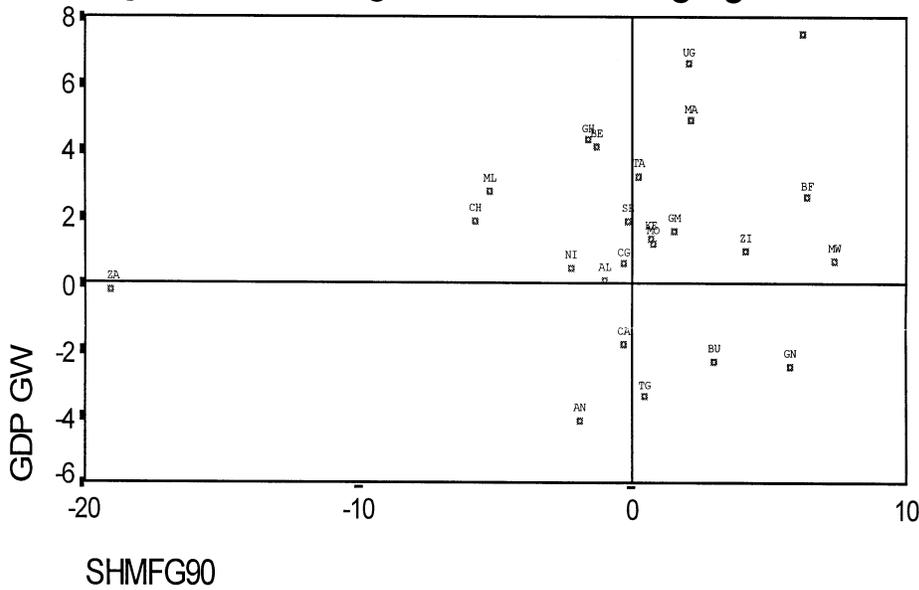


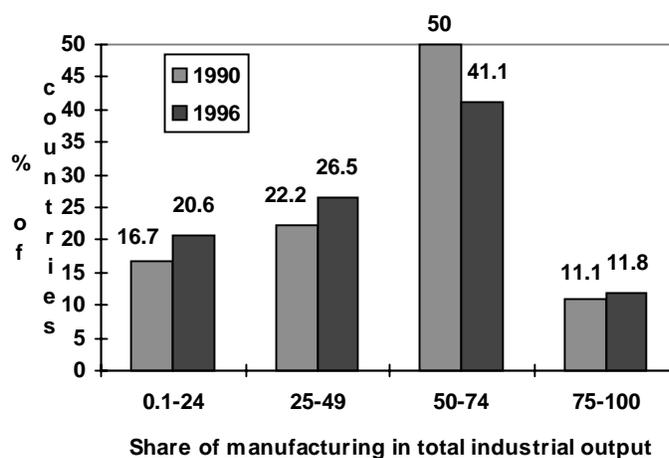
Figure 4: GDP growth and changing share of manufacturing output



Other sectors have also been very badly affected by intensified import competition, particularly vehicle assembly, white goods, and electronics which are generally low value added and heavily reliant on imported parts and other raw materials (see annex tables 5 and 6). In Nigeria, for example, production levels of vehicles and radios and televisions in 1995 were reported to be 11.7 percent and 6.0 percent of 1985 levels. The poor performance of the machinery and other metal goods industries (even in countries such as Zimbabwe) is particularly worrying because of the central role these sectors (which rely heavily on core engineering skills) typically play in successful industrial development. The shoe industry and, in some countries such as Kenya, the sugar industry have also been badly affected by imports. In some countries, (e.g. Congo, Niger, Chad), manufactured imports are largely smuggled and distributed via the informal sector.

Industries that have tended to fare better are those such as food, beverages, tobacco, wood, and cement which rely mainly on locally produced inputs. In some countries, the shift in production towards agro-processing has been quite dramatic. In Zambia, for example, the food, beverage and tobacco industries increased their share of total manufacturing output from 39.3 percent in 1990 to 54.9 percent in 1994 (see World Bank, 1996). In addition, products with high transportation costs have been able to maintain a high degree of natural protection. This is especially the case for landlocked countries that have lengthy and often poor transport links with sea ports. However, even these resource-based industries which are likely to enjoy reasonable comparative advantage have had to

Figure 5: Share of Manufacturing in Total Industrial Output in SSA Economies, 1990 and 1996



contend with much increased levels of import competition. For example, the 1995 Annual report of Kenya Breweries Ltd noted that “liberalisation and the stabilisation of the shilling brought in their wake increased competition in the beer market from imported canned beers and a reduction in the profitability of the export trade” (Kenya Breweries Ltd, 1995:4). Serious “cost-cutting measures” had to be introduced in order to respond to this new challenge. Cement producers in many countries have also had to contend with increasingly competitive imports.

Type of Enterprise

As noted earlier, a key objective of industrial restructuring in Africa is to promote the development of the micro, small and medium sized enterprises by removing the constraints and distortions of high

protection import-substitution industrial policy regimes that strongly favoured large scale enterprises and by generally providing a more enabling environment. By creating a level playing field, the overall intention is to plug the ‘missing middle’ that characterises the industrial sector in most African economies. One would expect, therefore, smaller enterprises to respond more positively to economic reform than larger enterprises. However, prior to adjustment, shortages of foreign exchange in many countries meant that large scale enterprises, most of which were heavily dependent on imported spare parts and raw materials, operated at extremely low levels of capacity utilisation. Despite the strong policy biases that affected micro and small enterprises, many flourished since they were far less reliant on imported inputs and could respond positively to local demand that was largely unmet by larger enterprises. Thus, with the advent of economic reforms and, in particular, the marked improvement in the availability of foreign exchange, some economists have anticipated that the large enterprise sector would regain their market dominance.

The available evidence on the impact of economic reform and industrial restructuring on the MSME sector is patchy and, at times, contradictory. The RPED surveys suggest, however, that among the sampled firms, average employment levels have increased fastest among the microenterprise group (1-9 employees), but have decreased among the large group (100+ employees). The extent of microenterprise expansion has been particularly impressive in Ghana where over 40 percent of the enterprises are reported to have graduated to the 10-49 employee size cohort between 1998 and 1992. In Cameroon, Kenya, and Zimbabwe, however, this percentage was much smaller - 14 percent, 12 percent and 4 percent respectively- over a similar time period. But among small and medium enterprises in the four RPED countries, employment growth has been much less impressive. In particular, in Cameroon and Ghana, 45 percent and 57 percent respectively of medium scale enterprises (i.e. 50-99 employees) dropped into the small enterprise size category during a five-six year period. In all four countries, the incidence of microenterprises graduating into the large enterprise category remained minimal, although quite sizeable proportions of medium-sized enterprises in Kenya and Zimbabwe (27 percent in both countries) grew to become large enterprises during this period.

Elsewhere, there is more impressionistic evidence that indicates that competition is intensifying between micro and small enterprises, on the one hand, and large enterprises, on the other. In Gabon, for example, “there is intense competition from the expanding informal sector which produces cheap, albeit low quality, goods and distributes smuggled goods in major urban areas” (EIU, 1997:34).

Overall Employment and Training Levels

Only very fragmentary time series data are available for the 1990s on total employment in the industrial and manufacturing sectors. However, for the majority of countries and, in particular, among those that have most rigorously followed economic reform programmes, total manufacturing employment has generally declined. For example, in Cameroon, Mauritius and Zimbabwe, the number of manufacturing employees declined by 14.0 percent, 6.0 percent and 5.6 percent respectively between 1990 and 1995. Ghana has probably experienced the greatest contraction in manufacturing employment - from 53,600 in 1986 to just 20,600 in 1991 (see, ILO, 1996).

Faced with greater import competition, most firms have been forced to rationalise and streamline their operations. State-owned enterprises (SOEs) that have been privatised have also tended to shed surplus labour both during the run-up to privatisation and when enterprises have been actually divested. In Zambia, for example, among a sample of SOEs that were privatised in 1994 and 1995, median post-privatisation employment was 30.3 percent lower than in 1992 (see Bennell, 1997a).

Again, evidence is very limited, but the impact of adjustment also appears to have been negative

on the overall level of formal training conducted by enterprises. This is particularly the case for formally indentured artisan apprentices. In Tanzania, for example, in 1990, the national training agency responsible for artisan training managed to place 66.7 percent of trainees with employers for the prescribed three years of structured on the job training. By 1995, this had fallen to 10.3 percent (see Bennell and Mukyanuzi, 1997). In Zimbabwe, the total number of newly indentured apprentices fell from 1,223 in 1991 to 994 in 1995 (see Bennell, Kanyenze and Munetsi, 1997).

Investment

Insufficient investment is the most important proximate cause for the poor output performance of the industrial sector in the majority of African economies during the 1990s. With the increasingly rapid privatisation of state-owned industrial enterprises (in particular in countries such as Ghana, Mozambique and Zambia where the public sector has dominated industrial production), it is clear that private sector investment will largely determine the rate of growth of industrial production in all countries in the future.

Disaggregated data on private sector investment in the mining and manufacturing sectors are not available in most African countries. However, it can be observed in Table 5 that total gross private sector investment expressed as percentage of GDP has not only remained generally very low since the mid 1980s when the majority of countries embarked on economic reform but, more serious still, this percentage fell in 15 out of the 26 countries for which data are available between 1989/90 and 1993/94. It is the case that rates of private investment have increased in slightly more countries since the mid 1980s (14 out of 24 for which data are available), but with the exception of a few countries such as Mozambique, Tanzania and Zimbabwe, these increases have been very small. Among the RPED survey countries, pooled data for the four countries indicates that between 1991 and 1995 the annual gross investment rate was only 6 percent of the value of the capital stock and only 11 percent of value added, suggesting that net investment was negative (see Collier and Gunning, 1997).

Foreign Direct Investment

The mining and manufacturing sectors account for the bulk of foreign direct investment in Africa. During the period 1983-88, at the height of the economic crisis in most African countries, average annual net OECD investment in sub-Saharan Africa was a mere US\$ 323 million. Elsewhere in the world, FDI was growing at an unprecedented rate so that, for example, British investment in sub-Saharan Africa was a minuscule 0.5 percent of total UK foreign investment in the late 1980s (see Bennell, 1989). Although net investment by OECD countries has increased considerably since then (averaging US\$1.3 billion between 1990 and 1995), two-thirds of this increase was concentrated in just three oil-exporting countries (Congo, Gabon and Nigeria) and three OECD countries (the United Kingdom, France and Japan) accounted for 80 percent of the increased investment. And, while net investment was higher in 24 countries, it fell in another 21 countries (see annex table 8). Detailed breakdowns are not available, but a very significant proportion of 'new' foreign investment is in fact re-investment by existing subsidiaries and associate companies, rather than inflows of equity and other capital from new investors. Furthermore, while net investment as a whole has increased since the mid-1980s, there has nevertheless been widespread disinvestment, particularly in manufacturing industries (see Box 1).

Exports

With a few exceptions (Egypt, Lesotho, Mauritius, Morocco, South Africa, Tunisia), the level of manufactured exports from African economies remains minuscule. Table 6 shows that, while there has been limited growth in manufactured exports in some countries, there has been a general failure to exploit the new opportunities afforded by significant real exchange rate devaluations and improved access to foreign exchange and other inputs during the 1990s. A 1996 survey of manufacturing enterprises in Mozambique, Tanzania, and Zambia found that, if anything, trade liberalisation had adversely affected the capacity of firms which were already exporting. The survey highlighted the “fragility of the majority of firms exporting wholly or in part for export. Many are operating at the very limits of profitability and viability, even of survival. Traditional exporting firms are either moving out of export production, with others literally ceasing production or going out of business” (UNIDO, 1996:54).

The evidence from the four RPED survey countries also reveals a limited export response of the manufacturing sector. The overall export orientation of the survey firms in Ghana, Kenya and Zimbabwe increased by less than two percentage points of total output between 1991 and 1995. In Cameroon however, there was a sizeable increase in export orientation (from 27.9 percent in 1991 to 40.8 percent in 1995) which was mainly accounted for by the much improved competitiveness of textile and wood products following the historic CFA devaluation of December 1994. In all four countries, however, most of the increase in manufactured exports was accounted for by enterprises that were already exporting during the late 1980s. In particular, large, capital intensive and technically efficient foreign firms tend to have a much greater export orientation than other firms. Bigsten et al argue that expansion within firms already exporting is unlikely to generate an export boom and that, therefore, an extensive entry of new exporters is essential (see Bigsten, 1997). However, given that there appears to be a definite size threshold in order for firms to enter successfully most manufactured export markets, a trade-off may exist between the objectives of rapid industrialisation and the development of “indigenous entrepreneurship” which is likely to be mainly concentrated among small and medium enterprises.

5. Growth Constraints

The New Received Wisdom

While it is still widely accepted that “getting prices right” is an essential prerequisite for efficient and sustainable industrial growth, with the generally poor performance of the industrial sector in most African countries during the 1990s, much more emphasis is now being attached to those aspects of the industrial restructuring process that focus on the removal of critical ‘resource’ constraints. The World Bank’s recognition of the overriding importance of more deep-seated ‘structural’ factors has, however, been quite recent. As late as 1994, the Bank’s ‘Adjustment in Africa’ Report confidently stated that, in general, industry had responded very positively to new economic incentives, and that this has been particularly the case where adjustment programmes had been comprehensively implemented and sustained. Now, however, Bank staff readily concede that “the supply response of the manufacturing sector, especially manufacturing exports, has been uniformly inelastic in almost all SSA economies” (Biggs and Raturi, 1997:2). Given the World Bank’s influential role in all aspects of policy formulation in Africa, particularly among heavily aid-dependent low income countries and the donor community, this decisive shift with respect to the industrial sector is very significant.

Table 5: Gross Private Investment as Percentage of GDP, 1980-1994

Country	1985-86 ^a	1980-90 ^a	1993-94 ^a	Difference 1989-90 and 1993-94
Benin	6.2	8.3	9.8	1.5
Burkina Faso	14.7	13.3	14.0	0.7
Burundi	2.7	2.3	2.2	-0.1
Cameroon	15.2	12.4	12.9	0.5
Cape Verde	10.6	15.0	12.0 ^a	-3.0
Comoros	5.5	6.6	8.5	1.9
Côte d'Ivoire	5.3	4.2	7.7	3.5
Gabon	31.8	25.9	18.6	-7.3
Gambia	8.4	14.9	13.5	-1.4
Guinea	8.9	8.5	8.3	-0.2
Kenya	11.1	11.1	10.0	-1.1
Madagascar	3.1	5.3	4.9	-0.4
Malawi	4.0	8.7	2.2	-6.5
Mali	-	11.9	13.1	1.2
Mauritania	20.5	13.3	15.5	2.2
Mozambique	10.2	21.3	37.8	16.5
Namibia	5.7	10.6	11.2	0.6
Nigeria	5.4	8.3	4.2	-4.1
Senegal	7.8	8.9	10.5	-1.6
Sierra Leone	6.5	9.9	4.6	-5.3
South Africa	12.4	13.1	11.2	-1.9
Sudan	8.3	8.3	-	-
Swaziland	7.8	14.4	11.9	-2.5
Tanzania	12.9	20.3	19.7	-0.6
Togo	13.4	17.4	7.0	-10.4
Uganda	-	-	8.8	-
Zambia	4.9	2.4	5.7	3.3
Zimbabwe	7.5	14.7	17.9	3.2

Notes: African Development Indicators, 1996.

Source: ^a Simple averages of growth rates for each two year period.

In trying to understand the determinants of the inelastic supply response, most empirical research now focuses on identifying key microeconomic constraints that affect the capacity of various types of industrial enterprises to expand production efficiently. Certainly, there are those in the research community who still continue to argue that inadequate incentives (that are largely the outcome of basic shortcomings of macroeconomic policy and other fundamental distortions created by excessive government interventions) are still the main culprits (see, for example, Teal, 1995). However, a new received wisdom is emerging that accepts that a more interventionist, long term industrial strategy that specifically targets particular problem areas is urgently needed.

Private Sector Development

The overall success of economic reform in Africa hinges on the ability of private economic agents to respond to the new opportunities that become available. This is particularly the case for those countries that have pursued socialist or quasi-socialist development strategies since the attainment of political independence. The fundamental weakness of the private sector in most African economies, is therefore the superordinate constraint that must be surmounted if market-led capitalist development is to succeed. It is precisely for this reason that 'private sector development' has become of such

Box 1: Foreign Disinvestment from sub-Saharan Africa

While the overall level of net foreign investment in sub-Saharan Africa has not declined appreciably during the 1990s, the number of industrial enterprises with foreign equity participation may well have declined. The limited evidence that is available comes from foreign investment surveys in Germany, the United Kingdom, and the United States. Specifically, 388 US affiliate companies were reported as operating in SSA in 1985. By 1993 (the last year for which data are available), this had fallen by 30 percent to 270 companies. During the same period, total employment fell from 85,000 to 49,500. The number of affiliates increased in only three countries (Congo, Gabon, and Malawi). The number of German affiliates also declined from 170 in 1991 to 124 in 1994, with employment falling from 28,000 to 21,000.

A detailed survey of UK manufacturing investment in English-speaking Africa found that in 1989, 90 British companies had a total of 336 equity involvements, but by 1994, there were only 65 companies with equity stakes in 233 manufacturing enterprises. A small group of 20 parent companies accounted for nearly 70 percent of these equity stakes. The combined share of the two giants, Lonrho and Unilever, was 22.4 percent. An earlier survey in 1989 had also reported that approximately one-third of UK companies that had manufacturing equity involvements during the late 1970s had already disinvested during the 1980s. It is clear therefore that the disinvestment that has occurred during the 1990s represents a continuation, albeit accelerated, of an already well established process of corporate withdrawal. Some of the most important disinvesting companies include: Chloride and Lucas (batteries), Leyland Trucks (vehicle assembly), Courtaulds (paper, packaging and paints), Boots and Wellcome (pharmaceuticals), ICI (chemicals) Low and Bonar (textiles, plastics, engineering), Pilkington (glass), Raleigh (bicycles), and Lonrho (paper, printing and packaging, food and drink). Probably the largest and, in many ways, the most symbolic disinvestment was the sale in 1994 of most of Unilever's 40 percent stake in the United Africa Company in Nigeria. UK disinvestments were spread across all manufacturing industries, although the metal goods, electrical goods and transport equipment were particularly badly affected.

central importance in the World Bank's country lending programmes and general policy discourse throughout Africa. With respect to the industrial sector, the previously disabling policy environment that discouraged entrepreneurship needs to be replaced with a new enabling environment that aggressively promotes a new industrial class of 'indigenous' entrepreneurs. At the same time, however, it is clear that much greater involvement of non-indigenous, foreign enterprises and individuals is also needed in order to attract additional investment, and access new technologies, skills and markets. Getting the policy balance between these two groups of economic agents is a major challenge in nearly all countries.

The absence of strong rural and industrial capitalist classes capable of sustaining a process of rapid capital accumulation across a range of high growth sectors and able to ensure that the state plays the necessary enabling roles has been the central weakness of the development process in Africa. Clearly, therefore, explanations for the failure of these types of classes and developmental states to emerge must be based on an in-depth analysis of the complex interplay of economic, social, cultural, and political factors that have shaped both policy and practice during the last five decades. However, because economists continue to dominate academic and policy debates on the reasons for the poor performance of the industrial sector in Africa, most analysis tends to narrowly focus on economic and usually focuses on the very recent past. In so doing, there is a failure to recognise that many allegedly economic constraints are themselves the outcome of social and cultural factors (see

Table 6: Manufactured Exports from African Countries, 1985-1995

	1985	1995	(1987 constant dollars)
North Africa			
Algeria	26	32	-25.7
Egypt	446	922	6.2
Morocco	474	1,591	0.9
Tunisia	877	4,574	7.3
West & Central Africa			
Cameroon	126	127	6.0
Chad	5	1	-
Côte d'Ivoire	728	900	-
Gambia	-	-	-7.2
Nigeria	-	-	-8.0
Senegal	-	-	12.1
Togo	47	60*	21.9
East & Southern Africa			
Angola	22	39	-
Burundi	6	7	1.6
Kenya	117	184	-7.6
Lesotho	2	43	-
Mauritius	212	807	5.7
Madagascar	37	75	5.0
Namibia	95	289	-
Rwanda	0	0	-5.8
South Africa			
Tanzania	33	79	-12.5
Tanzania	252	1,891	6.5

Notes: Omitted countries have negligible manufactured exports.

Sources: Amounts 1985 and 1995: World Bank, Trends in Developing Economies, 1996.

Rates of growth: World Bank, unpublished data.

Moore, 1997). In other words, just as the focus on “getting prices right” has proven to be overly simplistic, there is a danger that the diagnosis and proposed policy solutions to the multiple supply constraints affecting industrial enterprises in Africa may fail to get to grips with more deep-seated problems that are preventing the emergence of a strong and dynamic class of entrepreneurs in each African country.

The Investment Climate

As discussed earlier, low and declining private investment ratios in most African economies have been consistently identified as being of critical importance in explaining the poor supply response of the industrial sector. Numerous enterprise surveys have been undertaken in order to identify the main obstacles that affect firm output expansion which turn will eventually lead to new investment. Table 7 summarises the severity and rank of these obstacles in seven RPED countries. Lack of credit and lack of demand consistently emerge as the two most important constraints in all countries. During the period 1990-95, average annual rates of GDP growth were stagnant (i.e. less than 1 percent) or negative in well over half African economies, and were over 4 percent in barely one-quarter. These aggregate growth rates conceal the extent to which the purchasing power of the large majority of the population has fallen since the mid-1980s. The World Bank reports that the number

of African families unable to meet their basic needs doubled between 1985 and 1995 as average incomes fell by one third (World Bank, 1997:1). This erosion of purchasing power is also frequently commented upon in the annual reports of major companies, especially those producing basic wage goods. In Nigeria, for example, Unilever's 1994 Annual Report notes that "the operating environment will be difficult and challenging until the end of the decade" (Unilever, 1994:6) Falling consumer demand coupled with an inadequate supply of foreign exchange resulted in capacity utilisation of only 37 percent in 1993. The lack of depth of most financial systems in Africa has also seriously dampened investment. While nominal interest rates are generally very high, in most countries they have remained low or negative in real terms which has restricted the availability of financial resources. High public sector deficits in many countries have also continued to crowd out private investment.

The next most serious constraints reported by the RPED survey firms are lack of public services (including infrastructure) and high taxes and utility prices. Interestingly, import competition and a range of government regulations (most notably foreign exchange, price controls, licences, and labour regulations) are not widely rated as being serious obstacles. This is probably because many enterprises continue to enjoy fairly high absolute levels of protection, but economic liberalisation has largely eliminated many of the more onerous government controls that previously characterised import substitution regimes in Africa. Without serious competition, the economic pressures on enterprises to invest heavily in new productivity-enhancing plant and equipment is likely to remain limited.

The investment climate in most of Africa is seriously affected by exceptionally high levels of risk and uncertainty. Investments are particularly irreversible in Africa because of a number of factors, including the lack of second-hand markets for machinery and other equipment and, given the absence of developed equity markets in most countries, the difficulty of selling firms as on-going concerns. Enterprises are also frequently heavily reliant on a few suppliers (see Collier and Gunning, 1997). The unreliability of audited accounts and the difficulty of enforcing legal title significantly increase risks. More recently, considerable attention has focused on the lack of 'social capital' in African business communities which are often characterised by low levels of trust, both between enterprises themselves, and between enterprises and the public institutions that are responsible for the regulation and promotion of industrial activity. In particular, difficulties in enforcing contracts can result in high levels of opportunism thereby significantly increasing transaction costs. In such high risk business environments, financial institutions typically demand exorbitantly high levels of collateral before being prepared to make loans. The success of some industrial communities such as Nnewi in Eastern Nigeria has been due in large part to their ability to reduce risk and uncertainty and develop close trust-based relations (see Box 2).

More generally, the process of economic reform has itself frequently exacerbated already very high levels of risk and uncertainty. In particular, exchange rates have become more volatile and increased competition and higher input costs have lowered profitability which continues to be the single most important determinant of investment. Relatively low returns to manufacturing investment are widely reported in Africa which, in turn, discourages investment in the sector. For example, the 1993 and 1994 surveys by the Paris-based Centre pour les Investissements en Afrique Noir (CIAN) of French owned firms operating in the Franc Zone reported that only 29 percent and 10 percent of firms were 'clearly profitable' (CIAN, 1993 and 1994). In Ghana, profit rates in 1993 varied from just 0.2 percent for large firms to 8.2 percent for micro and small enterprises. The much lower profitability of large firms was largely because wage rates were, on average, four times higher than those paid by small firms. This rise in wages with size, "acts as a tax on the profits of firms as they attempt to grow" (Teal, 1995:12).

The threat of major policy reversals as economic reform programmes are implemented is widely regarded as another key factor that has markedly increased investment risk. This is especially the case where government commitment to economic reform is perceived as being low with key reforms being implemented under duress mainly because of donor pressure and conditionality. Where therefore the reform process lacks credibility and is not 'locked-in', investors will be understandably reluctant to make sizeable and largely irreversible long term investments.

Foreign Investment

Many of the same factors that have dampened domestic investment also explain the relatively limited increase in foreign investment in the industrial sector in recent years. During the last decade, African governments have made increasingly concerted attempts to improve the investment climate for transnational corporations and other foreign investors. In particular, new investment codes have been promulgated that have swept aside many of the restrictions and impediments that have limited foreign investment in the past, replacing them with a variety of investment incentives and guarantees. These include the freedom to remit profits, the removal of limits on the level of foreign equity, and the granting of work permits for expatriate personnel.

While these changes in investment policies mark a decisive break with the past and are absolutely essential in order to attract new foreign investors, they are merely bringing African economies into line with investment policy regimes elsewhere in the developing world. As all research on the determinants of direct foreign investment has conclusively shown, corporate investment decisions are mainly the outcome of an assessment of key economic and political 'fundamentals' (see, for example, Guisinger, 1985). The investment policy regime is therefore a necessary but not sufficient condition for increased investment flows. The key economic fundamentals for most investors are the current size of the markets they wish to produce for, the growth prospects of these markets, production costs, and the extent of domestic and foreign competition. Potential investors also assess the progress made to date in achieving lasting economic reform along with the future growth prospects for the economy as a whole and, in particular, they look very carefully at what local investors are doing.

As discussed earlier, there has been some increase in net FDI flows to sub-Saharan Africa during the 1990s. These increases have also been accompanied by an overall improvement in profitability. For example, the overall rate of return on US investments increased from a very low level of 1.9 percent in 1989 to approximately 8 percent in 1995. This compares very favourably with rates of return in other developing regions. Similarly, excluding Nigeria, net income from British investments in SSA rose by 60 percent during the same period. Despite these improvements, widespread concerns still persist about the credibility of economic reforms which continue to be fuelled in many countries by the large gaps that exist between stated policy and actual practice. In a 1994 survey of 150 foreign enterprises operating in East Africa, the most serious reported deterrent affecting foreign investment was 'political and policy uncertainty'. In addition, five of the next six deterrents were of a policy type, including poor infrastructure and excessive government regulation. Although there has been a slight increase in the overall creditworthiness of countries in sub-Saharan Africa since 1992, in absolute terms the continent remains over two times less creditworthy than the other major country recipients of private capital flows (see Bhattacharya, Montiel and Sharma, 1997).

Without doubt, the high incidence of civil wars and other major political crises has seriously discouraged FDI, not only in the 15-20 countries that have been directly affected, but also in the continent as a whole. The dismantling of one-party states and the ending of long military dictatorships

Table 7: Severity Index (and Rank) of Obstacles to Firm Expansion in RPED countries
(Number of firms which claim these obstacles to be among their three most - Ranks are in parentheses)

Obstacles	Burundi 1993	Cameroon 1993	Ghana 1992	Kenya 1993	Tanzania 1993*	Zambia 1993	Zimbabwe 1993
Lack of credit	3.3(1)	4.0(1)	3.8(1)	3.4(1)	133(1)	3.5(1)	3.1(1)
Lack of demand	3.0(2)	3.7(2)	2.6(2)	2.7(2)	37(6)	2.8(3)	2.9(2)
High taxes	2.7(3)	3.0(3)	1.9(4)	1.4(8)	21(8)	1.8(7)	2.3(7)
Lack of support services	2.7(3)	2.5(5)	1.6(7)	2.0(4)	57(4)	2.4(6)	2.4(6)
Lack of infrastructure	2.2(6)	2.4(8)	1.8(6)	2.1(3)	58(3)	2.8(3)	2.8(3)
Lack of security	-	-	-	-	3(15)	-	-
High utility prices	1.6(9)	2.5(7)	2.2(3)	1.7(6)	59(2)	2.8(3)	2.8(3)
Lack of skilled labour	2.4(5)	-	-	-	14(9)	-	-
Import competition	1.5(10)	2.5(6)*	1.8(5)	1.9(5)	40(5)	2.6(5)	1.9(10)
Local competition	2.0(7)	-	-	-	29(7)	-	-
Corruption	-	-	-	-	6(13)	-	-
Regulation	1.7(8)	-	-	-	13(10)	-	-
Investment benefits		2.6(4)	1.1(9)	1.1(13)	2(18)	1.4(8)	2.0(9)
Activity restrictions	1.2(12)	1.7(11)	1.1(10)	1.3(10)	3(15)	1.1(13)	1.4(13)
Labour regulation	1.2(12)	1.7(10)	1.1(10)	1.0(14)	3(15)	1.2(12)	1.8(11)
Location restrictions	1.2(12)	1.1(15)	1.3(8)	1.4(9)	-	1.2(11)	1.4(14)
Ownership restrictions	1.1(17)	1.2(14)	1.1(13)	1.0(15)	9(11)	1.1(13)	1.5(12)
Licences	1.2(12)	1.9(9)	1.1(13)	1.5(7)	4(14)	1.3(10)	2.0(8)
Price controls	1.3(11)	1.3(13)	1.0(15)	1.3(11)	1(19)	-	1.1(15)
Foreign exchange	1.2(12)	1.3(12)	1.1(12)	1.2(12)	8(12)	1.3(9)	2.7(4)

Note: Severity index is rated from 0 (low) to 5 (high).

Source: World Bank, 1996b.

has been universally welcomed. However, greater democratisation has not significantly reduced political instability and uncertainty in many countries. Finally, the low and, in many countries, declining level of domestic private investment is a powerful signal to potential investors about the overall dynamism of the private sector and the likely growth prospects for the economy as a whole. For all these reasons, most potential foreign investors have adopted a 'wait and see' attitude.

The International Investment Corporation, the private investment arm of the World Bank, has become the single largest source of foreign equity and loan capital in sub-Saharan Africa. The composition of the IFC's annual investment portfolios is a good indicator of the relative attractiveness of investments across the main economic sectors. During the 1990s, manufacturing investments have accounted for only around 10 percent of total investments while mining and oil comprised 50

percent. This breakdown is symptomatic of the difficulties faced in identifying attractive opportunities for foreign investment in manufacturing industries in most of Africa.

Privatisation

In many countries, particularly those where state-owned enterprises have dominated the industrial sector generally poor industrial growth has invariably been closely connected with the slow pace of the privatisation process. State-owned enterprises have continued to perform badly in many countries, with governments being obliged to subsidise heavily their activities. This has been further aggravated by the prospect of divestiture itself. In Mozambique, for example, “in an effort to demonstrate commitment to the privatisation program, the government announces early on the process which companies are to be privatised. Once the announcement is made, it is difficult for enterprises in question to do business, Credit dries up.. and foreign customers are reluctant to enter in to contractual arrangements with such firms” (World Bank, 1995:69). As a result, “operations are rendered virtually impossible” (ibid.).

At least up until 1993-94, most governments lacked the strong political commitment necessary to implement major privatisation programmes. Opposition to the sale of SOEs has come mainly from strong vested interests, most notably senior managers and workers in SOEs themselves. Politicians and populations at large have also been concerned that indigenous entrepreneurs actively participate in privatisation programmes and are not squeezed out by local non-indigenous nationals (mainly Asians and Lebanese) as well as foreign capital. In Zimbabwe and South Africa, the prospect of local white business communities being the principal beneficiaries of privatisation has been one of the main hurdles preventing these countries from seriously embarking on privatisation.

With regard to more strictly economic issues, the saleability of public enterprises has been the single most serious obstacle in most privatisation programmes. Governments have generally tried to maximise revenues from privatisation sales by relying on asset-based valuations whereas potential buyers use mainly business-based valuations that calculate the net worth of an enterprise by estimating likely net profit streams and offsetting these against current liabilities. Using the latter valuation methodology, many SOEs have negative net worth (especially those with large debts), and thus governments must be prepared to virtually give them away if they are to be divested successfully. Not surprisingly, many governments have been reluctant to do this.

Information on the post-privatisation performance of enterprises remains sparse but there have been some notable success stories (see Box 3). However, the sale of public enterprises to indigenous business interests has been frequently problematic. More specifically, the limited financial capacity of African entrepreneurs to purchase SOEs is indicated by the large number of “unconsummated transactions” in a number of countries, most notably Ghana, Guinea, and Nigeria and, to a slightly lesser extent, Burkina Faso and Uganda. In Ghana, for example, 12 enterprises collectively valued at over 20 percent of the 1990-94 tranche of privatisations had to be ‘re-divested’ because of the non-payment of mainly deferred sales agreements. Between 1990 and 1994, gross sales of SOE equity amounted to C63.1 billion, of which only 34 percent had been paid by the end of May 1994. Similarly, in Nigeria, N2.3 billion out of total privatisation sales of N5.7 billion had were overdue in 1993 (see Bennell, 1997).

Box 2: Nnewi: 'The Taiwan Of Africa'

Nnewi is a 'rural town' located 15 miles Southwest of Onitsha in the eastern region of Nigeria. During the early 1980s, when total manufacturing output was falling rapidly in Nigeria, an industrial boom was underway in Nnewi. In the space of just two years, 1983-84, 23 large to medium sized factories and engineering shops were started by Nnewi businessmen. Half of these new enterprises produced motor parts with the remainder producing a very wide range of products including electrical wire and cables, switchgears and electrical fittings, bottled liquor, plastic electrical accessories, toilet paper, and road construction equipment.

In trying to understand the Nnewi phenomenon, Deborah Brautigam argues that this dynamic, geographically tight cluster of indigenous capitalist manufacturers have "largely substituted for the state i.e. they have successfully filled the gaps left by the failures of both the market and the state. In particular, through embeddedness - personal relations and culturally-grounded institutions that act as sophisticated networks, reduce information uncertainties and agency problems and enhance trust - they have reduced the high transaction costs typically faced by African entrepreneurs seeking to enter industry (Brautigam, 1997:1065).

The state in Nigeria has largely failed to create an enabling environment for the development of an efficient and dynamic manufacturing sector. "The wide swings in macroeconomic parameters, the unreliable electricity supply, the frustrations of the telecommunications system, and the remarkable levels official corruption" (ibid:1070) have had a devastating impact on industrial development. It is true that during the early stages of Nigeria's short lived economic reform programme that lasted from 1986 to 1992, manufacturing enterprises did respond very positively to improved incentives and better availability of inputs. What is particularly interesting, however, is that not only does the start of the industrial boom in Nnewi predate this reform episode, but production has been sustained well into the 1990s when most of the manufacturing sector in Nigeria has been crippled by foreign exchange shortages, rapidly deteriorating infrastructure, and depressed domestic demand.

Eastern Nigeria is the home of the Igbos. There are well recognised characteristics of Igbo culture (most notably individualism, competitiveness, and receptivity to change) that fuel entrepreneurialism and capitalism in the region. Igbos invest heavily in education and training and have rules of inheritance that encourage capital accumulation. However, in addition to these undeniably important cultural features of Igbo society, there are specific institutional factors that have played a central role in facilitating industrial development in Nnewi. Throughout Nigeria, entrepreneurs have to contend with a very high risk business environment. Transaction costs are so high in part because "the state has not provided the kinds of public goods that would reduce them". Apart from poor infrastructure, property rights are poorly specified and often difficult to enforce, and there are a battery of regulations that have to be dealt with which is costly, both in terms of time and bribes. More generally, poor market information significantly raises transaction costs.

What is special about the Nnewi business community is that both formal and informal institutions i.e. rules and regulations and patterns of behaviour have evolved that lower transaction costs in a variety of ways. Most industrialists in Nnewi were originally traders.

Many ran shops selling motor spare parts. At least half started their working lives as apprentices to successful motor traders. These traders have developed "tightly controlled but decentralised lineage-based distribution networks that ensured that relatives were in charge of the central parts of the business groups" (ibid:1074). In making the transition, therefore, to manufacturing production, not only have Nnewi traders had a strong base of relevant knowledge and skills, but they have continued to rely on a very supportive network of relationships that are cemented together by high levels of trust and cooperation.

There are numerous cultural practices that lower transaction costs in Nnewi. For example, trading networks have engendered a form of cooperative competition which has been transferred to manufacturing. In particular, sharing of equipment and lending of skilled personnel is common. Close trust-based relationships also ensure that key information travels quickly among both producers and traders. Furthermore, Nnewi entrepreneurs have over a number of years developed close links with motor spare part producers and wholesalers in Taiwan and other Asian countries. These links proved especially valuable when Nnewi traders began to develop their own production activities and obtained detailed advice and other technical assistance from their Asian suppliers about the type of machinery and other technologies they should acquire and the acquisition of the specific skills needed to operate efficiently.

Productivity

Very low and, in some countries, declining levels of factor productivity is the fundamental problem that has undermined the ability of industrial enterprises in Africa to withstand heightened import competition and break into export markets. Reliable data on the level and trends in factor productivity among industrial enterprises in Africa is very limited. However, among the four RPED countries, labour productivity fell between 1992 and 1996 (See Collier and Gunning, 1997). In Ghana, for example, value added per employee (measured in constant cedi prices) fell by 60.1 percent in the machinery sub-sector between 1991 and 1993, 38.9 percent in furniture, 12.7 percent for bakery products, and 4.8 percent for wood. Only garments and food enterprises recorded overall increases (of 6.6 percent and 0.7 percent respectively) in labour productivity during this period. Thus, “far from policies leading to rises in productivity and a move to efficiency at international prices, the opposite is happening, firm costs are rising: in part due to the failure to raise productivity through investment” (Teal, 1995:7).

The low task efficiency of workers in Africa seriously undermines the attempts of enterprises to become internationally competitive. Table 8 shows, for example, that the number of garments produced per machine operator per eight hour shift in Ghana, Kenya and Zimbabwe is considerably lower than in India and China. However, average wage costs in Africa are low enough to offset the productivity disadvantage which has enabled garment producers to penetrate export markets. But, as long as productivity levels in Africa lag behind Asia, the only way that African producers can remain internationally competitive is for the exchange rate to decline steadily and for wage costs to be kept very low. Thus, as Biggs and Raturi point out “the real cost of lagging productivity is the low standard of living that it brings” (Biggs and Raturi, 1997:5).

The low technological capabilities of entrepreneurs, managers and workers has been consistently identified as the root cause of the poor productivity of manufacturing enterprises in Africa. Understanding the reasons for these poor capabilities and how they can be improved is a major objective of the RPED studies. In Ghana, for example, Lall et al conclude that “the manufacturing sector at large has only been able to develop a rather limited range of capabilities in a few mature simple technologies. There is little sign of dynamism in any of the main forms of technological development. It is not in a position to launch a broad based export thrust unless new technological capabilities are introduced by new foreign investors, or created by investments in local skills and technical effort” (Lall et al, 1992:114). The study found that (i) entrepreneurial success was clearly associated with higher levels of education and, for this reason, most informal sector enterprises lack an adequate educational base to develop technological capabilities. Thus, they “are destined to die out as modern industry emerges” (ibid:127); (ii) the use of formal technical skills is generally very low; and (iii) the affiliates of foreign firms have the best systems for training managers and workers both on and off the job. Similarly, in Kenya, lack of technological capabilities resulted in most enterprises adopting a ‘defensive’ rather than an ‘offensive’ approach in response to increased levels of import competition. In particular, owners and senior managers tended to reduce costs by cutting employment, moving into non-tradables, and simply doing nothing as opposed to countering the threat posed by import competition by buying new technology, intensifying staff training, and attempting to export (see Lall and Wignaraja, 1996).

Biggs and Raturi use a simple econometric model to analyse the impact of different sources of learning on firm productivity in three RPED countries, namely Ghana, Kenya and Zimbabwe. Four learning-related variables are tested- level of internal and external training by the firm, the extent of technology transfer, the level of foreign ownership, and whether or not the firm exports. Their findings

provide striking evidence of the importance of technological capabilities. With the exception of the export variable, the other learning variables are positive and statistically significant. In particular, worker training has a very large impact on productivity, such that “if these countries doubled the mean number of workers trained by firms from the current average of 9 percent to 18 percent, this itself would increase the average productivity of firms by 6 percent” (Biggs and Raturi, 1997:29). Not only is the overall incidence and quality of firms’ internal technical learning efforts much lower than in Asia and Latin America, but, equally important, learning from external sources is “extremely weak or missing altogether in the three African countries...most firms are technologically isolated from the rest of the world” (ibid:34). In most African countries, the small number of enterprises that typically exist in specific product sectors undermines the development of very sizeable learning externalities that generally characterise well established ‘clusters’ of enterprises producing the same or similar products.

Weak indigenous technological capabilities coupled with generally negative government and popular attitudes towards the employment of expatriate managers and technical personnel has also meant that most African countries have generally been unsuccessful in acquiring foreign skills and technologies. In the context of de-colonisation, especially where the nationalist struggle was protracted and/or highly adversarial, this unwillingness to learn from foreigners is not perhaps not surprising, but it is in marked contrast to the experience of the newly industrialising countries in Asia where enterprises consciously and aggressively utilised all possible sources of skills and knowledge from overseas sources. According to Amsden, “the formal education of the workforce and the apprenticeship of the firm to foreign technical assistants (rather than the apprenticeship of workers in particular trades) lie at the heart of the late industrial experience (in East Asia)” (Amsden, 1989,:215). Thus, the willingness and capacity to become a successful learner are both critically important ingredients for the attainment of international competitiveness.

6. Future Prospects and the Role of the State

The development prospects for the mining industry in Africa are extremely good. Exploration activity has grown enormously since the early 1990s which should lead to a boom in mining production over the next 3-5 years. New mining developments will be overwhelmingly foreign owned and managed, with South African companies playing an increasingly important role. Investment policy regimes for the mining sector have been or are being comprehensively reformed in most countries and are broadly in line with policy regimes elsewhere in the world. With regard to manufacturing, however, the future is much less certain. But what is clear is that, given the fundamental lack of competitiveness of large sections of manufacturing sector in most African countries, there is a real possibility that many enterprises, both large and small, will be unable to cope with increasing import competition resulting from comprehensive trade liberalisation.

Whatever happens, the manufacturing sector will be almost entirely private sector driven. Thus, its future development will largely depend on the overall process of private sector development in each country. There are three key components to private sector development, namely the restructuring of the state so that key supportive functions can be fulfilled, the emergence of an indigenous class of industrial entrepreneurs with the necessary skills and attitudes, and the divestiture of all or most state-owned enterprises. While the pace of public sector reform has generally been very sluggish, there has been a marked acceleration in recent years. This is particularly the case with regard to the extent and scope of privatisation with new programmes having been recently launched or re-activated

in over 20 countries. Consequently, at the end of 1997, only a small minority of countries had not embarked on fully fledged privatisation programmes and, within five years, it is likely that most state owned enterprise will be in private hands. In those countries where the state has dominated the industrial sector, it is clear that the whole process of private sector development is inextricably tied up with the outcome of the privatisation process, and in particular, the ability and commitment of the new owners to improve productive performance.

There are two key sets of private sector actors, namely local and foreign enterprises and entrepreneurs. While there is widespread agreement that much increased levels of foreign manufacturing investment are crucial, there is little real likelihood of this happening in most countries, at least in the short term. Nevertheless, it is still important that close links are established with foreign companies that enable key skills and technologies to be accessed (see below). Both local and foreign enterprises will continue to be adversely affected by the multiple constraints on manufacturing output and productivity that have been discussed earlier. Unless the most serious of these constraints can be effectively resolved in the short-medium term, the prospects for the manufacturing sector will remain poor. There is broad agreement, therefore, that governments in Africa should: (i) consistently pursue wide-ranging macroeconomic reforms and take whatever steps that are necessary to ensure that these reforms are seen as credible and locked-in. This includes the removal of excessive government regulation that leads to serious price distortions. Eliminating these distortions is vital in order to create the right incentive structure for manufacturing enterprises. (ii) Reform financial systems and develop capital markets so that firms are able to access adequate long term finance at reasonable costs; (iii) Improve telecommunications, transport and other basic infrastructural services; and (iv) Generally strengthen the overall institutional framework essential for the efficient functioning of product and factor markets. This includes improvements in judicial, accounting and auditing systems in order to endure secure property rights and improve contract compliance.

Box 3: Privatisation Success Stories in Tanzania

The Morogoro Shoe Company in Tanzania was sold to an Asian company in 1992. The new owners revamped production machinery and equipment. As a result of these improvements, production increased from 200 to 2000 shoes a day from mid-1992 to the end of 1995. Capacity utilisation increased from 5 percent to 38 percent during the same period. Employment increased from 42 before divestiture to 240 in 1995.

INDOL, a subsidiary of South African Breweries, acquired a 50 percent shareholding in Tanzania Breweries Ltd in December 1993, at a cost of US\$22.5 million. This was subsequently increased to 60 percent in 1994. The new managers sourced US\$63 million additional capital that was used to modernise beer production at the existing brewery in Dar Es Salaam as well build a new brewery in Mwanza. Sales volumes more than doubled in the three years following privatisation. After-tax profits increased from T.Sh. -0.6 billion in 1993 to T.Sh. 15.4 billion in 1996, but employment decreased from 2554 to 1800 during the same period. In mid-1996, the Company declared and paid dividends to the government of nearly T.Sh. 2 billion- the first time dividends had been paid since the mid 1970s.

Sources: United Republic of Tanzania, Parastatal Reform Commission, 1995/96 Review and the Action Plan for 1996/97, Dar Es Salaam, July 1996 and Seminar on Privatisation for Honourable Members of Parliament, Dodoma April 1996.

Table 8: Task-Level Efficiency in Standardised Garment Production in Selected Countries, 1994

Number of garments produced per machine operator in 8 hour shift	Zimbabwe	Kenya	Ghana	India	EPZ China
Men's casual shirts	12-14	12-15	12	16	18-22
Men's jeans	10-12	n.a.	n.a.	n.a.	14
Index of unit labour cost (for men's casual shirts)	0.034	0.026	0.022	0.027	0.040

Source: Biggs and Raturi, 1997.

Where there is much less agreement is the role that should be played by the state in directly supporting the industrial sector. Economic growth is generally picking across Africa and this will feed through into increased domestic demand for manufactured goods. However, it is clear that the manufacturing sector in Africa will remain tiny unless there is a dramatic increase in manufactured exports. Some argue that the problems of African manufacturing are so serious that it will simply not be possible for enterprises to become internationally competitive. A related contention is that states in Africa fundamentally lack the capacity to implement the kind of interventionist manufacturing export strategies successfully undertaken in the high performing Asian economies. Consequently, only a fairly limited number of manufacturing activities, the majority of which entail processing of local resources, will have a comparative advantage and thus be economically viable. This pessimism is compounded by the changes that are occurring in the international trading system as a result of the Uruguay Round of reforms. In particular, exporting to Europe, which has been the destination of the bulk of manufactured exports from Africa, will become increasingly difficult as the trade preferences given to African producers under GSP are progressively eroded and other non-trade barriers are eliminated. In the past, textiles and clothing have been seen as a key area for export production from Africa. However, the ending of the Multi-Fibre Agreement in 2005 will give Asian textile manufacturers unfettered access to European markets (see Stevens and Kennan, 1994).

There is, however, a more optimistic school of thought that argues that considerable scope exists to improve manufacturing productivity in Africa and reach or at least get close to the best practice frontier. But, this requires a coherent long term industrial development strategy that is a combination of policies that not only improve the incentives for enterprises to become more efficient, but also assist them to build up their technical capabilities so that they can respond positively to the new incentives. Thus, the key component of such an industrial strategy is a comprehensive technology policy that, above all, encourages the kind of private and collective learning mechanisms that have enabled the Nnewi industrial cluster in Nigeria to thrive in such adverse circumstances. While it would be entirely inappropriate to reinstate the levels of protection and thus high implicit subsidy for manufacturing that prevailed during the era of import substitution, those industries that clearly have the potential to improve productivity significantly should be given the opportunity to do so. This will probably require a certain amount of infant industry protection for a strictly limited period of time.

Given the limited capacity of the state to provide good quality support services, it is important that any reforms are carefully targeted and state efforts are focused on supporting the efforts of industry-wide organisations as well as other private sector organisations. In particular, industry training boards should be established that are largely controlled by employers and thus demand driven. Training activities should normally be funded by a training levy. For larger enterprises, levy

funds could be used to fund both internal and external training activities. Training and other kinds of technical assistance from foreign organisations and individuals both in-country and overseas is particularly crucial. It is well known that small enterprises generally lack the capacity to train their own staff and for this reason special steps will have to be taken to develop specialist training and consultancy organisations that can cater to their needs.

Improving the overall quality of primary and secondary education is another key priority that will ensure that all workers can attain higher levels of productivity and be highly trainable. However, given the current preoccupation with 'basic education' especially in the donor community, there is a danger that not enough attention will be given to improving the scope and quality of both general and specialised training and other support services for industrial as well as other formal sector enterprises. Furthermore, with up to 30 percent of the economically active population in some countries (especially in East, Central and Southern Africa) expected to become infected with the HIV virus, human resources development strategies must be able to tackle effectively the emergence of very serious skill shortages. Whatever steps are taken, it is likely that the need for experienced expatriates will increase very considerably in the short term in order to make up for shortfalls in the availability of local personnel.

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