



DISCUSSION PAPER

FINDING THE RIGHT TRACK FOR INDUSTRY IN AFRICA - SOME POLICY ISSUES AND OPTIONS

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I. AFRICA IN A CHANGING GLOBAL ENVIRONMENT

The countries in the world economy which have grown most rapidly are those which have been the most active participants in globalisation.¹ East Asian, and subsequently South-East Asian, economies have accelerated their industrialisation on the basis of manufactured exports. South Asian countries too have become major exporters of manufactures.

The Uruguay Round Agreement's reductions in trade barriers through the World Trade Organisation are providing a further impetus to the expansion of world trade. In recent years globalisation has been intensified by technological and organisational changes which have allowed international companies increasingly to integrate their production across national boundaries. Foreign direct investment (FDI) is now the primary force behind further globalisation although this 'globalisation' often takes place on a regional basis. International production also involves a proliferation of strategic, non-equity links between companies in different countries. International capital flows, including flows of portfolio capital, have grown as capital markets have been deregulated and foreign exchange controls relaxed.

Africa, particularly sub-Saharan Africa, has been slow to participate in globalisation. Although world trade has been rising faster than world output consistently since the second world war, this has not been true of Africa. For example, African exports grew more slowly than gross domestic product (GDP) during the periods 1980-85 and 1991-95.² As well as seeing its share of world merchandise exports fall from a mere 4.2 per cent in 1985 to 2.3 per cent in 1996, Africa has seen its share of total FDI inflows to developing countries halved over the period 1986 to 1996.³

However, since the mid-1990s, Africa's economic growth performance has started to improve. As African countries continue to liberalise their domestic economies under structural adjustment programmes, and as their barriers to imports are gradually reduced, they will find themselves faced with the need to integrate into the world economy. Integration offers them the opportunity to join in world economic expansion, but it has its dangers too. There is little evidence that allowing the free run of market forces in a low-income developing country is enough to make that country internationally competitive. Yet without that competitiveness, integration may simply mean the loss of domestic manufacturing capacity in the face of import competition, and a continued reliance for export earnings on primary products whose demand prospects are poor.

There is a need to develop industrial policy which helps African economies to utilise their comparative advantages in order to compete in the international market at the level of enterprises. Macroeconomic stability and competitive real exchange rates are prerequisites for improved industrial performance, but they are not enough in themselves. Development of competitiveness and enhancement of technological capability require a strengthening of the rule of law and of property rights so that contracts can be enforced, and the creation of market-supportive institutions to ensure competition and encourage market flexibility.⁴ A particularly pressing requirement in Africa is investment in the extension and rehabilitation of the infrastructure - essential if enterprises are to respond to devaluation and other price incentives. Government investment in this area can provide a stimulus to investment by the private sector.

Industrial policy also needs to focus on how to spread the benefits of industrial expansion to bring about true economic development. In particular, the incomes of both the rural and the urban poor must be raised. Food security and employment opportunities are essential features of the spread of the benefits to the poor. The fast-growing economies of East Asia all started on their path of accelerated growth with relatively even income distributions. This creates effective demand and wide markets for consumer goods; moreover, with growing agricultural incomes absorbing industrial output, the integration of agriculture and industry is fostered.

(i) *Global defence or global presence?*

African countries, therefore, are faced with the need to strengthen their industrial competitiveness to establish a presence in global markets as exporters of manufactured goods, and at the same time they need to avoid further falls in their existing shares of world primary commodity markets (see box 1). They also need to defend themselves against erosion of their domestic manufacturing as they lower their trade barriers and integrate into the global economy.

Although structural adjustment programmes have been in operation in Africa since the early 1980s,⁵ economic liberalisation has been taking place only to a limited extent. An index of the speed of integration into the global economy constructed by the World Bank using an average of the changes in four indicators - the ratio of real trade to GDP, the ratio of FDI to GDP, the Institutional Investor credit rating, and the share of manufactures in exports - compared changes in individual developing countries over periods from the early 1980s to the early 1990s. The findings suggested that 26 out of the 36 sub-Saharan African countries studied were slow or weak integrators; only two countries in the region were fast integrators.⁶ This reflects the fact that there have been great differences between African countries in their degree and type of liberalisation, and in the extent to which they have implemented the programmes they have agreed with the World Bank and International Monetary Fund (IMF).⁷

One common feature is that many African countries still impose substantial protection against imports. Nineteen sub-Saharan African countries for which data on trade barriers were available maintained in the mid-1990s an average unweighted level of tariff protection of 26.8 per cent compared with 6.1 per cent in OECD countries. Over one-third of the imports into these African countries were also covered by non-tariff barriers, compared with under 4 per cent into the OECD. There is little reason to suppose that those countries in Africa for which data were not available had significantly lower levels of protection.⁸

The longer that many African countries maintain protection against imports, the longer it will take for their domestic industries to learn to compete in their own domestic markets, although in countries with long and porous land borders, smuggling may circumvent such barriers. Long-run protection against imports makes for inefficiency but the gradual phasing-in of reductions in tariffs and non-tariff barriers does give domestic enterprises a vital breathing space. During a managed phase-in period, governments, in co-operation with the private sector, can focus on policy to improve the general competitiveness of the economy and encourage the development of crucial technological capabilities among sectors and firms.⁹

In certain sectors and enterprises, development of export competitiveness does not need to wait for the general removal of import protection. No developing countries, other than Hong Kong and Singapore, have expanded manufactured exports on the basis of free trade and in the case of Singapore there were extensive additional interventions in the economy. Of the South-East Asian countries which have become important exporters of manufactures, Indonesia in the mid-1990s retained an average (unweighted) import tariff of 17.0 per cent, Malaysia 12.8 per cent and Thailand 8.5 per cent.¹⁰ What is important is to free exporters from the anti-export biases of a protectionist trade regime: they need a competitive exchange rate, and access to imported inputs at free-trade prices. Even efficient, technologically upgraded African enterprises will find it difficult to export in the face of significant anti-export bias.

Box 1. Africa's Export Performance in World Markets

AFRICA MUST REVERSE THE LONG-TERM DECLINE IN ITS COMPETITIVENESS

A major statistical study of the export performance of sub-Saharan Africa, North Africa and other groups of developing countries over the period 1962-64 to 1991-93 has assessed how each country's export growth results from three separate factors:

- *the growth of demand for the products which it exported in the initial period: this shows changes in exports which would have occurred if there were changes in demand only;*
- *changes in its exports of those products other than the changes which can be attributed to demand growth: these changes measure competitiveness in the market for these initially important exports in relation to other producers;*
- *export diversification, which is equal to the actual change in a country's exports less the changes which can be accounted for by demand growth and changes in competitiveness.*

Sub-Saharan Africa's market shares for its major export products - overwhelmingly primary commodities - fell during the period studied, and these products also experienced a decline in their importance in world trade. With the exception of North Africa, all other developing country groupings increased their exports over and above what could be expected as a result of growth in demand. Over the same period, sub-Saharan Africa's exports also became less diversified, with the top 3-digit level SITC products rising from 36 per cent to 62 per cent of total export earnings.

Sub-Saharan Africa's disappointing export performance cannot be blamed on increases in protective measures imposed in its export markets. The period saw moves from a less to a more favourable tariff environment, with the implementation of the tariff concessions of the European Union's Lomé Convention and the Generalised System of Preferences schemes in major markets. Sub-Saharan Africa received more favourable treatment over the period than other developing countries in respect of both tariffs and non-tariff barriers. The study concludes that Africa's poor export performance cannot be blamed on external factors but on inappropriate domestic policies, including the anti-export biases associated with its high levels of protection against imports.

*Source: F. Ng and A. Yeats, "Open economies work better! Did Africa's protectionist policies cause its marginalization in world trade?", *World Development*, vol.25, no.6 (June 1997), pp.889-904.*

(ii) Comparative advantage and competitiveness

African countries typically have small industrial sectors and a short history of manufacturing. They have poor physical infrastructure and limited human capital endowment, with low levels of primary and secondary education, and shortages of industrial skills. This is a weak basis on which to develop the necessary competitiveness in manufacturing production that would diversify export earnings beyond traditional primary commodities. Any comparative advantage for African countries, therefore, almost inevitably lies in agro-related industries: industries using either agricultural products as their main raw material, or those producing agricultural inputs. The further processing of agricultural products can also make an important contribution to the efficient replacement of imports. Over 70 per cent of total employment in Africa and 60 per cent of manufacturing value-added (see table 1) is in agro-related industries. These industries include many labour-intensive activities such as subsectors within food processing, as well as textiles and clothing, leather processing and footwear.

The production of labour-intensive goods with mature, readily available technologies has been the point of entry into the world market for manufactured exports for virtually all developing countries. Production of goods based on innovative technology and high labour skills requires a degree of technological upgrading which cannot yet be undertaken other than by South Africa (and to some extent some North African countries).

**THE STRUCTURE OF VALUE-ADDED MANUFACTURING SHOWS
LITTLE STRUCTURAL CHANGE SINCE THE 1960s**

Table 1. Percentage shares of agro-related sectors in sub-Saharan African manufacturing value-added

ISIC	Sector	1960	1980	1990	1996
311	<i>Food</i>	21.7	17.5	21	22.4
313	<i>Beverages</i>	14.7	12.1	13.2	13.1
314	<i>Tobacco</i>	8.5	4.4	4.4	4.7
321	<i>Textiles</i>	8.4	10.2	9.2	8.7
322	<i>Apparel</i>	2.4	2.2	2.8	3.5
323	<i>Leather</i>	0.6	0.7	0.7	0.8
324	<i>Footwear</i>	2.1	1.2	1.3	1.1
331	<i>Wood</i>	7	3.9	2.7	2.9
332	<i>Furniture</i>	1.7	1.8	1.1	1
369	<i>Non-metallic minerals</i>	3.6	2.9	3.8	4.3
Total	<i>Agro-related</i>	70.6	56.8	60.2	62.7

Source: UNIDO global database.

Mature-technology goods based on abundant natural resources may also be suitable candidates for export development but they need to be carefully selected. Since most natural resources can be internationally traded, they are less a source of comparative advantage than cheap labour unless there are significant cost reductions - for example, as a result of weight loss - in using them in the country of origin. Britain in the eighteenth and nineteenth centuries did not require domestic cotton in order to become the world's main exporter of cotton textiles. Similarly today, Africa's prospective exporters of resource-based products are likely to face competition from developed market economies which import those materials.¹¹ For example, the possession of natural rubber does not generate an overwhelming cost advantage in the production of tyres: rubber gains in bulk when transformed into tyres. Although many developing countries produce tyres for their domestic markets, the world export market is dominated by a handful of multinationals based in developed countries. In contrast, a group of South-East Asian natural rubber-producing countries have been successful in exporting specialised rubber products such as sheath contraceptives and surgical gloves.¹² However, agro-related manufacturing growth and competitiveness require new investment, not only in plant and equipment, but also in infrastructure and human capital.^a

Box 2. Sources of International Competitiveness in Primary Processing

^a Agro-processing industries as a whole in the world economy are somewhat *less* labour intensive than more narrowly defined manufacturing. Narrowly defined manufacturing (which, however, includes textiles, clothing and footwear) in developed countries employs 34 per cent more workers per unit of value-added output than broadly defined manufacturing (that is, manufacturing including agro- and mineral-processing activities). In developing countries, 26 per cent more workers are employed per unit of value-added output in narrow manufacturing than in broad manufacturing. The figures relate to the late 1980s. See T. Owens and A. Wood, "Export-oriented industrialization through primary processing?", *World Development*, vol.25, no.9 (September 1997) p.1457.

AFRICA NEEDS TO ACCUMULATE HUMAN CAPITAL IF ITS AGRO-PROCESSING INDUSTRIES ARE TO COMPETE EFFECTIVELY IN WORLD MARKETS

The production of manufactured goods calls for high inputs of skills but not much land: the ratio of labour skills to land use is in inverse proportion to that relating to the production of unprocessed primary commodities.

Statistical studies on a sample of 108 countries show that labour skills per worker are a significant variable in explaining differences between one country and another in their export performance for both gross and net exports of processed primary exports in relation to unprocessed primary exports. The ratio of labour skills per worker to land per worker is also a significant factor in equations setting out intercountry variation in gross and net export ratios of broad manufacturing (that is, including processed primary products) to unprocessed primary exports.

Africa combines low skills per worker and large amounts of land per worker. This puts the continent at a disadvantage in relation to its competitors.

*Source: T. Owens and A. Wood, "Export-oriented industrialization through primary processing?", *World Development*, vol.25, no.9 (September 1997), pp.1453-1470.*

Turning country-level comparative advantage into enterprise-level competitiveness is by no means simple - even in labour-intensive activities. Garments, footwear and toys all require high standards of quality and design if they are to be acceptable on international markets.^b Nor is the production technology so easy to acquire. The equipment can be imported, but the technology is often poorly defined and diffusely distributed among the production team.¹³ For this reason, the development of export competitiveness in garments in China, the world's largest exporter, was heavily dependent on investment from Hong Kong. Similarly, Taiwanese investment has been important in developing footwear exports from China, and Korean investment in sports footwear exports from Indonesia. These investors bring key organisational and marketing skills, and contacts with retail chains in Europe, North America and Asia. Attracting such investment is vital to African export competitiveness. Non-traditional agricultural exports such as vegetables, fruit and flowers also require high standards of grading and quality. These have been pioneered by, for example, Kenya and Zimbabwe in co-operation with retail chains in the UK.

A more hopeful feature in the development of labour-intensive exports is the possibility of selling to regional and subregional markets. In these markets African exporters may find demand patterns similar to those of their own domestic consumers and, in this sense, regional competitiveness can more easily be based on experience gained from home market development. Textiles and food processing, where international competition is especially intense, could be developed in this way, particularly by countries such as Ethiopia or Nigeria, which have potentially large domestic markets. In some cases, informal trade has already mapped out local regional markets, as in the case of Nigeria's exports of agricultural machinery and textiles.¹⁴

The range of labour-intensive activities in which low-income countries can hope to be competitive has been narrowed by technical progress, particularly as a result of generic technologies - technologies which can be applied to a range of manufacturing sectors. Information technology and biotechnology have eroded traditional comparative advantages, and developing countries need to upgrade their technological level and human capabilities in order to stay competitive even in labour-intensive activities. In footwear manufacture, for instance, information technology allows the realisation of completed designs in full colour and texture on the computer screen and also gives accurate costings, while assembly operations now demand greater accuracy and the use of robots is increasing.¹⁵ Again, low-cost production based on regional markets for local tastes may partially circumvent these problems. While footwear demand in OECD countries has almost reached saturation point at about six pairs per

^b An interesting possibility for developing garment exports is the niche market in the USA for Afro-centric products. There has been strong interest by some large US buying chains in sourcing these in Africa. A World Bank study concluded that Kenya, Ghana and Zimbabwe had promise as exporters, though they were impeded by many supply constraints. See T. Biggs, G.R. Moody, J-H. Van Leeuwen and E.D. White, *Africa Can Compete! Export Opportunities and Challenges for Garments and Home Products in the US Market*, World Bank discussion paper, Africa Technical Department Series, no. 242, 1994.

person per year, in Africa, where consumption is far below this level, there is scope for great increases in demand as income rises.

It is also important to strengthen competitiveness in traditional primary commodity export products. Africa's comparative advantage in crops such as cocoa, palm oil and rubber appears clear, yet sub-Saharan Africa's declining share of world exports since the 1960s can be attributed mainly to a loss of competitiveness in primary commodities, particularly in comparison with South-East Asia. There is no incompatibility between strengthening existing commodity exports and developing other sectors to diversify away from primary commodities. In this, Malaysian experience is a guide.¹⁶ Malaysia has increased yields and labour productivity in its traditional rubber and palm oil exports, and developed new export crops such as cocoa. The additional export earnings from these products yields foreign exchange for the capital goods and technology imports necessary for upgrading domestic manufacturing activities.

Box 3. Transport Costs and African Competitiveness

AFRICA'S HIGH TRANSPORT COSTS ACT AS A BARRIER TO EXPORTING

Transport costs in Africa are a greater barrier to exports than the tariffs they face in importing countries:

- *Sub-Saharan Africa's average freight costs are more than 20 per cent higher than those of other countries. For some goods, such as clothing, textiles and footwear, in which Africa is potentially competitive, average transport costs are between 15 and 20 per cent of the value of output.*
- *Once the terms of the Uruguay Round Agreement are fully implemented, the average tariff on all imports into the USA is less than 4 per cent.*

For the continent's landlocked countries such as Uganda, Zimbabwe and Zambia, transport cost barriers to exports are greater still:

- *Ten landlocked countries in the early 1990s faced net transport and insurance costs equivalent to up to 42 per cent of total export costs. For developing countries as a whole this ratio was 5.8 per cent.*

Source: UNIDO, The Globalization of Industry: Implications for Developing Countries beyond 2000, 1996, pp.113-115 (with citations from original World Bank sources).

Africa's competitive position has suffered from a recent worsening of the external environment in two respects. Its traditional trade privileges through the European Union's (EU's) Lomé Convention and the Generalised System of Preferences operated by major industrial countries have been eroded by the multilateral reduction of trade barriers under the Uruguay Round agreement.¹⁷ The buffeting which the world economy received in 1997 and 1998 as a result of the Asian financial crisis¹⁸ also has implications for Africa. The crisis has resulted in falls in outward direct investment by the Asian newly industrialised countries (NICs) such as South Korea. There have also been large real depreciations, particularly of the Korean, Thai and Indonesian currencies. These depreciations render Asian manufactured exports potentially more competitive in world markets and make African entry more difficult. To these difficulties are added Africa's long-term disadvantage of high transport costs, particularly for its landlocked countries. However, the United States' new African Growth and Opportunities Act (AGO) offers improved market access to African countries, although it is too soon to predict its likely effects on African manufacturing exports.

II. INDUSTRIAL POLICY DIMENSIONS

A. Macroeconomic Preconditions

(i) *Stabilisation*

It is hardly in dispute that some degree of macroeconomic stability is necessary for successful economic performance. High inflation and grossly overvalued and unstable real exchange rates inhibit growth. So does macro and other policy instability. Structural adjustment in Africa over two decades has stressed a combination of stabilisation and liberalisation, although the degree to which these measures have been applied - let alone implemented - varies considerably between countries. The distinction between stabilisation and liberalisation is blurred in practice. The control of inflation by the restriction of domestic credit expansion is often, but not invariably, accompanied by devaluation. In an attempt to 'back up' devaluation so as to release real resources to the tradeable goods sectors and prevent the further build-up of inflation, minimum wage legislation and collective bargaining procedures may be dismantled in order to exert downward pressure on real wages. Government subsidies on basic items such as food and electricity may be phased out, and controls on cash and food crop procurement prices may be lifted.¹⁹ Thus the pressure on governments to withdraw from economic activity can accompany stabilisation from an early stage.

The challenge is how to design stabilisation policies so as to reduce the conflicts between stabilisation and growth, and to reduce the detrimental impact on the poorest members of society. The early stages of stabilisation involve the reduction of high inflation levels, substantial cuts in budget deficits, and devaluation to correct current account deficits. Restrictive fiscal and monetary policy can have a drastic effect on consumer purchasing power and capacity utilisation in domestic industry. In Nigeria, for instance, where inflation soared from under 10 per cent in 1990 to 90 per cent by mid-1995, the restoring of macroeconomic stability in 1995 and 1996 was associated with large falls in consumer purchasing power. This exacerbated the problems of low capacity utilisation in domestic manufacturing caused by shortages of foreign exchange.

Inflation causes the real exchange rate to appreciate, and stabilisation policies require the inclusion of a corrective devaluation. Devaluation is necessary also where there are substantial external shocks, such as occurred in the mid-1980s with falls in world primary commodity export prices. The greater the supply responses to devaluation, the less is macroeconomic restriction needed to correct current account deficits. In this sense, adjustment for a 'flexible' economy is less painful.²⁰ Structural adjustment programmes need to be designed as a coherent set of policies. Trade liberalisation must be combined with devaluation to avoid current account deficits occurring when import restrictions are relaxed. The freeing of import restrictions can ease the constraint on industrial growth by giving manufacturers better access to imported spares and intermediate products. One particularly important aspect is to maintain government development expenditure during adjustment, perhaps placing the burden of cuts on public sector wages.²¹

Once initial stabilisation has been achieved, policy should centre on maintaining a stable macro environment with a broadly expansionary focus, keeping a stable and competitive real exchange rate, and adjusting macro policy quickly in the face of any external shocks.²²

(ii) *Export Promotion*

An important feature of the broader macro framework designed to strengthen competitiveness is the removal of the anti-export bias that arises in most African countries as a result of continued protection against imports. Continuing protection overvalues the exchange rate and leads to a bias against both exports and import-competing industries in favour of non-tradeables such as services. In addition, there is a bias within the tradeables sector (that is, importable and exportable products) in favour of import-competing products; this bias results from the incentives that import protection gives for resources to move into import-competing industries and non-tradeables, and away from exports. A number of African countries, including Mauritius, Kenya, Zimbabwe, Madagascar and Nigeria, have

adopted a variety of the export promotion measures which have been developed in Asian countries in an attempt to counterbalance this bias.²³ These include export processing zones (EPZs), duty drawbacks and exemptions on imported intermediate products, and in-bond manufacturing. All three in theory allow exporters access to imported inputs at world prices, and EPZs offer in addition good infrastructural facilities. Access to imported inputs is especially important in Africa since domestic manufacturing often relies heavily on imports for equipment, spare parts and many raw materials.

Export processing arrangements are far more relevant for some subsectors than others. For example, they are vital for Lesotho's export garment manufacturing based on imported textiles. However, for prospective leather products exports from Nigeria or Ethiopia, which would use mainly domestic leather, they would be of much less importance. There is a danger that such arrangements, if they are eventually made to work effectively, would distort the choice between local and foreign inputs in favour of imports. To counteract this, it is equally important to give exporters remission of domestic taxes such as value-added tax (VAT) which they pay on domestically produced intermediate inputs.

Free access for exporters to inputs at world prices does, however, raise the danger that export activities will develop as enclaves. In fact, this may be desirable at an early stage of export development. Access to free-trade inputs releases exporters from domestic supply constraints, and from quality defects in domestic inputs. It puts pressure on domestic input suppliers to be competitive, while mapping out a market for them if they eventually become so. China, in addition to its famous Special Economic Zones, successfully developed labour-intensive manufacturing exports using processing and assembly arrangements²⁴ which are now available to exporting firms in general.²⁵ Where foreign investment is attracted by such arrangements, as in the labour-intensive export industries of China and Indonesia, initially the foreign investors may be entirely export oriented, with little connection to the domestic economy. In time, however, overseas component suppliers may move to the new location and deepen the economic structure.²⁶

Export promotion must work in a speedy and corruption-free manner if it is to be effective. This raises the question of whether particular African countries have the institutional capability to operate export processing arrangements, and highlights the need to introduce policies in line with capabilities.²⁷ It is likely that duty exemption schemes for imported intermediate goods will work better than duty drawbacks, since drawback schemes require more administration.²⁸ Similarly, it may not be possible to extend drawback schemes to indirect exporters (domestic suppliers of intermediate products to final exporters). EPZs, if administered efficiently, are useful ways of kick-starting foreign investment in export manufacturing, and have proved so, for example in Mauritius.²⁹ Note, though, that the new African Growth and Opportunities Act has implications for EPZ arrangements, since it specifies African rules of origin regulations as a condition for market access into the USA, thus reducing scope for international sourcing of inputs. One consequence of AGOA, in the case of South Africa for example, is to encourage *vertically integrated* inward investment from Asia in clothing and textiles.

(iii) Government expenditure

The composition of government expenditure is as important as its level. Public expenditure programmes should be designed with a view to enhancing the technological and human resource capabilities of the economy that will enable it to compete.³⁰ Policy designed to strengthen the supply responses can improve the overall competitiveness of the economy. This applies particularly to infrastructural investment, which encourages rather than crowds out investment by the private sector, and which increases the likelihood that the price incentives provided by liberalisation will lead to faster growth.³¹ Development expenditure on rural infrastructure may be particularly beneficial, by increasing supply response and reducing transport and storage costs.

B. The Challenge of Equity and Sustainability

Sustainable development centres around the notion that meeting the needs of the current generation should not endanger those of future generations.³² This is a complex concept, since the preferences of

later generations are not known, and nor do we know what technologies will be available in the future. Current economic growth is likely to deplete the stock of 'environmental capital' although worries about this may be lessened to the extent that substitutes are available for particular resources, or that human and physical capital is accumulated as a result. Raising living standards in the immediate future will reduce the damage to the environment that results from pressure on livelihoods when people live in poverty. Social sustainability requires human populations to continue to function in the face of physical shocks such as drought or flood and in the face of economic stresses such as fluctuations in crop prices. The notion of sustainable livelihoods highlights the interrelation between sustainability and poverty reduction. Livelihood diversification allows families to reduce risk and raise incomes. Off-farm employment is a major aspect of rural households' livelihood diversification.

(i) Food security and off-farm activities

Food security is an essential part of raising the welfare of both the rural and the urban poor. It depends on food availability and access to food, in terms of both transportation to market and consumers' purchasing power, which itself depends on the success of strategies to boost household livelihoods. Although food security might seem to be mainly an agricultural issue, an industrial policy based on strengthening the links between industry and agriculture could do much to foster it. In Africa, only about 10-15 per cent of food production is processed compared with 80 per cent in developed market economies. A higher degree of processing would contribute to food security, as also would improved storage facilities and increased production of agricultural inputs, especially if food marketing systems were strengthened at the same time.³³

Any discussion of food availability in Africa raises the issue of agricultural productivity; increasing this should be one of the goals of industrial policy. It can be done through the provision of agricultural inputs, such as fertilisers, and of incentive consumer goods to induce farmers to raise output. Given agriculture's importance in GDP and its potential linkages to other sectors, increases in agricultural productivity would be a significant stimulus to the spread of growth and employment. Off-farm employment, providing diversified income sources, can contribute to sustainable income growth and food security. Rural industrialisation has been made famous by China's 'township and village enterprises' (TVEs), whose growth was closely related to the agricultural reforms which took place in China between 1978 and the mid-1980s. These reforms, which centered on decollectivisation, raised peasant incomes and generated increased purchasing power and investible funds for rural industry. The agricultural reforms also released surplus labour for off-farm employment. China's TVEs accounted for over 40 per cent of the country's exports in 1993.³⁴ Other Asian countries have experienced large increases in agricultural output through the use of 'green revolution' technologies.

Whether Africa could use agricultural expansion to lead industrial growth, particularly in rural industries, depends in part on its potential for raising agricultural productivity (see box 4). The massive reorganisation of agriculture which took place in China is scarcely conceivable in Africa. The 'green revolution' technological breakthroughs which drove rural industrialisation in some other Asian countries are likely to be more difficult to achieve than in Asia, especially in food production.^c Root crops, which in many African countries amount to as much as half the calorific intake, have been less amenable to the innovations which have raised Asian yields in rice, wheat and maize.³⁵ Maize is one of the few African food crops where high-yielding varieties have been introduced, and research has shown that this introduction has been stimulated by improvements in access to markets and to agricultural inputs.³⁶ In fact, increases in food production are likely to be more dependent on improvements in infrastructure and market integration than on technical change.

Box 4. Rural Industrialisation, Income Diversification and Sustainable Livelihoods

^c In some cash crops there is greater potential for yield increases. Michelin claims to have achieved the highest output per hectare in the world on its Nigerian rubber plantations. See Alistair Campbell, "Natural rubber: a Nigerian challenge", in *Report on the Second Nigerian Economic Summit*, May 1995.

CAN AFRICA INDUSTRIALISE THE COUNTRYSIDE?

Livelihood diversification occurs when households set up a diversified portfolio of economic activities and social support in order to survive and improve their standard of living. In sub-Saharan Africa 30-50 per cent of rural incomes frequently come from non-farm sources. Rural off-farm employment can be an important contributor to such income, although in Africa many off-farm income sources are non-rural.

Off-farm employment can be driven by improvements in agricultural output and productivity which stimulate industrial and service growth. This happened in Asia in the 1970s and 1980s as a result of agricultural productivity increases following the introduction of 'green revolution' technologies. Yet not all increases in off-farm employment mutually reinforce agriculture and industry. There are cases where growing off-farm employment is accompanied by stagnation in agriculture, and urban firms may come to rural areas simply to gain access to cheap labour. Farm output may even be damaged by increases in non-farm employment.

Where farm output and incomes rise as a result of agricultural productivity increases, this generates demand for industrial consumer goods and for farm inputs. Increased crop output stimulates new investment in crop-processing activities and rural trading. Agricultural development and industrial (and service) development can proceed together. Various empirical studies for Africa suggests that for every additional dollar of value-added generated in agriculture, non-farm income of between \$0.50 and \$1.90 is created. In Africa these multipliers consist mainly of non-farm consumer expenditure on non-farm products, rather than forward or backward linkages.

Given Africa's diversity of cropping systems, soils and climate, and its more risk-prone agriculture, the massive and widespread productivity increases seen in Asian agriculture are unlikely to take place. Africa also has more widespread seasonal and locational labour shortages in agriculture than does Asia. Any breakthroughs in African agricultural productivity are more likely to occur on a narrower front.

*Source: F. Ellis, "Household strategies and rural livelihood diversification", *Journal of Development Studies*, 1998.*

(ii) Small enterprises and employment creation

Employment growth spreads the benefits of development. However, developed countries' industrial growth since the mid-1970s has done little to increase employment and unemployment has risen, particularly among unskilled workers. Sub-Saharan manufacturing employment started to decline during the 1980s and in many countries this is associated with declines in manufacturing value-added.³⁷ Small and medium enterprise (SME) development is often seen as a way of generating employment-intensive industrial growth but SMEs are not invariably more labour-intensive than larger firms.³⁸

There is now an accumulation of evidence that SME growth both in industrial and in some developing countries has been associated with increasing export competitiveness. Over half the exports of both China and Taiwan Province of China are generated by SMEs. The 'flexible specialisation' model of Piore and Sabel³⁹ has made famous the SME clusters and industrial districts of Italy as a means of achieving competitiveness in garments, footwear and other labour-intensive exports. Developing countries have used clustering to maintain export competitiveness; an example is Brazil, with its footwear industry.⁴⁰ A key factor in Japan's export competitiveness has been the widespread practice of efficient subcontracting to its exceptionally large number of specialised SMEs.⁴¹

Many of the small enterprises in Africa, however, are very different not only from those of Japan, but also from those of Italy or Brazil. In contrast to Japanese SMEs, which may employ up to 300 workers and also be quite capital intensive, many businesses in Africa are microenterprises. African firms with more than 50 workers are often considered to be large.⁴² Microenterprises employ only a handful of workers, who in many cases are family members or relatives. In Uganda, for example, one survey in 1988 found that enterprises with more than four workers accounted for only one-quarter of the industrial workforce.⁴³ Such microenterprises in many respects are more like household activities than firms in the Western or Japanese sense. They face many different constraints than 'proper' small and medium firms and require somewhat different policies. The production of a particular article may be part of a portfolio of activities in which family members may engage at different moments. Growth may be constrained by a wish to avoid the attention of the authorities, which might entail burdensome administrative or financial obligations and perhaps predatory behaviour on the part of officials. Profits

may seem better invested, for reasons of household security, in land or property than in expansion of the business. The question of credit for microenterprises is taken up later in this chapter, but the difficulty of getting access to microcredit may be less important than other constraints. Policies regarding microenterprises should be concerned as much with supporting household livelihood diversification as with supporting industrial development in the more conventional sense.

Box 5. Microenterprises, Microfinance and Growth Constraints in Africa

WHAT CONSTRAINS THE DEVELOPMENT OF AFRICAN MICROENTERPRISES?

Microfinance has been widely suggested as the key to microenterprise expansion, but microenterprises face many constraints that cannot be relieved simply by injections of capital. These constraints relate both to the external environment in which the enterprises operate, and to the characteristics of the enterprises themselves:

- *Microenterprises are often more like households than enterprises in the Western sense. They may switch between activities, and be concerned more with household survival than with growth.*
- *Profits may be invested in assets such as land rather than in the enterprise, if such assets promise better long-term security to the household.*
- *Microenterprises may hesitate to 'grow into formality' if this increases the risk that they will be subject to burdensome regulation or to the predations of the state.*
- *Much 'credit' in Africa takes a non-monetary form, such as the lending of labour or tools.*

*Source: G. Buckley, "Microfinance in Africa: is it either the problem or the solution?", *World Development*, vol.25, no.7 (July 1997), pp.1081-1093.*

A particular issue is that African microenterprises usually fail to grow ('graduate') into being small enterprises, and small enterprises (say under 10 workers) may not graduate into medium ones. There is a 'missing middle' of medium enterprises. In practice, of course, growth constraints on small businesses are likely to differ between sectors. For example, some sectors, such as engineering, are constrained by foreign exchange availability for spare parts or raw materials. Lack of consumer demand growth is a serious constraint in certain sectors. The availability of credit to assist growth is probably a more serious factor for small enterprises than for microenterprises: there is some evidence that costs for small firms rise in the early stages of their expansion.^d A study of garment manufacturers in Kenya found both consumer demand and the availability of finance to be key factors in the growth of firms (see box 6).

SMEs offer considerable scope for technological upgrading to judge by the experience of other developing countries. If at the same time this enables them to become internationally competitive, it can be an effective way of generating growth in employment. The upgrading of SMEs, and particularly policy interventions to favour clustering, is discussed in a later section.

Box 6. The Growth of Garment Manufacturers in Kenya

WHAT FACTORS EXPLAIN SMALL ENTERPRISE GROWTH IN AFRICA?

A study of growth in an original sample of 91 firms in Nairobi in 1989 traced their subsequent development into the 1990s. The sample comprised firms employing between 4 and 49 workers, and covered custom tailors, contract garment workshops, mini-manufacturers of garments and mass-producers of garments. Most of the entrepreneurs were female although this varied between subsectors. Most firms had been started with the owner's own funding, supplemented from family sources.

The survey found:

- *Larger firms in the 1990s were generally those which had started with larger capital, rather than smaller ones which had grown.*

^d The expenditures involved in becoming more of a formal sector enterprise are likely to occur before the firms become large enough for costs to fall for reasons of efficiency. If regulation (and labour supervision) costs rise before economies of scale set in, the microenterprise will face a 'humped' average cost curve. This can be a serious limit to growth. See M. Fafchamps. "Industrial structure and microenterprises in Africa", *Journal of Developing Areas*, vol.29, no.1 (October 1994), pp. 1-30.

- *The period 1990-93 saw a decline in Kenyan per capita income. This inhibited the growth of firms selling to urban consumers more than that of firms selling to rural markets.*
- *Firms were more likely to have grown if their proprietor had had some secondary education. This also gave access to wider support networks.*
- *Many firms had access to credit, but only three of those without credit succeeded in growing.*
- *Although many of the firms studied were situated in the same location within the city, there was little evidence of 'clustering' in the sense of subcontracting or other interfirm contractual relations although firms did sometimes help each other with repairs and in preparing designs.*

*Source: D. McCormick, M.N. Kinyanjui and G. Ongile, "Growth and barriers to growth among Nairobi's small and medium-sized garment producers", *World Development*, vol.25, no.7 (July 1997), pp.1095-1110.*

(iii) Environmental sustainability⁴⁴

With increasingly strict environmental regulations being imposed in the developed world, developing countries are forced to meet higher environmental standards to gain market access for their exports. What is the effect of compliance with these standards on the competitiveness of developing country enterprises and are there costs for developing countries in terms of their competitiveness at the macro level? Domestic environmental regulations may also affect the competitiveness of developing countries' exports although these regulations are often driven by international pressure. More generally, what are the determinants of an environmentally sustainable industrial development path for Africa?

Environmental regulations can affect process standards, product standards and standards of discharge. Eco-labelling also imposes environmental standards on developing country exporters (see box 7). Under GATT/WTO rules, import requirements cannot stipulate process standards (that is, how a product is produced), only product standards. However, to comply with product standards it is often necessary to alter the production process.

Box 7. The Implications of Eco-labelling Requirements

HOW CAN AFRICAN EXPORTS COPE WITH CONSUMER ENVIRONMENTALISM IN INDUSTRIAL COUNTRIES?

Eco-labelling refers to the use of labels on products to tell consumers that a product is more environmentally friendly than other similar products. It serves as a marketing tool in countries where consumers are prepared to pay a premium for 'green' products. Proper eco-labelling includes an assessment of the ecological effects of a product during its whole life-cycle from resource extraction, production and distribution, through to its consumption and disposal.

Eco-labelling can serve as a trade barrier to developing countries' exports because:

- *there is a lack of information about the requirements of the many eco-labelling schemes in the various markets of industrial countries. Such information may be difficult and costly to acquire;*
- *the adoption of cleaner technologies in developing countries may require existing facilities to be scrapped. Small and medium enterprises may lack access to funding for the necessary new investments;*
- *eco-labelling requirements may oblige producers to purchase specified chemical and other input materials thus raising production costs. New and expensive technologies may be necessary and may involve expensive training of personnel. Selection criteria may be biased in favour of the technology in use by domestic firms in the consuming countries*
- *African countries lack the infrastructure and technical capabilities for certifying products and their own certification may not be acceptable to consuming countries.*

The trade-restricting effects of eco-labelling could be moderated by:

- *internationally agreed labels to replace the multiplicity of different schemes in force, with mutual recognition of national labelling schemes. Environmental regulation in exporting countries could be taken as equivalent to meeting importers' eco-criteria;*
- *greater transparency, which could be achieved by spelling out schemes' environmental objectives and criteria. It would also be useful if consuming countries were to provide early information on new schemes,*

carry out information campaigns and use reputable scientific methods in establishing criteria.

Source: UNIDO, *Environmental Policies and Industrial Competitiveness: Are They Compatible?*, Global Forum on Industry: Perspectives for 2000 and Beyond, New Delhi, India, 16-18 October 1995 (prepared by Ritu Kumar).

The need to comply with international environmental standards affects the competitive climate because compliance costs are imposed on enterprises, and regulatory costs on governments. These costs could result in the loss of share in overseas markets. Compliance costs are likely to be greater in the short run since they involve immediate investment expenditure, and are greater for some industries than others. Chemicals, pulp and paper, mining and oil refining are likely to be among those most affected. SMEs find these costs difficult to bear, given that they lack information about the details of overseas standards and that they do not have access to credit to cover the cost of new investments. However, environmental compliance can also *reduce* long-run costs by promoting more efficient use of raw materials and energy. The reduction of clean-up costs and waste can yield social as well as private benefits, as can the promotion of clean technologies generally.

Looking at national competitiveness in terms of attracting foreign investment rather than in terms of effects on exports alone, there is little evidence that developing countries are becoming 'pollution havens' where stricter domestic environmental standards would deter inward investment. Developing countries attract foreign investment mostly on the basis of their low labour costs, technological base, and political and policy stability.

For most firms compliance costs are low, usually just a very small percentage of total production costs. Domestic policies to improve environmental compliance are better handled by economic instruments such as pollution charges, user charges and tradeable permits, using the principle of 'the polluter pay'.

There are some cases, though, where compliance requirements do harm exports. One is Zimbabwe's exports of beef and ostrich to Australia and the EU. Quarantine regulations and expensive blood tests made it costly to export live birds, and EU requirements that beef should be inspected before it leaves the exporting country discouraged Zimbabwean exporters. Another case is China's exports of refrigerators: these have been much reduced as a result of the Montreal Protocol's requirements that ozone-depleting substances should be restricted although subsequently China set out to achieve its phase-out targets faster. Eco-labelling too is a likely impediment to African countries' penetration of markets in industrial countries.

Integrating industrial and environmental policies so as to achieve 'ecologically sustainable industrial development strategies' would also help to ease the detrimental effects on competitiveness caused by environmental compliance. An important part of such strategies is making enterprises internalise the environmental and social effects of their production. The traditional regulatory methods used in industrial countries require effective monitoring and enforcement systems; these are often lacking in Africa, where fiscal methods may be more effective. The latter include taxation, accelerated depreciation, effluent charges and administrative charges, and the use of tradeable pollution permits. One area which can be monitored is the regulation of Africa's EPZs, to ensure that the industries located there comply with environmental requirements while maintaining their international competitiveness. It should also be possible to diversify into more environmentally friendly products, which command higher prices on the international market, and to support research in developing such 'green premium' products. One particular area where research and assistance should be directed is that of helping SMEs to adopt cleaner production processes. This assistance could include demonstrations of the economic and environmental benefits of such processes. Training programmes and research into cost-effective solutions to pollution problems would also help.

In Africa at present, industrial pollution is low by international standards. The continent has yet to rise much on the inverted U-shaped trajectory followed by most countries during the development process, whereby pollution rises with the level of industrial development before falling again as the pattern of

demand switches away from manufactured goods towards services.⁴⁵ Africa's more pressing environmental issues concern the depletion of water resources, soil degradation and deforestation.⁴⁶ Poverty alleviation is a crucial dimension in treating these problems, where society-wide livelihood improvements are necessary to relieve ecological pressure.⁴⁷

C. Industrial Policy and the Sources of Industrial Growth

(i) Investment and growth

Industrial growth in Africa depends crucially on raising the share of investment in national output.^e Higher investment allows new technologies to be embodied in production,⁴⁸ and at the same time technological progress drives investment growth. 'Total factor' productivity growth - growth beyond that which can be explained by the growth of capital and labour inputs - is closely associated with rises in investment. Manufacturing expansion leads to productivity growth by facilitating learning-by-doing, technical change, economies of scale and inter-enterprise specialisation. In fact, manufacturing value-added actually fell in Africa from 11.3 per cent of GDP in 1980 and 11.8 per cent in 1990, to 10.9 per cent in 1995,⁴⁹ a contraction due in part to structural adjustment in sub-Saharan Africa.

The interrelationship between investment and growth can be either a virtuous circle or a vicious circle. High growth can stimulate investment by raising aggregate demand and encouraging technical change. Growing incomes allow savings to increase both absolutely and as a share of GDP so as to finance growing investment. Yet Africa risks being caught in a trap where poverty limits savings, low demand limits investment opportunities, and low investment inhibits structural change and productivity growth. Little structural change has taken place. The share of agro-related industries in the 1990s remained similar to that in 1980 - or indeed 1960. Food, beverages and textiles remain the dominant activities (see table 1). The share of investment in GDP for Africa as a whole has fallen since the late 1970s and early 1980s (see table 2). It has been estimated that investment needs to be at least 13 per cent merely to cover depreciation of the capital stock.⁵⁰ Breaking out of this situation will require efforts to mobilise domestic savings, improve the effectiveness of financial institutions channelling funds from savers to prospective investors, improve investment incentives and enhance the efficiency of investment. Macroeconomic policy exerts much influence: stable, low-inflation environments with positive real interest rates encourage savings. Macroeconomic stability, and stability in economic policy more generally, encourage investors to believe in the credibility of policy and take the long-term view necessary for industrial investment.^f Education policy and public investment in physical infrastructure can also act as stimulators of investment. Another key issue is the need for a market-supporting infrastructure, for example, regarding the enforcement of property rights and contracts.⁵¹

(ii) Sources of demand

Investment growth depends on demand. In the case of goods where international competitiveness can be developed, export growth will stimulate investment. In other sectors, particularly those where international markets are exceptionally competitive, such as textiles, clothing and footwear, domestic market growth too will be crucial. These basic consumer goods, which have low income elasticities of demand in industrial countries, still have high income elasticities of demand in Africa. Continuing protection of domestic markets will give producers some breathing space to become more competitive against imports although they often face fierce competition from imported second-hand goods from Europe. There will also be some 'natural' protection resulting from differences in domestic consumer

^e See *Industrial Development Global Report 1997*, whose theme was 'Financing Industrial Development', especially ch.1.

^f Taking a long term view is also necessary to generate investment in tree crops such as rubber and palm oil, which have lengthy gestation periods and in which Africa has a strong potential comparative advantage. The global competitiveness of these crops has been much damaged by the failure to replant with higher yielding varieties such as those developed in South-East Asia. In some countries such as Nigeria, land tenure problems also inhibit long-term investment in tree crops. These failures represent a loss both of commodity export earnings and of cost-efficient inputs for domestic agro-related industries.

tastes from those of the international market. The strengthening of regional trading arrangements such as the 16-member Economic Community of West African States (ECOWAS) and the 20-member Common Market of Eastern and Southern Africa (COMESA) are potentially useful additions to market growth. However, African income levels are so low that even the markets of the most populous countries are small at present. Nigeria's domestic market in 1995 (in terms of GDP in US dollars at market exchange rates) was only one-tenth that of Belgium, one of Europe's smallest countries. Even when Nigerian income figures are adjusted for a more realistic estimate of purchasing power parity, the market is still less than half the size of Belgium's.⁵² These small market sizes compound the need to develop exports.

Domestic demand depends on GDP growth and macro policy. The short-term credit and other macro restrictions associated with bringing domestic inflation under control will need to be replaced by steady macroeconomic expansion compatible with maintaining price stability. Such expansion would help to increase capacity utilisation and thereby lower costs and create employment. Capacity utilisation would also be aided by the increased availability of imported spare parts and intermediate products that would result from the additional foreign exchange earnings generated by manufacturing expansion. Employment creation would help to create the broad-based demand necessary to stimulate new investment.

(iii) Savings

The investment necessary for industrial expansion requires increases in national savings. Savings come from households, enterprises and governments. Household savings strongly depend on the level of household income, but they are also stimulated by greater macroeconomic stability and by the soundness of the legal and financial system, so that savers feel their assets are protected. Enterprise savings can be encouraged by tax concessions on profits that are used for new investment, and government savings will increase as government brings fiscal deficits under control.

African savings are low by the standards of other developing countries and, for most of the 1990s, they were around half those of Asia when measured as a proportion of GDP (see Table 2).

Using foreign savings can be a valuable way of financing domestic investment in low-income countries. Africa remains more heavily dependent on external sources of savings than developing countries generally and is also heavily dependent on inflows of official development finance. In the mid-1990s, FDI averaged only 10-15 per cent of total inflows, and portfolio equity investment in the region's emerging stock markets averaged about 2-5 per cent.⁵³ Moreover, Africa's FDI stock was equivalent to 13 per cent of its GDP, a higher figure than that of Asia, whilst the figure for sub-Saharan Africa was 17 per cent.⁸ A later section in this chapter looks at Africa's prospects for increasing its FDI inflows.

⁸ For several of the largest recipients of direct foreign investment in sub-Saharan Africa, DFI represented a large proportion of gross fixed capital formation. For example, the proportion was more than 45 per cent in Nigeria and Angola, and more than 20 per cent in Ghana and Uganda. See UNCTAD, *World Investment Report 1997*, p.60.

SAVINGS	Averages		1994	1995	1996	1997	1998	1999
	1978-85	1986-93						
All developing countries	22.5	23.4	26.6	26.3	26.5	27.1	25.9	25.4
Africa	21.2	16.1	15.5	16.6	16.4	15.8	16.2	18.3
Asia	25.1	28.7	33.4	32	32.5	33.4	32.6	31.6
INVESTMENT								
All developing countries	24	23.4	26.6	26.3	26.5	27.1	25.9	25.4
Africa	23.2	19.3	19.7	19.5	18.5	18.5	20.4	20.3
Asia	26.1	30	33.9	34.6	33.5	32.4	29.9	29.7

Source: IMF, World Economic Outlook – May 2000.

(iv) Channelling savings to investors

Financial intermediation between savers and investors depends in Africa, as in other low-income areas, mainly on the commercial banking system. Banks have an obvious preference for lending to large, well-established enterprises; they face serious information problems in lending to small firms and especially to microenterprises. Moreover, they are prone to demand collateral in the form of physical assets rather than expected increases in future profits. Nonetheless, commercial banks do seem to play a significant role in mobilising the savings of small enterprises even when they are not prepared to lend to them.^h Informal sector financial institutions also have a key role in mobilising savings. The provision of savings facilities for the poor in some respects is as important as provision of credit to microenterprises. Savings are a path by which people can achieve financial independence and microenterprises self-sufficiency.⁵⁴

Improving the channelling of investible funds to micro and small enterprises would in principle improve both growth and equity and these enterprises could be a key force in the private sector development of manufacturing.⁵⁵ Although the importance of providing finance for the smallest of microenterprises - 'microfinance' - has aroused some controversy (refer back to box 5), improved financial access for SMEs is essential. This is especially so as their needs for fixed, in relation to working, capital rise as a result of expansion.

Informal financial institutions have been important in supporting industrial investment and growth in SMEs in Asia. In Africa, links between formal and informal financial sectors are minimal. Informal sector credit providers specialise in an extremely limited range of services. Many small enterprises are deterred from approaching money lenders because of their high charges, and would use them only for very short-term working capital. There are gaps in provision for small enterprises whose capital requirements are too substantial for the informal sector but which are not seen as attractive prospects by banks.

Government policy regarding the promotion of lending to micro and small enterprises has increasingly acknowledged the need to avoid subsidised interest rates, which discourage savings and encourage low-return projects and excessive capital intensity.⁵⁶ There is also a danger that subsidies, provided for example by international donors, may as a result of institutional mismanagement go to people other than those they were intended to benefit.⁵⁷ Charging market-based interest rates helps microcredit

^h A study of 450 microenterprises in Kenya and Ghana found nearly 90 per cent of proprietors had deposits at commercial banks, although the proportion was lower among small enterprise proprietors in Malawi, the third country studied. See G. Buckley, "Microfinance in Africa: is it either the problem or the solution?", *World Development*, vol.25, no.7 (July 1997), p.1085.

agencies to become self-sustaining,ⁱ although such sustainability is not necessarily a guarantee of their effectiveness in promoting the growth of their clients. Credit may also be more effective if provided along with other services to small businesses, such as business incubators, small-firm industrial estates, maintenance and training centres and marketing and procurement assistance. However, the advantages of such arrangements need to be partially offset against the difficulty of an institution simultaneously offering help and collecting loan repayments.

For small and medium-sized businesses - as opposed to microenterprises - credit guarantee schemes offer a path whereby commercial bank lending can be encouraged. These schemes help to familiarise banks with lending to SMEs, while reducing the risk and transactions costs of doing so. They are of particular importance in view of the steep decline during the 1990s of donor support in the form of direct credits for the use of small businesses.⁵⁸

(v) Domestic capacity building and productivity

Human and technological capacity building is important even for the development of low-technology, labour-intensive and resource-based industries. The processing of natural resources needs skills similar to those of more general manufacturing development. There is no contradiction between specialising in low-technology activities in the first instance and, in the longer-term, there should be an evolutionary development of technological capacity. If low-technology exports can be developed, they generate foreign exchange for technology imports and technology embodied in capital goods. This exporting offers contacts with buyers in industrial countries who can advise on technology. Modification of imported capital equipment to local conditions (for example, to different qualities or types of raw materials and different climatic conditions) facilitates technical learning among domestic technicians.

Governments can provide a framework for the acquisition of national technological capability by investments in education and in infrastructure. Human capital development needs education as its foundation. Illiterate workers and farmers cannot read instructions. Secondary education enhances the effectiveness of in-house labour training by firms. In process industries such as textiles, short training within firms is sufficient for most jobs and requires only that workers have a sound elementary education. While North African and some (mainly higher-income) sub-Saharan African countries such as Botswana, Lesotho, Zimbabwe and Swaziland have high proportions of children of primary school age enrolled in school, the proportion is still low in a number of countries. Apart from North African countries and South Africa, only Botswana and Mauritius have more than half the secondary-school age group enrolled.⁵⁹ Both male and female primary school enrolment rates in sub-Saharan Africa as a whole actually fell between 1980 and 1993 - to 65 per cent for females and 78 per cent for males - while secondary school enrolment rates rose to 22 per cent for females and 27 per cent for males. The disparity in growth between primary and secondary enrolments could be interpreted as a reflection of worsening income distribution. In contrast, in East Asia and the Pacific there is 100 per cent enrolment for both females and males in primary education, and 51 per cent of females and 60 per cent of males are enrolled in secondary education.⁶⁰ While the benefits of extending the education system are necessarily long term, training programmes to develop managerial and engineering skills among secondary school graduates would have a more immediate effect, and are fruitful areas for donor support. They would provide a cadre of potential managers and technicians whose skills could be further developed at a later stage by industry-specific training.

Africa's long-term industrial growth and competitiveness is greatly impeded by its poor infrastructural capacity. Relieving these constraints should be a priority for government development expenditure. Many sectors have higher costs because of deficiencies in transport systems. A lack of rural roads leads to large wastages in fruit and vegetable production after harvesting; this is true also of many other agricultural crops, and deprives agro-industries of cost-effective inputs. Poorly functioning rail transport systems make fertiliser distribution costly and inefficient, and retard the agricultural productivity growth

ⁱ Institutional financial viability may be easier to achieve in urban areas where there is a higher population density of enterprises and transactions costs are likely to be lower.

which can generate increased rural consumer spending on industrial products, and backward and forward linkages for industry. Inadequate telephone systems create problems for industries such as clothing which depend on customer contact and where sometimes employees must be sent by road to settle matters which in other countries could be handled by telephone, fax or e-mail. Deficient electricity and water supplies raise costs and thereby discourage investment. In the case of large firms, costs are raised by the fact that they typically need to sink their own bore holes and install their own generators. For small firms which cannot afford such expenditure, other problems arise. For example, in clothing, frequent power cuts lead to the use of dual manual/electric sewing machines, but manual operation produces lower quality and more expensive garments. Better power supplies would encourage investment in increased mechanisation of many informal sector activities. Privatisation of infrastructural facilities is an important potential way of raising investment: Malaysian Telekom's investment in telecommunications in Ghana and in Guinea is an example.⁶¹

At industry level, policy designed to foster the growth of technological capability in larger, formal-sector firms requires that a view be taken on which sectors have the best potential to be internationally competitive. In addition to static comparative advantage differences such as the relative labour-intensity of production, the ease of acquiring technological capability varies considerably between sectors. Some sectors, such as the production of complex machinery, use job-shop production processes requiring high-level skills in production planning on the part of management and a highly skilled and experienced labour force. Some sectors - again such as complex machinery - may also require sophisticated networks of suppliers, which simply may not be available in a low-income country. In contrast, cotton textiles can be produced with process technology and relatively small numbers of skilled technicians. Suitable industries can be fostered by giving them protection against import competition (or, more usually, continuing existing protection), but with a pre-announced timetable for removing that protection once they are expected to have become competitive. Industry-specific training can be provided by government and financed by compulsory levies on firms, to avoid some firms free-riding on the training financed by others. It is, however, more doubtful whether many African governments have the capability to undertake the reorganisation of an industry of the kind carried out by the Taiwanese government in the 1970s to make the Taiwanese machine tool industry internationally competitive.⁶²

At the firm level there is scope in the formal sector for bringing the productivity of existing firms up to the level of the best in the domestic economy. There is considerable evidence of productivity differences between firms using similar technologies, both within national economies and internationally.⁶³ Since in African economies there tend to be fewer of the informal contacts and less skilled labour mobility between enterprises than is the case in industrial countries, it may be necessary to import foreign technological skills in the form of foreign technicians to improve local labour, technical and management practices.^j There is also an important role for encouraging multinational FDI in order to establish international best-practice production methods. There is now little evidence that multinationals use 'inappropriate' capital-intensive technology when they invest in developing countries.⁶⁴

Fostering the technological capabilities of small and medium firms raises some different issues. One is the importance of clustering (also important in the development of competitiveness of geographical concentrations of larger firms too). Clusters involve specialisation, the growth of specialised services, and the interchange of information and technology. They may be organised around large firms which subcontract to smaller ones, or they may involve relations between firms of similar size. As well as national-level policies for education, training and infrastructure development, SMEs' development can be aided at the subsectoral level. These so-called 'meso' policies can involve the strengthening of local

^j A scheme proposed for the enhancement of industrial productivity in Jamaica is instructive. The scheme involves the training of managers, workers and technicians, and upgrading the product and process technological capacity of firms by making use of technological information available on the internet. Specific proposals include a 'learning factory' in which new technologies can be demonstrated and an 'industrial incubation' unit to foster the development of new, internationally competitive products. See B.O. Nnaji, *Economic Production and Productivity Growth in Jamaica*, USAID/Jamaica, 30 April 1997.

trade associations which disseminate information and encourage the co-operative organisation of production and services.⁶⁵ However, it is important not to be falsely optimistic about such developments, given that they involve the microenterprises that characterise so much of sub-Saharan African manufacturing. For example, these enterprises are highly unlikely to be able to provide products of sufficient quality to be used as subcontracted inputs by larger formal-sector firms. Although African microenterprises can be encouraged to mechanise and upgrade technologically - for example, through rural electrification programmes - they are unlikely in the near future to become like the export-oriented SMEs of Brazil or China. They are even less likely to become akin to the SMEs of Japan, whose export competitiveness is, in any case, indirect because their growth has been associated with the Japanese system of highly outsourced 'lean production' now widely copied in the West. Industrial policy towards clustering in Africa should focus on the more formal small and medium enterprises (such as the Nairobi garment makers referred to in box 6).

III. CAN AFRICA BE THE LAST GREAT FRONTIER FOR FOREIGN INVESTMENT?

Inflows of FDI into sub-Saharan Africa more than doubled between 1993 and 1996, rising to \$4.02 billion from \$1.95 billion and increased again by more than 30 per cent in the following two years to total \$5.29 billion in 1998. Although this rate of increase is much less than the more than threefold increase between 1993 and 1998 in FDI for developing countries as a whole - and consequently causes a substantial fall in Africa's relative share of that inflow - the rise partly reflects the large increase in direct investment in China. China consistently received around one-third of total FDI for all developing countries in the first half of the 1990s with this share tapering off slightly from 1996 onwards. If China's share is removed from the developing country total, then sub-Saharan Africa's share of DCs investment flows in 1998 was 6.6 per cent.

Within Africa, FDI flows tend to concentrate in a small number of countries. In 1996, Nigeria received almost 40 per cent of inflows (excluding South Africa), although this figure declined to 33 per cent in 1997 and to just over 28 per cent in 1998. In North Africa, Egypt is the main attraction taking more than 40 per cent of FDI to the region in 1998.

	<i>(Annual average) 1987-1992</i>	<i>1993</i>	<i>1994</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>
Developing countries (DCs)	35 326	78 813	101 196	106 224	135 343	172 533	165 936
Of which China	4 652	27 515	33 787	35 849	40 180	44 236	45 460
As % of DCs	13.2	34.9	33.4	33.7	29.7	25.6	27.4
DCs minus China	30 674	51 298	67 409	70 375	95 163	128 297	120 476
Of which Africa	3 010	3 469	5 313	4 145	5 907	7 657	7 931
As % of DCs With China	8.5	4.4	5.2	3.9	4.4	4.4	4.8
As % of DCs Minus China	9.8	6.8	7.9	5.9	6.2	5.9	6.6
Of which sub-Saharan Africa	1 797	1 950	2 984	2 965	4 021	4 609	5 288
As % of DCs Inc. China	5.1	2.5	2.9	2.8	3.0	2.7	3.2
As % of DCs Minus China	5.9	3.8	4.4	4.2	4.2	3.6	4.4
As % of all Africa	59.7	56.2	56.2	71.5	68.0	60.2	66.7
Of which North Africa	1 214	1 518	2 330	1 180	1 886	3 048	2 643
As % of DCs inc. China	3.4	1.9	2.3	1.1	1.4	1.8	1.6
As % of DCs minus China	4.0	3.0	4.4	1.7	2.0	2.4	2.2
As % of All Africa	40.3	43.8	43.8	28.5	32.0	39.8	33.3

Source: UNCTAD, World Investment Report 1999.

Mineral resources continue to attract foreign investment. For example, despite continuing unrest in Angola, it continued to bring in several hundred million dollars of inflows each year throughout the 1990s, with FDI in 1998 totalling \$396 million. High-value agricultural products have also attracted the attention of foreign investors and Western buying chains and Zimbabwe and Kenya are now well-known suppliers of 'exotic' fruit and vegetables to European supermarkets. Cut flowers, which can be airfreighted to market, are another area which has expanded. Although fruit and vegetables can be grown by smallholders, capital requirements for internationally competitive products can be substantial, and foreign investors have taken the lead in such developments. Floriculture too has heavy capital requirements.

Foreign industrial investment is likely to be attracted to countries with *potentially* large domestic markets, like Nigeria. This particularly applies to Western multinationals, which are active for example in Nigerian food processing and tyre manufacture. The rises in sub-Saharan African GDP growth rates, which started in 1993, enhance the prospects for such investment. Smaller foreign investors can be

attracted to local niche markets in smaller countries such as Ghana and Uganda where policy reform and political stability have improved the investment climate. An example is Indian investment in the engineering industry in Uganda, attracted by the local market for agricultural implements.⁶⁶ Privatisations in countries including Zambia, Mozambique, Guinea and Tanzania have attracted foreign investors, who can upgrade production facilities. Nevertheless, countries such as Sierra Leone, Gambia, Togo, Benin and Lesotho, with very small populations and low *per capita* incomes, offer domestic markets which are scarcely as large in terms of purchasing power as those of Western European provincial towns. They need to attract export-oriented FDI, including FDI in tourism.

Export-oriented industrial FDI has important regional dimensions. The well-known process by which Asian NICs such as the Republic of Korea and Taiwan Province of China relocated labour-intensive production to China and to South-East Asian countries has started to be repeated in Asian LDCs, including Laos, Cambodia and Myanmar. Cambodia in 1996 was the largest LDC recipient of foreign investment, much of it in export-oriented garment manufacture although natural resource investment was important, too. However, the 1997 fighting in Cambodia reduced its attractiveness as a location, at least temporarily. Geographical proximity and cultural affinities - for example between South-East Asia's ethnic Chinese minorities - are also facilitators of FDI flows. Sub-Saharan Africa has suffered from a lack of such links but its prospects are improving. Political stability in Uganda has seen the return of Indian investors, and links with the Indian sub-continent are important throughout East Africa. North African countries, which have benefited from historical contacts with the EU, may in the future move labour-intensive processes to lower-wage locations in sub-Saharan Africa. Nonetheless, hopes of Asian-style intraregional foreign investment mainly depend on developments in post-Apartheid South Africa and hold out promise in the medium term (see box 8). In fact, there is already evidence of Asian investment in Africa. In textiles and garments, the remaining years to the final phase-out of the Multi-Fibre Arrangement (MFA) in 2005 still attract 'quota-hopping' foreign investment, particularly since African ACP countries under the Lomé Convention are exempt from MFA quota restrictions when they export to the EU. In Nigeria, two of the largest textile companies are part of the Hong-Kong based Cha Chi Ming group, one of the biggest textile groups in the world. Another large group of Nigerian textile companies, Churchgate, is owned by Indian foreign investors.⁶⁷ Mauritius has become a rapidly growing garment exporter using Asian investment attracted by EPZ incentives. Lesotho's garment industry has also attracted export-oriented FDI from Asia although the relocation of South African garment production to avoid sanctions under Apartheid was a driving force in the industry. In the automobile industry, Hyundai is investing in Botswana and Daewoo in Morocco, while a company from China has invested in brewing in Ghana.⁶⁸

Box 8. Prospects for Trade and Investment Links with South Africa

**COULD SOUTH AFRICA BE A REGIONAL POWERHOUSE
FOR SUB-SAHARAN AFRICA?**

In Asia, Japan has taken a lead in spreading growth throughout the region by expanding its imports from neighbouring countries and by investing in those countries. In the 1980s and 1990s, Korea, Hong Kong and Taiwan Province of China were major investors in export-oriented manufacturing in South-East Asia. This pattern is sometimes known as the 'flying geese' syndrome, with Japan and then the East Asian newly industrialising countries (NICs) emerging as the leading geese. Could South Africa do the same for its neighbours?

There has certainly been an increase in outward investment from South Africa. The country's direct foreign investment stock more than tripled between 1991 and 1994 in the countries of the Southern African Development Community (SADC), and almost doubled in the rest of Africa. However, much of this investment was in natural resources rather than manufacturing.

The prospects for growing outward investment by South Africa in manufacturing are greater in the medium term than in the immediate future:

- *There are difficulties in the investment climate in many sub-Saharan African countries, whose general record in attracting foreign investment has been poor. These difficulties include inadequate physical infrastructure, capital controls and political instability.*
- *South Africa is in the process of emerging from a long period of import-substituting industrialisation and needs to make its own industries competitive. This is not simply a matter of sourcing lower-wage labour.*
- *Unlike the East Asian NICs, South Africa suffers at present from unemployment rather than a labour shortage. This is likely to prevent the rises in wages which stimulated outward investment in Asia.*

There are opportunities for sub-Saharan African countries to export to South Africa:

- *Trade was at a low level during the Apartheid era because of sanctions against South Africa.*
- *Since 1994 South African imports of primary products and intermediate goods have risen rapidly, while its regional exports of manufactures have expanded.*
- *However, South African protection against imports needs to be reduced further. The average nominal tariff on manufactures, which was 19 per cent in 1994, is being reduced to 8 per cent in 2000, but tariffs on clothing have been as high as 45 per cent. In addition, growth in demand in South Africa has been quite slow.*

Source: UNCTAD, World Investment Report 1997, pp.64-71.

Another potential source of investment funds for Africa is foreign portfolio investment. Africa's emerging stock markets may be the final frontier for international investors, particularly after the 1997-98 financial collapse in Asia. There are active stock markets in a number of African countries including Nigeria, Zimbabwe, Kenya, Ghana, Namibia and, of course, South Africa and several North African countries also have thriving stock markets. The expansion of stock markets is closely associated with domestic liberalisation and facilitates the privatisation of state-owned enterprises and public utilities. Industrial investments make up the bulk of market capitalisation in some markets, such as Nigeria although in South Africa, which attracts the most investor interest, mining investments predominate. Among the top companies, large multinational agri-business companies are heavily represented. Of the top thirty five, half have agri-business interests, including Brooke Bond, Lonrho, Lever Brothers, and Nestlé.⁶⁹

IV. POLICY GUIDELINES

(i) Restructuring industry

Since the mid-1990s, African economies have started to grow fast enough to produce a rise in real incomes per head, but there is little sign yet that manufacturing value-added too is growing consistently. Some de-industrialisation during the first 15 years of structural adjustment was probably inevitable, with the reduction in support given to inefficient firms that had developed under the import-substituting industrialisation policies of the 1960s and 1970s. More of these firms may have to be given up in the future. Internationally competitive export and import-competing industries must be built on African countries' existing industrial base, so that Africa can prosper in an increasingly open international economy. The industrial base consists overwhelmingly of agro-related sectors. In a continent where agriculture employs nearly two-thirds of the workforce but produces less than a quarter of GDP, the use of industrial development to raise agricultural productivity could accelerate growth and raise living standards. Agricultural output could be stimulated by the production of inputs such as fertiliser and simple machinery, and by the further processing of agricultural products.

(ii) Developing agro-industries

Africa's agro-related sectors include a range of industries in which there is potential comparative advantage. Simple textile products such as grey cloth, using labour-intensive methods, could utilise African countries' low wage advantages without requiring massive technological upgrading. This is not to say that all, or even most, of Africa's agricultural products can be the basis for efficient industrialisation. It is unlikely that Africa will become a world class exporter of tyres on the basis of its rubber, or of chocolate based on its cocoa, since there are locational advantages to producing these in the consuming countries. Agro-based industrialisation must be selective. Nigeria and Ethiopia could follow Brazil's example and develop exports of leather goods and footwear based on their potentially abundant supplies of leather. As technology develops, high-value specialised rubber exports could be developed, as has been done in South-East Asia.

(iii) Importing technology and attracting foreign investment

Industrial competitiveness and productivity growth depend on strengthening technological capability.^k This has been demonstrated by the rise of East Asian countries, which, despite their recent financial difficulties, remain formidable competitors. There is no contradiction between acquiring technological capacity and an initial specialisation in labour-intensive, low-technology products. These exports provide the foreign exchange with which to import technology. The problem is that to start such exports often requires foreign investment. Africa lacks the regional sources of FDI which in Asia have propelled 'second generation' NICs such as Indonesia into manufactured exporting. Even some of the poorest Asian countries, such as Cambodia, have been attracting such investment. Some African countries, including Lesotho and Mauritius, have attracted Asian FDI. Efficient export promotion arrangements, such as EPZs, are key features, but require bureaucratic efficiency and a relative absence of corruption. Incentives for textile and garment investment will be weakened by the phase-out of the MFA by 2005, although low labour costs will remain an important attraction. The new African Growth and Opportunities Act of the US will help counter some of the adverse effects of the MFA phaseout and encourage new inward investment. Whether South Africa in the future could provide economic stimulus in the form of trading opportunities and outward investment will depend much on the success of its own liberalisation policies. Strengthening groupings such as ECOWAS, UEMOA, COMESA and SADC would enhance African regional trade and extend domestic markets. In the garments and textiles industry in particular, AGOA may encourage exporters like South Africa and Mauritius to source within SADC to meet US African origin requirements.

^k It is worth remembering Paul Krugman's warning that it is increases in productivity which lie at the heart of economic progress. Competitiveness follows from these rather than being an object in itself. See P. Krugman, "Competitiveness: a dangerous obsession", *Foreign Affairs*, March/April 1994, pp.28-44.

(iv) Raising agricultural exports' market share

In the search for export products, it is important not to overlook the need to raise productivity in many traditional agricultural exports as this is low by international standards. Countries like Malaysia and Indonesia, which became successful exporters of manufactures in the 1980s, also invested in their commodity exports and have seen their primary commodity market shares rise at Africa's expense. These shares could be recouped. New agricultural products, such as Kenya's horticultural exports, face high income elasticities of demand in industrial countries, and the markets will become more competitive, with the entry of new producers such as Zimbabwe. Shrimps are another fast-growing world export market in which Africa could expand its existing share.

(v) Encouraging savings and investment

Raising the rate of economic growth requires savings and investment to rise. Rising investment is a vehicle for the embodiment of technical change. To stimulate domestic savings and investment, macroeconomic stability is needed. Households and firms must also believe that policies will be sustained. Equally important is the strengthening of the framework of property rights within the rule of law so that contracts can be enforced and savers and investors can make long-term plans. An economic climate which stimulates domestic savings and investment is likely also to attract foreign investment. Industrial 'visions', such as that to the year 2010 once formulated by Nigeria (although subsequently abandoned by a new government), are useful frameworks for long-term policy and are particularly useful if firms and households can be persuaded that they are credible and use them to form their own long-term plans.

(vi) Helping the rural poor

If future economic growth in Africa is to generate real development, its benefits must be widely spread. The rural poor will be helped by greater security of livelihood, and particularly by strengthened food security. The great increases in agricultural productivity which took place in China after 1978 as a result of massive reorganisation in agriculture are hardly relevant to Africa. Nor have the breakthroughs in agricultural technology brought about in other Asian countries by the 'green revolution' proved easy to implement in the case of most African crops, except maize. In consequence, agriculture-led growth, with resulting large increases in off-farm employment in rural industries and services, will be more difficult for Africa to achieve. It is still worth pursuing wherever possible, however. For one thing, food security will be strengthened by increases in agricultural processing.

(vii) Encouraging microenterprises and SMEs

The livelihoods of both the rural and the urban poor will depend heavily also on the employment growth generated by microenterprises. There are many constraints on the expansion of microenterprises, and not just the lack of access to credit. There is also little evidence that microenterprises are graduating into small and medium firms. Policy on microenterprises needs to focus firstly on how to strengthen livelihood security. In the more 'formal sector', SMEs have other concerns, such as the need for credit for fixed capital investment. Industrial policy at the sector level could enhance the competitiveness of such SMEs by facilitating their development into the clusters which have made developing countries in other continents more competitive.

(viii) Ensuring stability to create new opportunities

There are many differences in the current performance of individual African countries and it is likely that their income levels will become more sharply differentiated. The possibilities exist for rapid advance in those countries which achieve political and policy stability, and which enforce the rule of law. In such countries, investment in infrastructure, perhaps by foreign investors attracted by privatisation opportunities, could quickly strengthen industrial competitiveness and productivity once domestic investors show themselves willing to take a long-term view. Inflows of donor funds can raise industrial growth quickly in the short run by removing the foreign exchange constraint which keeps capacity utilisation low. Efficient industrial expansion can cumulate into technological advance. The issue is to make such expansion sustainable by raising domestic investment and agricultural and industrial productivity.

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