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**TRADE, INDUSTRY AND TECHNOLOGY
DEVELOPMENT IN SUB-SAHARAN AFRICA:
POLICIES, RESPONSE AND EFFECTS**

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List of abbreviations

AERC	African Economic Research Consortium
CTI	Confederation of Tanzania Industries
FDI	Foreign direct investment
FIIRO	Federal Institute of industrial Research, Oshodi
GDP	Gross domestic product
MVA	Manufacturing value-added
NFI	New forms of investment
NIEs	Newly industrializing countries
OECD	Organization for Economic Cooperation and Development
R&D	Research and development
SSA	Sub-Saharan Africa
TNCs	Transnational corporations
UNCTAD	United Nations Conference on Trade and Development
UNU/INTECH	United Nations University/Information Technology
UNU	United Nations University

1. Introduction

Economic development is closely associated with industrialization. Industrialization is in turn closely linked with technological development and productivity increase.

Trade and trade policies interact, in various ways, with both industrialization and technological development in the process of overall economic growth. Typically, industrialization is started off and often sustained through the importation, adoption and adaptation of foreign technology. Thus technology trade can contribute to both technological development and industrialization by augmenting local capabilities, particularly through the provision of learning opportunities. Recent development experience assigns a critical role to trade and outward-oriented trade policy in the development process. In particular, a policy that focuses on exports serves as a way of inducing domestic firms to acquire the capabilities for facing foreign competition by adopting international standards and technology.

The pace and pattern of industrialization have been influenced by the trade regime (e.g., protective trade policies) while the dynamism of the export sector has often been maintained through industrialization. The process of deepening industrialization has been associated with increasing complexity of products and complexity of technologies used.

Policies that mediate the interactions among trade, industrialization and technology operate at different levels: macroeconomic policies, sectoral policies and micro-level policies that influence firm level responses.

This paper focuses on the inter-relationships among trade, industrialization and technological development in the context of the overall process of economic development in sub-Saharan Africa (SSA) countries. The paper pays particular attention to policies intended to enhance these inter-relationships, enterprise-level responses to these policies and their effects. It brings out some pertinent differences and similarities in prevailing conditions in Asia and Africa, provides an account of the divergent development experiences in the two regions in the area of trade, industry and technological development, and addresses relevant institutional arrangements and organizational characteristics.

The rest of the paper is organized as follows:

Section 2 offers a brief review of the development and industrialization experience of the SSA region. Section 3 looks at SSA's development strategy, from an evolutionary perspective, paying special attention to the shifting relationship between the public and private sectors. Section 4 examines the presence and characteristics of networking, linkages and subcontracting and Section 5 turns its attention to policy design and implementation mechanisms where various practical elements of reforms and other interactions are discussed. Section 6 concludes.

2. Sub-Saharan Africa's development and industrialization experience

Economic performance in the SSA region has varied over time and across countries from the early 1960s to the mid 1990s. In broad terms, however, economic growth in the region was moderate and generally below the average rate for other developing countries in the early 1960s. After this time, SSA's average gross domestic product (GDP) growth rate accelerated, so that in the 1965–1973 period, its growth performance of 5.9% was virtually the same as the 6% recorded for all developing countries. However, SSA's growth rate faltered from the mid 1970s and declined further into the 1980s. Thus, the region's average annual GDP growth rates of 2.5% and 0.6% during the 1973–1980 and 1980–1987 periods compare poorly with the corresponding growth rates of 4.6% and 6.1% turned in by all developing countries over the same time periods (World Bank, 1989). SSA's annual GDP growth rate averaged about 2% between 1988 and the mid 1990s.

SSA's manufacturing sector grew significantly in the 1960s; the more than 8% annual average growth rate of manufacturing value added was substantially higher than the corresponding GDP growth rate, although the base of the manufacturing sector from which this growth derived was quite small. In any case, by 1965, this sector contributed 15% or more of the GDP of 12 countries (Botswana, Cameroon, Chad, Côte d'Ivoire, Ghana, Kenya, Madagascar, Mauritius, Senegal, Togo, Zaïre and Zimbabwe).

This growth performance could not be sustained, however. It decelerated sharply in the 1970s and was virtually stagnant in the 1980s. Manufacturing output declined in 10 SSA countries during the 1970s and in another 11 countries by the mid 1980s, with capacity utilization rates well below 35% in many SSA countries (World Bank, 1989).

The growth of manufacturing value added (MVA) over 1980–1993 was only 3% per annum in real terms, and the rate declined steadily over time, from 3.7% in the first half of the 1980s to 2% between 1989 and 1994. The trend has persisted within the latter period, with MVA growth falling from 3.3% during 1989/90 to 0.4% in the 1991/92 period, registering a modest recovery, to 1.7%, in 1992–1994 (ADB, 1996). This growth in fact conceals the continued stagnation or falls in MVA in many African countries—Africa has suffered the most serious “deindustrialization” in recent times in the developing world. Average per capita income has declined by 1.1% per annum, and SSA's share of manufacturing fell from 1.5% of world MVA in 1980 to 0.8% in 1994 (World Bank, 1997). During the early 1990s, the average contribution of SSA's manufacturing sector to the region's GDP averaged 16%, while its share of exports averaged 12% (World Bank, 1995). These averages mask wide country variations. Among the more industrialized SSA countries (such as Mauritius, South Africa and Zimbabwe), the share of manufacturing in GDP lies in the range of 23–39%. But the broad picture confirms certain key features of SSA's manufacturing sector. Clearly, most SSA countries have not succeeded in developing a technologically dynamic and internationally competitive industrial base.

The structure of industrial activity in SSA remains underdeveloped. It is dominated by the (minimal) processing of local natural resources and simple consumer goods industries, unlike those in Asia and Latin America that have broadened and deepened into a range of more

complex activities. Moreover, only a few African industrial activities have “matured” to full competitiveness by international standards (Lall and Wangwe, 1997).

As a result, the region’s import dependence remains high while its share of world exports of manufactured products has been low and falling. A recent assessment (World Bank, 1995: 50) concludes that “African manufacturing has not reached a critical mass and scale at which it can take off...”

Failures of public policy have, routinely, been identified as the major reason for the unsatisfactory performance of SSA’s GDP and manufacturing sector. In particular, it is suggested that SSA countries clung to import-substitution industrialization policies for too long — well beyond the point at which the protected industries could make any significant contribution to growth. As a result of this strategy, most SSA industries were isolated from world markets and new technology; hence they were under no real pressure to approach “best practice” operational frontiers in other parts of the world. Elbadawi (1996: 1) offers this summary:

SSA’s failed development strategies...emphasized a dominant role for the state in the development process but ignored the drawback of badly managed state-provided incentives (rent-seeking, inefficiency, etc.) and belittled the roles of the private sector and market discipline in the development process.

The industrialization experience in SSA is associated with investments taking place under protection that has not only been high but has also been persistent over time. The sectors like agriculture and infrastructure that would be supportive to industrial development have lagged behind industrial requirements. Exports have remained undiversified, undynamic and uncompetitive. Technological development is central to the process of attaining international competitiveness. Yet technology adoption and innovations have not been pressured by competition from either domestic actors or international trade.

3. The role of government and public–private sector relationships

The role of government

State intervention in economic development in post-colonial Africa was necessitated by the need to make up for market failures (distorted markets and missing markets) and the need to redress socioeconomic imbalances that had been cultivated during the colonial administration.

Development planning was adopted in many African countries as one response to perceived market failures and imbalances in society (e.g., Asians in Eastern Africa, Lebanese in West Africa). During the 1960s and 1970s, many SSA countries tried to use various forms of government intervention to rectify obvious market failures and to promote specific industries and sectors. Thus, they acted in ways that reflected their belief in the ability and right of government to orchestrate the actions of both private and public economic agents and coordinate entrepreneurial decisions in support of economic growth objectives and targets established by the government. These interventions resulted in high levels of protection and isolation from world

markets, and the whole economy was not closely linked into the global economy. Since “countries with better integration performance enjoyed not only higher but also more stable growth” (World Bank, 1996: 25), the lack of or inadequate integration into the global economy of SSA countries is also held partly accountable for the region’s poor performance in both overall economic growth and industrialization. On this count too, it has been recommended that SSA’s development strategy should shift from an inward to an outward oriented one. Thus, the explicitly expressed intent of the structural adjustment programmes designed for and implemented in virtually all SSA countries since the early 1980s has not only been to “get the fundamentals (i.e., prices and macroeconomic stability) right” but also to sharply curtail the role of government in the development process.

The idea of a “hands-off” minimalist government sits rather uncomfortably with the wide recognition that on both theoretical grounds (market failures arising from missing and underdeveloped markets, learning and other externalities associated with modern manufacturing and technological development) and the lessons emanating from the development experience of other regions, government could and should play an important role in assisting the development of new and dynamic comparative advantage using selective intervention measures. The response is expressed in the justifiable concerns about the weak or inadequate capacity of the typical SSA state to design and manage such measures effectively (World Bank, 1994, 1995; Lipumba, 1994). Thus, based largely on their record of past failures, their current lack of adequate capacity for implementing and monitoring selective interventions, and a political economy that is, apparently, highly susceptible to rent-seeking and corruption, SSA countries are enjoined to forgo the use of such measures. For instance, Winrock (1991) counsels that SSA countries should stick to policies that are simple and transparent and require minimal technical know-how; the World Bank (1994) advises that SSA countries should use their limited state capacity sparingly by minimizing unnecessary government involvement in markets. The same considerations lead Thorbecke (1994: 70) to conclude that for SSA countries, “it may be wiser to rely on more market and free trade-oriented policies and minimize interventionist policies”.

This admonition leaves several critical questions, including the following, unanswered: To whom and how will the obvious growth-retarding market imperfections and failures be addressed? To what extent can the “simple policies” work when the most relevant markets are absent from underdeveloped countries? Would seeking refuge in a “minimalist” state rather than building the necessary capacity for the state to carry out its functions more effectively not amount to abandoning the quest for rapid and sustainable growth — or throwing out the baby with the bath water?

Some lessons from Asia may be useful here, as is shown in the papers on Asia. However, at this point it may suffice to mention that the principle of state intervention in economic development was also adopted in East Asia, although substantial qualitative differences can be observed. The experience of most countries in East Asia shows that policy choices could not be treated as exogenous and political institutions had an important influence on the coherence of policy while bureaucracy came in for closer scrutiny. Overall, in Africa the intervention of the state in economic management tended to lean more towards controls and restrictions while the East Asian states tended to lean more towards promotion and facilitation (Rhee and Westphal, 1986).

State intervention in Southeast Asia has relied more on market based instruments of industrial policy, using market mechanisms and signals rather than negating them as was done in some of the post-colonial economies of “intermediate regimes” (Jomo, 1996). State intervention in Africa in many cases relied on administrative controls that operated against the market rather than through the market.

The experience of the second-tier countries suggests that state intervention is needed (Jomo, 1996) in the areas of technology (e.g., to deal with imperfections in market information), finance (e.g., to deal with market imperfections arising from risk and uncertainty), human resource training (e.g., to tap externalities in the labour market) and trade (e.g., to impose export targets in return to protection in the domestic market).

Public–private interactions and relationships

In the African context state intervention in the private sector varied from country to country. A study of six African countries (Côte d’Ivoire, Nigeria, Kenya, Tanzania, Zimbabwe and Mauritius) addressed the relationship between government and the private sector and found varying relationships between them (Wangwe, 1995).

The system of controls in the then Rhodesia was made to operate effectively and the highly protected system that they constituted did not lead to the gross inefficiency that has characterized other import substitution regimes. The need to adapt and innovate led to the development of a wide range of technical skills, particularly in various branches of engineering. The strong orientation to market requirements yielded a proliferation of products, often produced within large, vertically integrated conglomerates (Ndlela and Robinson, 1995).

In the case of Mauritius the government and the enterprise sector cooperated in many ways and held consultations on matters affecting industry. Government policy facilitated the process by which local entrepreneurs continuously gained control of industrial development (Lamusse, 1995). In Côte d’Ivoire the government worked with and was supportive of enterprise sector development in a way that did not threaten the main actors in industry, even if they were non-Ivorians (Ousou and Bouabre, 1995).

In the other three countries (Tanzania, Kenya and Nigeria) and the post-independence Zimbabwe, the relationship between government and the enterprise sector (or significant parts of it) was less cordial. Government intervention in industrial development was perceived as intending to address imbalances in society, as a result of which some leading actors in industrial development could be losers. In Tanzania the nationalization policy and the socialist philosophy were perceived as a threat to the private sector. In Kenya the way the Africanization policy was introduced and practices was perceived as a threat to the Asian community, who were the leading local private sector industrialist group. The indigenization policy in Nigeria posed a threat to some foreign investors. In post-independence Zimbabwe, too, the relationship between government and sections of the enterprise sector became less cordial as the government began to address some imbalances in society. The leading white community entrepreneurs perceived that they would be the losers. The application of controls in the absence of the rapport with the

private sector that had existed under the previous regime, and the introduction of new controls on wages and labour relations, led to a situation in which bureaucracy became one of the obstacles to the running of any kind of economic enterprise.

The relationship between government and the private sector in Asia is closer to the relationship exhibited in the Mauritius case, which differs in many ways from many typical African countries.

Governments in East Asia pursued policies to reduce uncertainty by addressing market failures and problems stemming from organization of industry (e.g., scale economies, entrepreneurial skills), structure of public institutions and rent-seeking behaviour. A set of institutions, institutional ties and more informal individual networks that connect the public and private sectors were put in place to keep policy makers connected to business. The networks allowed information to flow between business and government without reducing the ability of the government to tackle a series of interrelated institutional and structural bottlenecks that would otherwise hold back investment, technological progress and export development (UNCTAD, 1996: 128). In some cases mergers were encouraged and entry into specific industries was restricted; cartels were promoted for specific purposes (e.g., standardization, specialization and exports) and direct public investments were undertaken. The East Asian experience demonstrates the complementarity between export promotion and import substitution, as the policy packages contained both protectionist and export promotion measures for industries at varying degrees of maturity.

Government policies need to be designed to shape market responses so as to enhance their contribution to development. In the 1950s when the manufacturing sector was not competitive internationally governments promoted exports through a variety of subsidies (tariff rebates, tax exemptions, preferential export credits and export credit insurance). These provided the foundation for a reinforcement of such policies in the 1960s by putting in place more systematic promotion of manufactured exports. For instance, the Republic of Korea introduced a series of institutional reforms such as a monthly export promotion conference, the Korean Trade Promotion Corporation and the export targeting system. Government in most East Asian countries exercised considerable discipline over business, in order to meet export targets, through tax penalties, withdrawal of import licenses and reduced access to credit (UNCTAD, 1996: 129).

4. Networking, Linkages and Sub-Contracting

It may not be necessary for a firm to possess all its capabilities in-house if some of them can be obtained outside. In such cases the firm must be able to identify the kinds of capabilities it needs to buy from elsewhere and how best to use inputs and services provided by others. This capacity encompasses issues of linkages, networking and subcontracting.

Few firms in Africa have pursued networking and linkages as a policy issue. In fact, linkages seem not to exist significantly in Africa, where a contracting and subcontracting culture remains underdeveloped. Other types of linkages such as inter-firm linkages, financial institutions linkages and business support linkages exist but they have mainly been used on an ad hoc basis.

Subcontracting activities among engineering and clothing firms, for example, is limited, reflecting both the simple level of production undertaken by most firms (thus there was little need for subcontracting) and lack of “competent” firms capable of undertaking subcontracting work.

A study of six African countries found that internal linkages (i.e., within the country) are limited (Wangwe, 1995). While there were some linkages among firms that shared premises in the industrial estates, there were only isolated cases of subcontracting arrangements outside these networks. There are little subcontracting or local procurement of manufactured inputs in the exporting firms. Large firms have only infrequent relations with small firms except for the purchase of some repair and maintenance services. Information and technology diffusion among firms is minimal except for very informal channels.

The study suggested that several factors explain this situation. For one thing, import dependence over a long time has pre-empted the search for alternative local linkages. The lack of linkages reflects the pattern of import substitution industrialization, which emphasizes import-dependent assembly. Moreover, access to tied donor finance reduced the need to search for local sources of supply, and the capability to search for various local suppliers had not been developed. Some firms competed with their potential suppliers of technological services rather than being assisted by them. For instance, Themis of Tanzania produced farm implements, at least some of which were also being produced for the domestic market by two research and development institutions. The competitive relationship between the firm and the institutions that are supposed to provide technological services was not conducive to the development of technological linkages between them.¹ Lastly, poor inter-sectoral linkages may reflect poor infrastructural facilities for small firms, biases in policies and in the credit market, and the lack of an extension network.

Industry associations had made attempts to promote interactions among local firms by harmonizing production processes (e.g., identification of excess capacity in individual firms and possibilities of subcontracting, trading in spares, joint quality control, etc.). The case studies showed that in isolated incidents firms that receive large export orders have subcontracted some of the work to other firms (Wangwe, 1995). Inter-firm trade in unfinished products is very rare.

The creation of linkages or establishment of input-producing activities has been influenced by government policy. For instance, in the case of textiles and brewing, the establishment of some input-supplying activities was influenced by government policies discouraging imports (e.g., yarn and malt in Nigeria). Some of these firms have achieved such tremendous expansion that they now export in addition to selling on the local market. In the case of the brewing industry in Nigeria, the search for local alternatives was intensified with the introduction of restrictions on importing barley (Oluremi, 1995). Increasing success with local substitutes for barley malt improved the capacity utilization rate for the industry. The search for local substitutes for imported barley malt involved most of the firms in investment in R&D as well as substantial

¹ R&D institutions are often squeezed financially and one response is to engage in production.

plant conversion. Their efforts were complemented by the independent research endeavour at the Federal Institute of Industrial Research, Oshodi (FIIRO), which through some of its research report series, demonstrated that lager beer could be produced using only sorghum. Today, most of the more successful firms use maize and sorghum in their beer production process.

The case studies of the six countries found that buyers and consumers of the firms' products provided useful market information. They were very instrumental in inducing product quality improvements. The interaction with export markets, which are more demanding, was particularly effective in this respect (Wangwe, 1995).

Linkages and subcontracting are much more prevalent in Asia. It would be useful to understand what it would take to replicate some of the positive experiences with subcontracting and other inter-firm linkages and relationships. The role of marketing agents has been observed to be important in South Korea but there seems to be one difference; that is, Korean firms selectively let foreign buyers do much of the marketing during the early stages of export development but this role was gradually transferred to the firms or to local trading institutions. This progressive transfer process does not seem to have taken place in Africa as yet except for some firms in Mauritius.

The Trade–production nexus exhibited interesting linkages. The six country case studies in Africa found that the trade–production nexus was manifested in two forms. First, contacts made in the trading phase with consumers or with suppliers enabled firms to accumulate capabilities and knowledge about the characteristics of the markets and of suppliers. These contacts were a useful asset when these firms entered the manufacturing stage. Second, as some firms shifted from trading to manufacturing, part of the family continued with trading activities and some of them were located abroad. The local manufacturing firms then made use of the family connections, who acted as trusted agents and “marketing officers” abroad. Networking with family members in foreign countries has been useful in getting access to information about market opportunities and sources of technology. Such family connections were found very effective in Mauritius, in Zimbabwe within the white community, and in Tanzania and Kenya within the Asian community. A large number of these contacts were retained and operated as networks through which new ideas about changing technological and marketing conditions were disseminated, contributing to the improvement of firms' positions in export markets.

Exporting firms that are subsidiaries of transnational corporations (TNCs) have benefited from a production–trade nexus of a different kind. Through their global networks of companies, TNCs in resource-based activities have engaged in the production and processing of primary resources and trading in the final products. Either they control the source of raw materials by developing their own plantations or, by establishing processing activities at the source of the raw materials, they have priority over procurement. For instance, the production of cotton is highly dispersed worldwide but its marketing is concentrated in the hands of a few big traders (notably 15 cotton traders, of whom two are European companies, eight are US companies and five are Japanese trading houses). The coffee market is dominated by a few trading companies (General Foods, Nestlè, Suchard).

Capability building at firm level is expected to take place in the context of a network of linkages and relationships (formal and informal) with suppliers, customers, competitors, consultants, and technology R&D and educational institutions (UNCTAD, 1996). In this process of capability building access to foreign technology and other organizational assets (e.g., marketing and distributional skills) is essential.

Recent developments in technology and the consequent TNC strategies have made it possible for TNCs to locate and relocate specific activities in the production chain according to specific locational advantages. With such geographically dispersed production sites the spillovers from hosting TNCs are reduced but the chances of attracting some aspects of TNC activity is increased. The policy challenge may be to complement foreign direct investment with other forms of promoting upgrading and building of capabilities. In particular, development of domestic linkages (e.g., with suppliers) is important in increasing domestic value added of FDI activities.

The study of exporting firms in six countries in Africa addressed the issue of linkages between local and foreign firms. The positive role of foreign investment in building local technological capabilities has come out quite clearly in Mauritius, where local private capital has been progressively buying out foreign capital. This harmonious nationalization of investments has been facilitated by the existence of an entrepreneurial class that developed from the local plantocracy during the years when sugar production was dominant. The surpluses accumulated then were invested in industry. In addition, the macroeconomic environment and the climate for investments have been conducive for both local and foreign investment. For instance, one of the leading exporting firms in Mauritius, the knitwear firm, was established initially by Hong Kong investors with a minority Mauritian participation. After a few years the Hong Kong shareholders were bought out by Mauritians, and since 1977 the company has had an entirely local shareholding. The bulk of the shares are held by a local investment company belonging to a large sugar group. The existence of a capital market and a group of local individuals and institutions who are willing to invest seems to have favoured the process of nationalization in Mauritius.

The transfer of control from foreigners to indigenous owners has sometimes been far from smooth and possibly more destructive than constructive. For instance, an indigenization programme in Nigeria was carried out in 1974. Together with further phases that were implemented before 1980, the program resulted in Nigerians taking over the control of several businesses hitherto controlled by foreigners. However, it would appear that the policy makers overlooked the economic side effects of the indigenization programme, especially its possible negation of the goal of economic independence. The substitution industries that had been established were acquiring the capability to manufacture for export, but this development was thwarted by the workforce dislocation caused by the indigenization programme. Several of the newly established activities experienced workforce problems and some of them failed as a result.

The contribution of foreign investment in building local capabilities has not always been positive. The case studies showed that some locally controlled firms have been bought out by TNCs in response to the threat of competition, for example, Trituraf of Côte d'Ivoire. Another

multinational, Saco, had a monopoly for about ten years, after which many state-created companies started trading in Côte d'Ivoire. But in the middle of the 1980s nearly all of these newcomers disappeared or were taken over, leaving Saco in control of most of the local cocoa-bean processing and by-product production in the country (Ousou and Bouabre, 1995).

In discussions of the role foreign investment could play in industrialization and in building technological capabilities within firms it is important that the changing forms of foreign investment be recognized. This study has shown that exporting firms in Africa have benefited in different ways from various forms of relationships with foreign firms. Foreign investment is increasingly taking forms other than the traditional direct foreign investment. There is considerable evidence that new forms of investment (NFI) will continue to gain importance in developing countries, superseding traditional FDI in some areas and complementing it in others (OECD, 1989). The implication of the debt crisis and foreign exchange shortages for the balance between FDI and NFI is likely to vary policies (macroeconomic policies and policies on foreign investment), the host country's market potential, perceived degree of bureaucratic red tape, political stability, and the availability of local managerial skills and skilled labour. However, it is likely that as some developing countries acquire various capabilities, they may want to bring in only those assets they cannot obtain locally in order to minimize foreign exchange losses (through remissions abroad and payments for various services). Such long-term financial and foreign exchange considerations may lead to more selective pursuit of NFI, with government attitudes and policies tending to be more industry-specific, reflecting long-term benefits from learning by doing, (OECD, 1989).

The changing perceptions of TNCs may continue to favour a relative increase in NFI, on the grounds that it increases leverage on firm-specific assets and that it has risk-shedding advantages over traditional FDI. In future, the balance between traditional FDI and NFI is likely to be influenced more by the global dynamics of inter-firm competition and by the interplay between those dynamics and host-government policies than by the latter's unilateral decisions (OECD, 1989). This underscores the importance of understanding the global trends within specific industries.

The evidence presented by the OECD (1989) suggests that there is a long-term trend in the division of risks and responsibilities between TNCs, host countries and international lenders, which is characterized by increasing emphasis by TNCs on flexibility and the development of capabilities in relatively protected industry segments (where profit potentials are high), operating upstream of production (as suppliers of technology and management) in some industries and downstream (in marketing) in others. Host country investors are increasingly retaining partial or total ownership of investment projects, while the degree of effective control depends increasingly on factors other than host-country ownership of equity. International lenders are likely to continue to play a central role in channelling financial capital to developing countries (in the form of new loans and debt rescheduling) and in that way will exert significant control over the international investment process (OECD, 1989).

The East Asian region exhibits a diversity of experiences with FDI. In Singapore and second-tier NIEs, FDI accounted for 40–50% manufacturing (1986–1988) and even higher in electrical

machinery and electronics (about 70%) compared with about 20% in Korea (1986) and 2.2% in Japan (1986) (UNCTAD, 1996). The share of FDI in gross fixed capital formation during 1991–1993 ranged from 0.1% in Japan and 0.5% in Korea, to 24.65% in Malaysia and 37.4% in Singapore. In all countries the share of FDI increased in the last two decades, except Japan where it remained constant (UNCTAD, 1996). In terms of enhancing domestic capabilities, successful upgrading has been exhibited in the first-tier NIEs whereby moves into design and product development gradually reduced dependence on TNCs (UNCTAD, World Investment Report, 1995). The second-tier NIEs have taken a less restrictive stance on FDI. The second-tier NIEs have not developed a diversified manufacturing base with intermediate and capital goods industries and have not put in place a well-developed local supplier network and adequately trained work force. FDI originating in the first-tier into second-tier NIEs has been considerable. The evolution of industrial output and exports in the second-tier NIEs is raising concern in respect of increasing reliance on FDI and insufficient technological and supply linkages between the TNC-dominated export sectors and the rest of the economy. There is concern about the need to take measures to deepen the domestic industrial base and to improve the quality of the labour force, management and infrastructure (UNCTAD, 1996: 123). In fact, in recent years, there is evidence that second-tier NIEs have introduced more targeted measures such as local content agreement, more selective incentives to attract higher value added activities and greater efforts to capture FDI spillovers in the areas of training and R&D (UNCTAD), 1996: 133).

5. Policy and reforms

A policy package designed to deliberately raise the speed of growth and structure of a developing country's manufacturing sector in close association with technological development will, almost by definition, assign a significant role to the public sector. This arises partly from the fact that in the typical developing economy, the market system is unable to effectively transmit necessary information through price signals due to various imperfections, as a supplement to the market system, to facilitate and enhance information flow. The prevalence of various scale economies and externalities associated with both modern manufacturing and acquisition assimilation and use of technology also justify a significant role for government in the development process. As the same time, the dynamism that invigorates the development process is expected to come primarily from the production decisions and investment choices that private enterprises make as they deploy their capabilities in attempts to seize perceived market opportunities. A development strategy that reflects this reality should have something to say about cooperation and collaboration between the public and private sectors, without which the design and implementation of development policy could be deficient.

Restructuring state enterprises

Reform of the state sector enterprises is one of the key elements of the governments' economic reforms programmes in Africa, whose objectives are to improve the operational efficiency of enterprises, reduce fiscal burden to the government, and improve wide participation by nationals in the ownership and management of business and economic activities. To experience with privatization so far has shown that it takes more than change of ownership to spur long-term competitiveness in industry. This points to the fact that in Africa's industrialization there are

other critical constraints to competitiveness that cannot necessarily be solved by mere privatization. Issues such as adequate and appropriate skills, entrepreneurship, technology, fiscal and monetary policy, competition, and infrastructure problems will still deter the achievement of higher manufacturing competitiveness. Purposeful policies to address these constraints are called for.

The process has encountered several problems including slow investment response by prospective private investors, as a result among other things of the poor state of the parastatals, inadequate resources and capacity of the concerned government machinery to expedite the process, and the fear and indecision among the stakeholders about the validity of the privatization.

Reforms and institutional constraints

Institutional constraints

For policies that enhance manufacturing competitiveness to be effective, institutions in many African countries will have to be transformed to enable them to assume new roles and face new challenges. A reformed legal framework is needed that can provide investors (domestic and foreign) with a stable and predictable economic and political environment that is legally backed and ensures confidence. This discussion implies that the need for institutional reforms is even more imperative. Since after economic reforms government objectives and modalities have changed, it is necessary to change the implementing institutions that were created in a new policy environment. A change in government bureaucracies is needed, likewise changes in corporate structures that allow companies to meet the challenge of changing market conditions that is competitive. Good governance and political stability are instrumental in stimulating investment and production.²

Drags from previous regimes

There are problems in Africa that are deeply embedded in their economic and political structures and attitudes carried over from the previous regimes. The previous regimes were characterized by bureaucracies that hindered the smooth workings of economic activities and efficient use of resources. Institutional reforms cannot be complete without inculcating a new kind of thinking and way of doing things that is commensurate with the new socioeconomic and political conditions. This emphasizes the importance of a change of attitude and behavioural codes of stakeholders in the previous regime to fit into the new environment.

² Legal reform in Africa is another important underpinning for the envisaged improvement in economic performance, especially in inducing investors and entrepreneurs. Without some realistic expectation that the legal system is sufficiently insulated from the locus of political authority, investors will consider the risk of legal conflict unacceptably high.

Learning by doing in policy reforms

Learning by doing in policy formulation will enable the countries in question to be able to prioritize their needs wisely, and in the case of industrial policy, to better design sustainable policies to enhance skills and local entrepreneurship, thus contributing to manufacturing competitiveness. Many firms in Africa lack the knowledge, time and resources to identify their technological needs. They often seek assistance to resolve most of the pertinent issues underlying their own development. There is little effort to learn systematically from past experiences and from the experience of other countries.

Administrative capacity and managerial cadres

In many of the African countries that undertook reforms, one of the biggest factors affecting adversely the effectiveness of the policy changes is the lack of adequate administrative and managerial cadres to steer the economies away from the working of the old regimes to the new ones. The obstacles of human capacities including managerial and entrepreneurial deficiencies is manifested in the lack of adequate response to new investment and trade opportunities. To ensure manufacturing competitiveness in this era of globalization, managers in the enterprises have to be equipped with knowledge and expertise to manage in a new market and technology environment where competitiveness and flexibility and adaptation to new situations are more important than in the past.

Resistance to change by economic agents

The importance of governance in the context of policies, strategies and instruments of the manufacturing sector arises from a number of considerations. First, the discretionary use of promotional instruments may give rise to rent-seeking behaviour. Second there is a need for government intervention to shift its thrust from regulation to promotion. Third, administrative efficiency, accountability and transparency are of critical importance for the success of policy implementation and instruments thereof. The long history of protection and dictatorial regimes combined with rent-seeking behaviours is associated with vested interests in the society, which the respective groups tend to strive to safeguard.

Changing approaches to policy formulation

The environment in which policies have to be made is undergoing a continuous process of change. Recently, however, these changes have been more rapid and more far reaching. Individually and interactively, the changes are necessitating the need to review the way in which individuals and institutions carry out their activities and businesses. This presents enormous challenges to be faced as individuals and institutions alike devise mechanisms and build the capacity to cope with an increasingly dynamic environment.

The demand for more informed, more participatory and more precise policy making has increased in the past one and one-half decades. The domain of economic management has expanded to encompass more rigorously the demands for continued macroeconomic stability,

foster supply response and enhance efficiency of resource use. The dual transitional processes of economic and political liberalization have not only generated their own high demands for changes in the way they are doing business; further complications have arisen from the effect of the interactions of the two processes. Five main recent developments that influenced the conduct of policy formulation analysis and implementation and economic management can be identified:

- The transition from a controlled and interventionist to a more open and market-oriented economy.
- The transition from closed political regimes operating along patron–client networks to more open and liberalized political systems that allow for a more explicit articulation of interests of various groups in society.
- A donor attitude that has increasingly changed towards promoting the recipient ownership of policies and development strategies as one way of enhancing aid effectiveness, broad-based accountability and transparency of policy action.
- The considerably increased influence of the media in bringing policy issues to the public domain and enhancing the public scrutiny of policy performance.
- Intensified challenges arising from the changing world market conditions and rapid technological advances.

Political changes have emerged in the form of democratization and political liberalization. Various groups in the society have greater freedom to articulate their positions on various issues and hence make an impact on policy analysis and policy making process. Under the new multiparty politics in many African countries various political parties are free to articulate a variety of positions and policies, in addition, various social groups such as, private sector, the civil society, youths and women are better placed to articulate their interests. This has been accentuated by the significant increase in freedom of press, which facilitated an increase in the media involvement in the process of bringing policy issues to the public domain, thus enhancing public awareness and facilitating greater public scrutiny of policy performance. It is politically riskier and more costly to make policy mistakes and to ignore the views of these groups, which are slowly but surely gaining the strength and ground to affect the policy making process. It is becoming increasingly clear in that in this new socio political environment, policy making is no longer a monopoly of the government. Greater attention is being paid to devising the most appropriate ways through which all actors can be given the opportunity to present their views on policy proposals so that they be incorporated in the policy making process. In the case of Tanzania, for instance, the role of the business community in policy formulation increased considerably in the 1990s. In 1994 the Confederation of Tanzania Industries (CTI) submitted industrial policy proposals to the government. Subsequent initiatives by the government to formulate an industrial policy took into account the proposals from CTI, and the business community was consulted by the government during various stages of formulating the policies. In another important policy area, that is, the budget, the business community submitted their inputs into the 1996/97 budget. Some of their proposals were incorporated into the budget and

during 1996 and 1997 consultations continued between the government and the business community on matters of fiscal policy. Similar consultations are found in several other countries (e.g., Ghana, Uganda). These developments indicated that there is greater room now for various stakeholders to express their interests in policy making processes in Africa. However, this is an area where experience from Asian countries would be very useful. The long experience of involving the private sector in policy formulation in many Asian countries and the way the interactions between business and government have evolved over time deserve closer scrutiny and understanding.

6. Conclusion

As in other developing regions over the last four decades or so, SSA countries have focused on industrialization as a key component of their development process. But compared with these other regions, SSA countries have had little success in building dynamic manufacturing sectors. The blame for this lack of success has typically been placed at the door of poor macroeconomic and sectoral policies emanating from basically faulty development strategy.

While not necessarily de-emphasizing poor policy as a cause of SSA's generally unsatisfactory performance, it should be noted that the difference between SSA and other developing countries is probably not so much in the policy instruments used; it may have a great deal to do with several other characteristics of the policies. Including among these are their design and implementation, their stability and credibility, the incentive (positive and negative) and institutional structures created around them, and how the policy package is adjusted to take account of changing circumstances. In addition, and in comparison with other developing regions, SSA had the smallest base of technical and managerial capital to work with. Yet, the promotion and enhancement of the technological capabilities of private enterprises received very little policy attention in many SSA countries. Finally, the deep distrust and virtual confrontation between the public and private sectors in many African countries have not created a conducive environment for either to play its different but interlocking and complementary role in the development process.

Recent institutional and policy reforms in many SSA countries have addressed some of the key macroeconomic and sectoral policy deficiencies. They have not, however, recognized that a number of constraints will continue to frustrate African industrialization aspirations even after SSA countries have managed to "get the prices right". These relate, first, to market imperfections, externalities and scale economies that would not enable the market system to provide correct price signals and hence call for government intervention. Second is the need for African industry to receive a degree of protection, which should be time-bound and closely related to objective performance criteria, as an assistance over a learning period. This is particularly important given the very low base of human capital and technological development from which African private enterprises generally start. Third is the need to create and strengthen collaborative arrangements and mechanisms that would enable African public and private sectors to work together to achieve the common goal of rapidly enhancing societal welfare.

The traditions of subcontracting, networking and engaging in linkages of various kinds between producers and consumers are not as developed in Africa as they are in Asia. This is one area where useful lessons can be drawn from Asia. In particular, as many countries are opening up the policy making process permitting the private sector and other actors to participate in policy formulation, then the relatively longer Asian experience in this area would be useful. The longer tradition of involving the business sector and other actors in the policy process in many Asian countries can provide relevant lessons for Africa.

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