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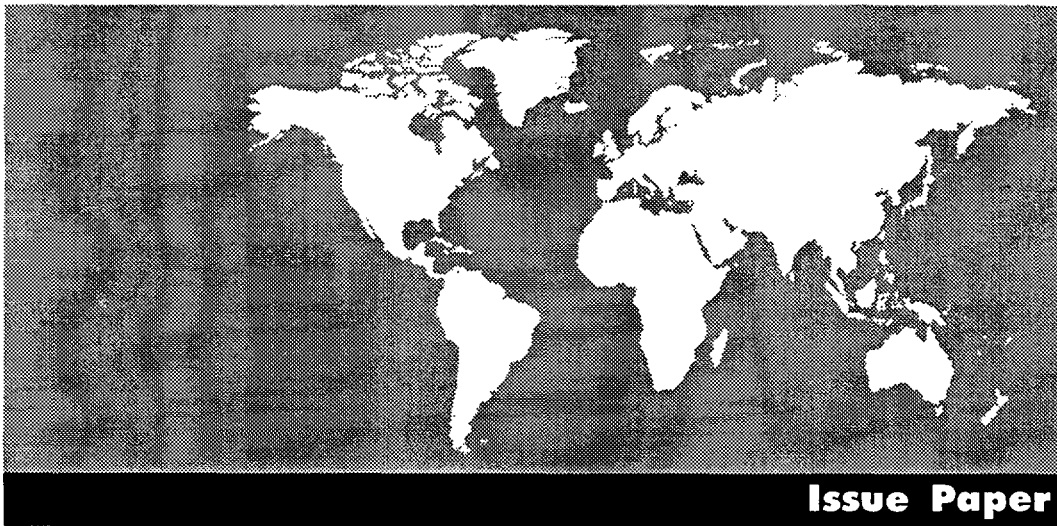
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## Panel V Industrial policy reforms: The changing role of Governments and private sector development



## Industrial policy reforms: The changing role of Governments and private sector development

Prepared by  
the UNIDO Secretariat



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

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**LIST OF ABBREVIATIONS**

<b>BO</b>	<b>Build-operate</b>
<b>BOT</b>	<b>Build-operate and transfer</b>
<b>CAMI</b>	<b>Conference of African Ministers of Industry</b>
<b>FDI</b>	<b>Foreign Direct Investment</b>
<b>NIEs</b>	<b>Newly industrializing economies</b>
<b>SMEs</b>	<b>Small and medium enterprises</b>
<b>SOEs</b>	<b>State-owned enterprises</b>
<b>TNCs</b>	<b>Transnational corporations</b>
<b>TRIMs</b>	<b>Trade-related investment measures</b>
<b>TRIPs</b>	<b>Trade-related aspects of intellectual property rights</b>

## INTRODUCTION

1. In most developing economies, industrialization has constituted a major objective of development strategy and government policy. It has been recognized that rapid industrial growth is the principal means of achieving increased employment, incomes and living standards and that the socio-economic transformation of these countries cannot be achieved except through accelerated industrial expansion. The strategy for industrial growth has, however, varied considerably. In several countries, emphasis has been primarily on promotion of private-sector investment, including that of transnational corporations (TNCs). At the same time, in a number of African, Asian and Latin American countries, the State in the past assumed a major role in industrial activities, through state-owned enterprises (SOEs) in various production and service sectors. In between these two models, a number of developing countries adopted the structure of mixed economies, where the private sector was allowed to flourish and grow, with varying degrees of regulatory control by governmental agencies but SOEs were set up in critical industries and commercial activities. The mixed economy model, which was adopted in several Latin American and Asian countries including petroleum-producing countries, became particularly pronounced during the 1970s. The rapidly expanded role of SOEs was accompanied, in most cases, by policies of import substitution and a high degree of protection, including quantitative import restrictions. While foreign investment was generally welcomed, it was often sought to be channelled to particular fields of activity, with pressure for increased holdings by national partners and shareholders, including government agencies and SOEs. There were, however, notable exceptions such as Chile and the Republic of Korea, where export-oriented policies received major emphasis after the late 1970s, or Singapore and Thailand, where foreign direct investment (FDI) was encouraged without ownership restrictions.

2. Since the latter half of the 1980s, disappointment with the performance of a large number of SOEs, combined with the deteriorating economic situation and the heavy debt burden faced by a number of developing countries, has resulted in most of these countries undertaking major industrial policy reforms. These reforms, which were mostly integrated within structural adjustment programmes, have principally taken the form of a major shift to greater market orientation and recognition of the private sector as the principal engine of industrial growth. The essential elements of the new policy approach have been liberalization of investment; implementation of privatization; liberalization of trade; and increased emphasis on the development of export capability.

3. The policy changes inherent in increased market orientation and private-sector development also became vitally necessary in the context of major economic changes in the international scene during the early 1990s. While in the case of the Commonwealth of Independent States of the former Soviet Union and the transition economies of Eastern and Central Europe, a major shift to privatization and increased market orientation became essential, this was equally necessary for a large number of developing countries, because of global economic developments. Revolutionary technological developments in informatics, including communications and production processes, have brought about the globalization of markets and the increased internationalization of production. The Uruguay Round Agreements are expected to achieve a major

liberalization and increase of global trade. At the same time, there is likely to be more intense competition for various goods and services, and competitive technological processes and high quality standards will need to be ensured, besides compliance with environmental norms. It will be increasingly necessary for developing countries and for transition economies to adapt their industrial structure so as to participate effectively in the mainstream of international trade and investment.

4. Any analysis of policy changes envisaged as a result of increased emphasis on private-sector development requires consideration of the principal elements involved in the liberalization and reform of industrial policies.<sup>1/</sup> These include mobilization of new investment, particularly FDI; ensuring inflow, absorption and adaptation of new technologies; achieving optimum levels of privatization; and increasing the levels of competitiveness and export orientation in each economy. The changing role of the State in the new context has also become a highly pertinent issue. It is often assumed that, with increasingly market-oriented economies, the role of the State and of governmental agencies should not only be substantially reduced, but that many of the responsibilities presently discharged by Governments will be assumed by the private sector and be handled by the interplay of market forces. It is necessary to consider whether, in the context of transition economies and developing countries, such an approach is practicable or desirable. At the same time, it needs to be recognized that, with increased globalization and interdependence, and with trade and investment liberalization at the national level, the role of Governments may need to undergo significant change.

## **I. PRINCIPAL ISSUES FOR CONSIDERATION**

5. Some principal issues for consideration are as follows:

(a) It needs to be reiterated that the basic objectives of industrial policy reforms in developing countries should be to achieve an accelerated pace of competitive and sustainable industrial growth and the development of export capability, primarily through the private sector, and that such growth should bring about greater socio-economic development;

(b) It needs to be considered whether recent industrial policy reforms in most developing countries - which have largely concentrated on general and market-friendly interventions such as liberalization of investment, particularly FDI, and foreign technology inflow, programmes of privatization; liberalization of trade; and promotion of private sector development - have contributed significantly to the growth of competitiveness in these countries;

(c) The results of industrial policy reforms have varied considerably in different countries. While there has been a significant increase in flows of FDI and technology to Asian countries, followed by Latin American countries, the situation in sub-Saharan Africa continues to be unsatisfactory and has even deteriorated in several

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<sup>1/</sup> UNIDO background paper prepared by Katherin Marton, *Recent Industrial Policies in Developing Countries and Economies in Transition, Trends and Impact*, (ID/WG.542/22(SPEC.)).

countries. It should be asked what remedial measures could be undertaken to increase investment and technology flows to these countries and economic and technological cooperation between developing countries;

(d) While considerable privatization of SOEs has taken place in a number of developing countries, it should be asked whether it is likely that, in future, the process of privatization will become more gradual and selective. And whether Governments should regulate aspects such as pricing of products or services in the case of privatized monopolies and undertake programmes for the retraining and absorption of surplus labour, consequent on privatization;

(e) It should be considered, in this context, whether privatization in developing countries should be extended to infrastructure fields, particularly electric power generation and distribution, port operations, and railways and highway transportation and, if so, whether safeguards or regulatory measures need to be imposed;

(f) With the massive capital outlays required, particularly for power generation, it needs to be considered whether host developing countries should promote such projects through the private sector, including through Build-Operate (BO) and Build-Operate and Transfer (BOT) arrangements and whether broad guidelines should be drawn up;

g) It is generally recognized that, with increased market orientation and private-sector development, the role of Governments should undergo considerable change. It should be considered, however, whether in the context of increased globalization and liberalization of trade and investment, such a role should become diminished and even marginalized. While this is primarily a country-specific issue, the nature and direction of change in the role of host Governments needs to be considered;

(h) One approach is that Governments should primarily concentrate on privatization and on providing a promotional and functional framework for private-sector development and leave further developments largely to market forces. The opposite approach is for Governments to assume a strong, proactive approach and define specific strategies, policies and measures for achieving industrial objectives. The example of the newly industrialized economies of South-East Asia is often cited in this context. It is necessary to consider whether, given the constraints in most developing countries and in several less-developed transition economies, the role of Governments may have largely to be in between these two positions. It also should be considered whether, instead of a sweeping exposure to international market forces at a particular point in time, the process should be more gradual, allotting time for adjustment by local institutions and enterprises;

(i) It should be considered whether host government policies should concentrate both on the promotion and development of local enterprises and local entrepreneurial capability, together with upstream institutional support activities, ranging from human resource development to financial support, technological adaptation and applied industrial research, and external linkages. In view of the market shortcomings in most developing countries, it might be necessary for Governments to undertake



specific programmes for the development of small and medium enterprises (SMEs) and for rural industrial development in order to extend the socio-economic benefits of industrialization to less-developed areas and to poorer and more vulnerable sections of the population;

(j) An important issue for consideration is how best to promote industrial development in sub-Saharan African countries, in which there continue to be major constraints and where past experience of SOEs has been very unsatisfactory; there has been little inflow of FDI and foreign technology, and the immediate impact of the Uruguay Round Agreements is expected to be less than positive. It should be considered whether major industrial restructuring of targeted subsectors and enterprises, and promotion of SMEs, would provide a viable, initial alternative for achieving increased industrial growth and competitive capability.

## **II. OBJECTIVES AND FEATURES OF INDUSTRIAL POLICY REFORMS**

6. The basic objectives of industrial policy reforms in developing countries should be to achieve an accelerated pace of competitive and sustainable industrial growth and development of export capability, within a framework of increased market orientation and private-sector development. Such growth should also bring about greater socio-economic development, including increased employment and incomes and improved living standards. In the case of transition economies, the principal emphasis continues to be on privatization and enterprise restructuring for the development of production and export capability.

7. Recent industrial reforms in most developing countries have largely concentrated on promotional features for private sector development. First, laws and regulations relating to industrial investment have been greatly liberalized, including with respect to FDI in most fields, with the necessary protection and guarantees being provided to foreign investors. Second, there has been similar liberalization with respect to foreign technology inflow, and the earlier screening requirements and policy guidelines on technology contracts have been largely replaced by the decision-making authority being left to user enterprises in these countries. Third, fairly extensive programmes of privatization have been carried out in a number of developing countries. Fourth, there has been considerable liberalization of trade, particularly imports, in most of these countries. Finally, several policy and institutional measures have sought to promote private-sector development, including through SMEs, besides fiscal incentives and concessions, especially for exports.

### **A. Foreign Direct Investment**

8. Measures for the liberalization of investment have resulted in a considerable increase in FDI to developing countries, which rose to US\$ 70.8 billion in 1993. Of this, US\$ 51 billion (81 per cent) was invested in only 10 developing economies, with China being the largest recipient (US\$ 27 billion); followed by Singapore (US\$ 6.8 billion); Argentina (US\$ 6.3 billion); Mexico (US\$ 4.9 billion); Malaysia (US\$ 4.3 billion); Indonesia (US\$ 2 billion); Hong Kong (US\$ 1.67 billion); Taiwan Province, China (US\$ 917 million) and Nigeria (US\$ 900 million). Most FDI flows (66 per cent) were

concentrated in Asian countries, followed by Latin American countries (22.7 per cent in 1993 and 34.1 per cent in 1994). FDI in African countries continued to be very limited in 1993 and 1994, ranging between US\$ 2 billion and US\$ 4 billion for all the countries, with Nigeria being the main recipient, followed by Morocco, Angola, Egypt and Tunisia. FDI in Central and East European countries amounted to US\$ 6 billion in 1993, largely to the Czech Republic, Hungary and Poland.

9. Apart from being concentrated in a few countries, FDI has taken place largely in resource-based industries, especially petroleum and natural gas and the minerals sector, followed by investments in consumer-goods industries, ranging from beverages, soft drinks and food products to consumer electronics and hotels and tourism.

10. There is every likelihood that FDI inflow to developing countries and transition economies will continue to increase during 1995-2000 and thereafter. There will, however, be increased competition to attract such investment and it is likely that it will be largely concentrated in countries with specific factor advantages. While a conducive climate will continue to be an essential prerequisite for FDI, other factor conditions such as scarce natural resources, large markets, and cheap, semi-skilled labour will be key determinants. It must be recognized, however, that, in a number of developing countries, particularly in Africa, FDI will continue to be limited. It is also likely that the restrictions on performance requirements imposed by the Agreement on trade-related investment measures (TRIMs) will reduce the bargaining power of host countries with foreign investors.

#### **B. Foreign Technology Inflow**

11. The liberalization of regulations relating to foreign technology contracts in several developing countries in recent years will undoubtedly have a positive impact on inflow of technology and know-how through joint ventures and non-equity licensing arrangements. It will, however, be necessary to comply with the provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs). In most cases, however, the initiative will need to be taken by enterprises from developing countries and transition economies. With increased technology diffusion, there is considerable potential for developing countries to obtain technology and know-how in several fields from more industrialized developing economies such as Brazil, India, the Republic of Korea, Singapore and Taiwan Province, China.

#### **C. Privatization**

12. The most significant impact of reforms in several developing countries has been with respect to privatization. During 1980-1991, the number of privatizations in developing countries was estimated at 1,357.<sup>2/</sup> The most extensive privatization was in Chile, where 500 companies were privatized during the 1980s, yielding a revenue of US\$ 3 billion. Fairly extensive privatization also took place in Mexico (airlines, telecommunications, banks, mining, steel and fertilizers) with revenues of US\$ 30 billion;

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<sup>2/</sup> *Ibid.*

Argentina, (airlines, telecommunications, utilities and petroleum) with revenues of over \$ 10 billion; and Brazil (steel, fertilizers and petrochemicals), besides several other Latin American and Caribbean countries. There was also extensive privatization in several African countries, where most of the smaller companies, who were making losses, were liquidated. Privatization in Asia has been undertaken in Malaysia (shipping terminals, airlines and telecommunications), the Republic of Korea (utilities), and Singapore, besides Bangladesh, Pakistan, the Philippines (airlines, banks and telecommunications) and Sri Lanka. In India, part of the Government's holdings in some SOEs were sold to state-owned unit trusts.

13. The privatizations in Asia and Latin America primarily took place through local private-sector groups, often in the same field of activity as the privatized enterprises. In Africa, most privatizations led to liquidations or closure, though some hotels and production enterprises were taken over by foreign companies. In other regions, foreign companies participated mainly in the privatization of telecommunications and in certain mining enterprises, besides service sectors such as hotels and transportation.

14. Privatization constitutes an important feature of industrial policy reforms. The first phase of privatization, brought about largely because of the high indebtedness of several countries in Africa and Latin America, and the Philippines in Asia, can be considered to be largely completed. It is, however, expected that privatization will continue in several developing countries, apart from the transition economies. At the same time, the next phase of privatization is expected to be more gradual and selective. In some Latin American countries, the scope for further privatization may be limited, unless it is extended to infrastructure facilities. In some other countries, including Brazil, China and India, further privatization will involve major political decisions.

15. The need for regulatory activities by national Governments is also becoming increasingly pronounced during the post-privatization stage, particularly in the case of privatized monopoly operations such as telecommunications and other services or in basic industries such as steel or petrochemicals. In the case of private monopolies, experience in Asian and Latin American countries suggests that certain government controls should be retained during the post-privatization stage in order that national and consumer interests are adequately protected. Issues such as the pricing of products and services provided by privatized monopolies will need to be regulated by the State. Programmes for retraining and employment of surplus labour consequent on privatization will also need to be undertaken. This will become a more pronounced problem with the extension of privatization to new fields, including infrastructure sectors.

#### **D. Infrastructure Development**

16. An important issue is the future role of the private sector with respect to major infrastructure projects, particularly electric power generation and transportation. This has already been recognized in telecommunications, where fairly extensive privatization has taken place in several Asian and Latin American countries. The principle of privatization for utilities and power development projects has also been recognized in the Philippines and the Republic of Korea. However, with the massive outlays required for electric power generation in developing countries and for other infrastructure

programmes, particularly transportation, it may become increasingly necessary to attract foreign private-sector groups and consortia to undertake or participate in major infrastructure projects. It is estimated by the World Bank that infrastructure development in East Asia alone (from Mongolia south to Indonesia and west to Burma) would cost US\$ 1.5 trillion by 2004.<sup>3/</sup> China alone would require \$ 744 billion for roads, power generation, and communications systems. India's needs would also be of major magnitude. Such major projects may need to be undertaken on a BO or BOT basis. While each such case must obviously be separately considered on its merits, it would be desirable to disseminate greater knowledge and awareness of the scope and potential of such arrangements. Certain broad guidelines on BOT contracts are being finalized by UNIDO and could be useful in this context.

#### **E. Industry-related Services**

17. An aspect of growing importance is that of industry-related services. World trade in services increased from US\$ 358 billion in 1980 to over US\$ 933 billion in 1993. Although trade in services represented only 18 per cent of total trade, it earned 40 per cent of net foreign exchange. The externalization of industrial service activities and the organizational segregation of such services constitutes an important trend which needs to be taken into account in developing countries and transition economies.<sup>4/</sup>

#### **F. Liberalization of Foreign Trade**

18. Trade liberalization constitutes an important policy reform, which has resulted, first, in the replacement of import substitution by export promotion as a major policy objective and, second, in extensive import liberalization by most developing countries. While liberal import policies have been implemented for several years in certain Asian and Latin American countries, these were also adopted in several African countries, generally as part of structural adjustment measures. With the signing of the Uruguay Round Agreements in 1994, and the emergence of the World Trade Organization, global trade liberalization has, in fact, come into effect.<sup>5/</sup> It is, however, necessary to point out that, at the micro level, liberal imports have had an adverse effect on local small-scale enterprises, particularly in African countries, and the implications need to be assessed. It must also be emphasized that if major imbalances in imports are combined with large inflows of rapidly transferable portfolio capital, the effects can be disastrous, as was the case in Mexico in December 1994 and early 1995.

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<sup>3/</sup> International Herald Tribune, 14 September 1995, p. 17.

<sup>4/</sup> UNIDO background paper, prepared by the UNIDO Secretariat, *Industry-Related Services: Key to Competitiveness*, August 1995 (ID/WG.542/25(SPEC.)).

<sup>5/</sup> The implications of global trade liberalization will be discussed by Panel IV of the Global Forum.

### III. IMPACT AND TRENDS

19. The impact of industrial policy reforms has differed considerably in various developing countries and needs to be broadly assessed in relation to the basic objectives of policy reforms and their socio-economic impact. These reforms cannot be viewed in relation to any fixed time span for developing countries as a whole and have been continuing over varying periods in several countries, particularly in East Asia. An overall assessment undoubtedly highlights the spectacular growth in industrial production and exports in the newly industrializing economies (NIEs) of Hong Kong, the Republic of Korea, Singapore and Taiwan Province, China, which have rapidly moved to the production of complex, high-technology products for the global market. There has also been a substantial increase in industrial production and exports from China, which received a massive inflow of FDI and technology during 1992-1994. Accelerated industrial production and exports have also taken place and are expected to continue in Indonesia, Malaysia and Thailand. With policy liberalization in India since 1991, it is expected that the inflow of investment and technology will increase substantially during 1995-2000.

20. Among Latin American countries, steady industrial growth has been maintained in Argentina and Chile, though at a much lower pace than the NIEs, particularly with respect to export development. Other Latin American countries have also registered considerable industrial growth, except Mexico which has also recovered considerably during 1995. It is, however, in sub-Saharan Africa that the situation has not only not improved but has tended to deteriorate. There has been a trend towards deindustrialization in several African countries and MVA per capita declined between 1970 and 1993 in a number of African countries, including Botswana, Ghana, Kenya, Senegal, Togo and the United Republic of Tanzania.<sup>6/</sup>

21. Any review of the impact of industrial policy reforms highlights the complexity of assessing comparative industrial and technological development in widely varying country situations. In market-oriented economies, the same or similar patterns of policies can yield different results depending on factor conditions and levels of development. The success achieved, and the failures experienced, reflect the interplay between a country's factor endowments, its level of skills and technological capability, the vibrancy of its private sector, the institutional support system that is available, the perceptions of foreign investors regarding the country's growth potential and the objectives and policies of host Governments. Thus, while TNC investment in selected fields constituted a key element in the rapid industrial growth of Singapore, a different pattern emerged in the Republic of Korea, where major local conglomerates, the *chaebols*, were able to combine substantial technology inflow and adaptation with aggressive policy support from the Government and financial institutions for export-oriented production in key selected sectors. At the same time, in Taiwan Province, China, rapid technological absorption and adaptation of electronics technologies by relatively small enterprises, with strong institutional support, facilitated the phenomenal growth of high-technology exports for

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<sup>6/</sup> World Bank, *World Development Report, 1995*, Washington, World Bank, April 1995.

global markets. Similar growth has taken place, though at a lesser pace, in Malaysia and Thailand, and is expected to take place in India and Indonesia in the near future, largely through effective combinations of foreign technology with domestic or foreign investment and with local semi-skilled labour capable of fast technological absorption.

#### **A. Development of National Enterprises**

22. The emulation of the Korean or Taiwanese experience is not easy and may not be practicable for most developing countries, as these developments took place under particular sets of circumstances. What does, however, need to be emphasized is the key role of national or domestic enterprises. Competitive capability has necessarily to be achieved at the enterprise level and such enterprises must initially be available with initiative and dynamism to take the lead in developing competitive capability. It is the indigenous enterprise that is the focal point around which technological skills and quality production must be developed. This would of course include TNC subsidiaries and affiliates to the extent that they develop competitive processes and products for global or regional markets. Alternatively, it is for local enterprises to acquire or develop the technology required to produce their own range of products of a competitive quality and price to compete in international markets.

23. The emergence and development of such national enterprises should normally be the function of the market mechanism. There may, however, be market failure in this regard, particularly in countries where private-sector industrial activities have been very limited, as in the LDCs and some of the less-developed transition economies. In such instances, the role of the State can be of vital importance in providing training programmes in entrepreneurship and business techniques and for creating or expanding a new entrepreneurial class, with the necessary institutional support.

#### **B. Socio-economic Impact of Policy Reforms**

24. The immediate socio-economic effects of industrial policy reforms have not been particularly favourable. Post-privatization unemployment has been a matter of growing concern in several African and Latin American countries and in most transition economies. Liberalization of imports has benefited only certain sections, particularly rich and élite consumer groups. In the case of local enterprises, the benefits of increased capital-goods imports will accrue only over time, while several local enterprises may not survive the test of increased competition from low-priced imports. The immediate impact in terms of linkages between agriculture, industry and the services sector has also been very limited so far, except in countries such as the Republic of Korea, where socio-economic benefits have been widely dispersed following highly successful export development, or Chile, where such reforms have been undertaken over several years. In most other developing countries, the effects of policy reforms have primarily been felt in metropolitan regions and have had little impact on rural regions and on weaker sections of the population. The direct effects of policy reforms on industrial unemployment and income have nevertheless been fairly positive, even after allowing for increased post-privatization employment. However, there has been little direct impact in rural regions. Not only has the indirect impact on the latter been limited but there have also been inadequate linkages between agriculture and industry so far.

25. The limited socio-economic effects of policy reforms may, to a large extent, be a question of time. Private-sector development, during the initial stages, will tend to be concentrated in urban, metropolitan areas where adequate infrastructure is available, unless the availability of raw materials constitutes a critical locational factor. The permeation of private-sector initiative to rural regions and among weaker and more vulnerable sections of the population, such as women, may be slow and gradual, and spread over a considerable period, unless the process is accelerated through promotional and institutional support. Such support has been available in certain countries, such as Bangladesh, particularly with respect to rural finance. In most developing countries, however, unless a comprehensive support programme is undertaken by Governments, socio-economic development solely through the private sector may take considerable time.

26. Efforts have been made to promote rural industrial development, through promotional government programmes for small and micro enterprises, in several developing countries, including Brazil, Chile, Mexico, and the Andean group of countries in Latin America; India, Malaysia and the Philippines in Asia; and Ghana, Kenya, Uganda, United Republic of Tanzania, and Zimbabwe, in Africa. These programmes have been relatively successful and have resulted in increased employment and income in rural areas, especially in agro-processing and in textiles, leather products and handicrafts. By themselves, however, these programmes may not be enough. If socio-economic benefits through policy reforms are to be maximized and if poverty alleviation in the poorer regions is to be effectively tackled, comprehensive and integrated programmes for rural industries will need to be implemented. This cannot be left to market forces alone; national authorities must necessarily take the lead in the formulation and implementation of such programmes in consultation with private-sector groups and bodies in each country.

#### **IV. CHANGING ROLE OF GOVERNMENTS**

27. An important issue is the extent to which national government policies, institutions, and machinery should be directly involved in programmes for increased market orientation and private sector development. It is necessary to consider whether the role of national Governments lies primarily in privatization and the prescription of the policy framework for private-sector development, while further developments are left largely to market forces. The experience and impact of recent industrial policy reforms in developing countries and economies in transition need to be considered in this context. The most successful achievements have taken place in economies where the Government's selective intervention has been most pronounced. This is exemplified by the rapid development of export capability in the Republic of Korea and Taiwan Province, China, the accelerated pace of industrial expansion and export development in India and Indonesia, Malaysia and Thailand and by the massive inflow of FDI to China and other Asian countries during 1992-1994 as a direct result of national policies.

28. State intervention in developing countries and economies in transition, where policy reforms have been relatively successful, has gone considerably beyond the creation of a suitable climate for new investment. In certain countries, there has been a close conjunction of policies and programmes between Governments, local industrial groups

and local financial institutions as in the Republic of Korea or in Taiwan Province, China. In other cases, a major thrust has been provided by certain national Governments both for accelerated industrial growth and for export development through promotional policies and incentives. At the same time, the role of host Governments does need to be significantly reduced from the high degree of regulatory control that characterized most developing countries in the 1970s and early 1980s. It is, therefore, necessary to assess the nature and extent of governmental involvement that may be necessary with respect to specific functions and requirements to meet industrial growth objectives in different country situations.

29. The policy changes undertaken in most developing countries and transition economies with respect to the promotion of FDI and technology and increased export orientation can undoubtedly be characterized as acceptable, market-friendly intervention. It appears unlikely, however, that only general policy interventions will be adequate to meet the objective of achieving competitive capability in selected fields. In this context, the experience of certain developed economies is useful.

#### **A. Government Interventions in Developed Countries**

30. The role of governmental intervention in industry-related issues is not a new phenomenon in developed market economies. Massive support for research in defence industries has provided a critical support system for new technological developments in the United States of America, as also to a lesser extent in Western Europe. Industrial policy in these countries has, however, been exercised primarily in terms of action and intervention in specific cases rather than policy pronouncements indicating the directions of industrial development.<sup>7/</sup> Thus, industrial policy refers to whatever the State does to develop or support various industries in order to maintain global competitiveness.<sup>8/</sup> In the face of rising structural unemployment and industrial stagnation, State interventions have often provided more pragmatic solutions than monetary, exchange-rate or conventional fiscal policies affecting industrial development. Examples such as the successful bail-out of the Chrysler Corporation (United States of America) in the 1980s or of DAF Trucks, the Netherlands-based lorry group in the early 1990s through a rescue package supported by the Governments of Netherlands and Belgium, are cases in point. The support provided to national champion enterprises in the informatics sector in certain European countries during the 1980s also constituted instances of intervention in favour of particular enterprises.

31. State intervention was also undertaken to bridge the gap between the breakdown of potentially viable enterprises due to factors external to these firms, as in the case of East German enterprises following the reunification of Germany. Substantive assistance was provided for rejuvenating the temporarily declining but promising enterprises, and Treuhandanstalt, the Government's agency in charge of privatizing enterprises, pursued

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<sup>7/</sup> OECD, *Industrial Policies in OECD countries*, Paris, 1990.

<sup>8/</sup> Chalmers Johnson, *The Industrial Policy Debate*, California, 1984.



an approach that was clearly interventionist.<sup>9/</sup> It privatized a number of firms under conditions that significantly improved the value of enterprises, which straightforward market-based disposal could not have achieved. Treuhandanstalt kept several enterprises operating often at considerable cost while transferring viable enterprises to private ownership. Voluntary restraints on automobile exports by Japan or pricing arrangements with respect to semi-conductors between United States and Japanese producers, or the recent dispute between the United States and Japan on exports of automobile parts and components to the Japanese market, are instances where industrial-related actions have spilled over into trading relationships.

32. Recent industrial policy initiatives in developed countries have been influenced by two factors: greater recognition of the role of intangible assets and investments in firms' performance; and the recognition of the importance of integrating firms in international markets and networks.<sup>10/</sup> A significant slowdown in total factor productivity growth in most OECD countries in the preceding two decades has led to attempts to explain the productivity paradox where resources devoted to R&D were increasing without a corresponding increase in productivity. Governments intervened by lowering the cost of some or all R&D projects and by selectively lowering the risk-benefit ratio in industrial research. The principal rationale for government support to industrial R&D has been that market imperfections and failures have resulted in less than socially optimum investment in R&D, with R&D enterprises failing to succeed largely because of the high cost of industrial research. Most developed countries provide various forms of direct support or favourable tax treatment to industrial R&D activities, while some countries provide grants or subsidized loans to industrial research projects.

33. A general consensus appears to have surfaced to challenge defensive policies aimed at protecting industries threatened by international competition. A number of developed countries now tend to encourage firms to take full advantage of the possibilities of combining options such as direct establishment abroad, cross-shareholdings with foreign firms, cooperation agreements, marketing agreements and straightforward cross-border trade. There has also been considerable encouragement of cross-border cooperative research and development projects and investments aimed at commercial expansion.

34. Industrial policy in developed countries is facing new challenges due to a shift in comparative advantage to, and increasing competition from, developing countries. Generally, industrial policies in developed countries have focused on the improvement of firm performance through addressing market failures, expanding technological capabilities, and according greater attention to the quality of investment and human resources. Measures necessitated by intensified international competition may, however, result in distortions in international trade and would need to be consistent with the provisions of the Uruguay Round Agreements.

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<sup>9/</sup> "The Visible Treuhand", *The Economist*, 21 March 1992.

<sup>10/</sup> This analysis draws on OECD, *Industrial Policy in OECD Countries*, Paris, 1990.

## B. Market Shortcomings in Developing Countries

35. In most developing countries, there are several major constraints on and market shortcomings in achieving competitiveness. These constraints have to be removed or minimized and if this goal cannot be achieved through market forces, the intervention of Governments will be necessary. Such constraints and market failures can take place with respect to a series of industrial functions and operations, which can extend from the economy as a whole to institutional support systems and to the enterprise level where competitiveness has to be achieved. Apart from privatization and creating a favourable climate for private-sector investment, State intervention may need to proceed to further stages of subsectoral or enterprise-level support, both directly and indirectly, in order to reduce the effects of market failure or shortcomings, even if this results in varying degrees of interference with the market mechanism for limited periods, until adjustments take place.

36. In a World Bank study,<sup>11/</sup> certain categories of market failure have been cited as requiring selective intervention:

- Capital market deficiencies (caused by information gaps)
- Lumpiness of investment (scale economies)
- Imperfect appropriability of firm-level investments in knowledge and skills
- Inability of individual investors to act rationally when there are technologically interdependent investments

37. Where these shortcomings exist, efficient resource allocation may require intervention to coordinate investments and counteract externalities. Such intervention cannot be purely functional, since different activities may be affected in varying degrees by these failures. The extent of market shortcomings may, in fact, be much broader for enterprises in developing countries and, in order to achieve competitive capability, intervention may need to go beyond providing general support functions to such enterprises with respect to externalities. The nature of the externalities is also important and can range from the development of capability to set up new enterprises to ensuring the availability of the necessary skills for production, technological absorption and adaptation, and for marketing and external linkages. Such externalities may also relate to certain industry clusters in particular subsectors or geographical areas, which may offer special potential for the development of export capability and merit specific supportive intervention.

38. The Government's role in dealing with market shortcomings with respect to physical infrastructure and institutional facilities for finance and basic industrial services is generally recognized as being both essential and market-friendly and most countries, developed and developing, have undertaken remedial measures, often selectively. These measures may involve expanding institutions, or creating new ones, to carry out the role

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<sup>11/</sup> World Bank, *The East Asian Miracle: Economic Growth and Public Policy*, New York, Oxford University Press, 1993.

of existing specialized services and meet the requirements for developing competitive export capability.

39. Market shortcomings can have a major impact on local enterprises, particularly new SMEs and rural industries. Foreign investors, especially TNC subsidiaries and affiliates face fewer failures in developing countries, largely because of the internationalization of many intermediate markets, especially for capital. The importance of TNC affiliates is increasing, particularly in activities where technologies are changing rapidly, production is becoming internationalized and access to export market is growing more difficult for new entrants. However, there may be market shortcomings in the process of FDI also that may call for possible interventions with respect to the entry process and factor markets affecting the activities of TNCs. The provisions in the Agreements on trade-related investment measures (TRIMs) and Trade-related Aspects of Intellectual Property Rights (TRIPs) may, however, constitute major limiting factors in such interventions.

40. Selective as well as functional interventions have played a pivotal role in the pattern of industrial and technological development in the Republic of Korea, Singapore and Taiwan Province, China, as well as in Indonesia, Malaysia and Thailand in recent years. Although the nature and impact of the interventions differed according to varying objectives and policies, the Governments showed an ability to devise and implement interventions effectively, partly because export orientation imposed a strict discipline on both industry and government.

41. The experience of two other countries,<sup>12/</sup> Chile and Ghana, presents an interesting contrast. While Chile has registered steady and stable industrial growth and a fairly dynamic pattern of exports, its export performance does not match that of the Asian NIEs. Yet Chile did not lack the human resources for rapid export development, the factor most closely identified as one of the determinants of East Asian success, and had one of the best educational systems in Latin America, with a substantial skill base in engineering and technology and a long history of industrial experience and entrepreneurship. Nevertheless the growth of manufactured exports in Chile has been relatively slow and its range continues to be limited. The upgrading of its comparative advantage has been largely limited to activities where there was an established or predictable cost advantage and the pace of technological upgrading has been slower and its diffusion much more limited than in East Asia. In Ghana, however, in response to policy reforms, there was a substantial increase in net inflows from foreign sources (mostly in the form of aid). The massive injection of aid resources allowed the economy to finance imports and to revive domestic demand. Initially, the manufacturing sector did fairly well. However, there has not been a continuing positive response on the part of Ghanaian manufacturing enterprises. Labour-intensive exports such as garments, toys or other light consumer goods and metal products, which led the initial export thrust of the Asian NIEs, are conspicuous by their absence. At the same time, large sections of the manufacturing sector have been adversely affected by import competition. Rapid

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<sup>12/</sup> UNIDO background paper, prepared by Sanjaya Lall, *Governments and Industrialization: The Role of Policy Interventions*, UNIDO, August 1995 (ID/WG.542/23(SPEC.)).

exposure to market forces in these conditions may have adversely affected the development of Ghana's comparative advantage. The inadequate upgrading of skills, technical information and technological support have exacerbated market failures in inputs that are essential for developing competitive capabilities.

### C. Nature of Selective Interventions

42. It is against the above background that the changing role of host country Governments and the nature of selective interventions need to be considered. Such interventions must be designed primarily to improve competitiveness and sustainability of the industrial sector and should be considered at the three levels of broad industrial strategy, specialized institutional support and the development of enterprise-level competitiveness, in addition to the promotion of SMEs and rural industrial development.

#### **Industrial strategy**

43. The broad industrial strategy should be based on a review of the competitive structure of national industry and should assess, in consultation with representatives of industry, the principal subsectors and clusters of industries that have special potential for competitive growth. It should also determine the major gaps and shortcomings with respect to human resources, technological capability and usage, and external linkages, and should undertake programmes and measures to cover such gaps. Inadequate human resource development<sup>13/</sup> constitutes the principal shortcoming in most developing countries and it may be necessary to undertake extensive training programmes in entrepreneurship and development of organizational and managerial skills, on the one hand, and in design, detailed engineering, computer programming and software applications and systems and other technological fields in response to the growing demand from industry, on the other. A major programme of intensive short-term training for human resource development, combined with a longer-term reoriented programme for technical education, needs to be drawn up by Governments in consultation with industry and universities to meet the changing demands of industry, particularly in export-oriented fields. This measure constitutes an essential prerequisite. Another closely related field is that of technological capability. Technological adaptation, upgrading and innovation have received comparatively little attention in most developing countries and applied research facilities at the institutional and enterprise levels continue to be limited. It will be necessary to provide financial support for the development of informatics, biotechnology and new materials, and activities undertaken in this regard in enterprises, universities and technical institutions should be subsidized. Similar subsidies must be provided for in-plant training courses and applied research activities in industrial enterprises. As in the case of entrepreneurship, a technological culture needs to be encouraged in developing countries. The industrial strategy for the development of competitiveness should also include measures for enhancing production and productivity and for strengthening information, technology usage, quality production, and managerial and organization and competence in the selected subsectors and industrial clusters with special competitive potential.

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<sup>13/</sup> *Ibid.*

### **Institutional support facilities**

44. Inadequate institutional support facilities can constitute a major shortcoming with respect to critical factor requirements in most developing countries. Market forces, by themselves, cannot ensure the appropriate growth of the necessary institutional mechanisms. Appropriate institutional facilities must be provided by Governments as an essentially market-friendly intervention for competitive growth. Such institutions must, however, be set up or operated with the active involvement of private-sector groups and associations.

45. Institutional infrastructure must cover a wide range of factor requirements. First, appropriate financial institutions must be developed, extending from commercial banking, insurance and other financial services to the development of a capital market, including venture capital, finance for equity requirements and loan finance, especially for micro, small and medium industries. Second, extensive training facilities must be developed for local entrepreneurs. Training facilities also have to be provided for the managerial personnel of local enterprises and for the development of specialized skills, such as design and engineering. Specialized industrial training must also cover the training of personnel in the use of new technologies, particularly computers, telecommunications and software, based on assessed requirements in these fields over a period of time. Industrial training at the national level should concentrate primarily on the training of trainers in various fields and should be based on close linkages with universities, technical institutions and management organizations in each country. Third, quality standards must be developed, including facilities for certification of ISO 9000, and for ISO 14000 in due course. Fourth, institutional facilities must be developed for industrial information, including alternative sources of investment or technology, and data and material on trade and markets in various fields. Fifth, institutional mechanisms have to be developed with respect to investment promotion and technology inflow, absorption and adaptation. These mechanisms should be essentially promotional and, at the same time, provide adequate guidance to local entrepreneurs on negotiations and contracts of various types. Finally, an institutional capability must be developed in applied research in selected fields. Industrial R&D in developing countries must be concentrated primarily on applied research activities.

46. The range of institutions are indicative of the multidisciplinary requirements for industrialization in developing countries and transition economies. What is particularly necessary is the closing of gaps, for instance with respect to information systems and industrial R&D, and the adjustment of existing institutional capability to meet the changing requirements of the private sector in particular countries. The growth of SMEs, which has particular potential in most developing countries, would largely depend on the extent to which financial and institutional support could be made available in different country situations.

### **Enterprise or cluster support**

47. It may be necessary, particularly in the initial stages in developing countries when exports of manufactured products have not taken place to any appreciable extent, to provide a package of financial and technological support at the enterprise level. While

extensive entrepreneurial and business training should be provided to local entrepreneurs, the essential requirements at the enterprise level must be met, such as: viable size and scale of production; technology and production techniques to be used; organization and managerial techniques to be employed; and the external linkages that will need to be developed. This type of support or extension service can be provided by Governments through an integrated package of assistance at the level of specific enterprises or cluster of enterprises in a particular field or geographical area. The emphasis in such an extension service should be that the package be made available in a combined and integrated form from financial institutions and technology-support bodies at the national or local level. The objective should not be to create individual champion enterprises but to develop a climate and support system in which several enterprises can compete and achieve competitive export capability.

### **Small and medium enterprises**

48. An important role may need to be played by Governments in developing countries and transition economies in the promotion of SMEs, which can be operated by local entrepreneurs. Policy and institutional support may, in most cases, relate to the enterprises that can rapidly develop a competitive capability. The interplay of market forces will require, in several less-developed economies, to be supported by the active and wide-ranging involvement of the State. Such involvement would be selective and market-friendly and may range from policies and incentives for the establishment of SMEs to the provision of physical infrastructure such as industrial parks, incubators and export processing zones; development of clusters of SMEs; training for entrepreneurs and managers in business operations; and institutional support for finance, technology, quality standardization, marketing and external linkages. The technology and quality factors particularly will require substantial governmental and institutional support in the early stages of developing competitive capability.

### **Rural industrial development**

49. It will also be necessary for Governments in developing countries to undertake a more challenging and comprehensive role in rural industrial development. Sole reliance on the private sector to achieve the socio-economic objectives of generating increased employment and income in less-developed regions and for poorer sections of the population can result in serious delay in effectively utilizing industrialization to tackle basic social problems in poor regions and communities. It will be necessary for national Governments and institutions to undertake an integrated programme for rural industrial development, particularly through small and micro-enterprises, in developing countries and transition economies. This will require the identification of fields of investment; training of entrepreneurs, particularly women; and institutional financial and technological support through industrial extension services to rural areas and communities. The role of national Governments and institutions must be substantially expanded in this regard.

#### D. Role of Governments in Sub-Saharan African Countries

50. The role of host Governments assumes special significance with respect to industrialization in sub-Saharan African countries, where industrial growth has tended to be very slow and there has been very limited inflow of FDI and technology despite the liberalization of investment codes. Economic policy in these countries has been largely dominated by trade and the key role of primary commodity exports. Policies were designed to regulate the economy and to mitigate the impact of negative external shocks. At the same time, Governments actively intervened to promote import substitution industries. These have had varying levels of success in certain countries but have found it difficult to compete with imports, when import policies were liberalized. Apart from the slow pace of industrial growth, it is argued that there has been a lack of "meaningful industrialization",<sup>14/</sup> while the growth of traditional exports has declined both as a result of adverse price trends and declining output. With the decline in trade, total productivity has lagged behind faster-growing regions. A major element in the distortions now being addressed by economic reform policies is the result of balance-of-payments problems caused by falling exports. With increased market orientation, it is expected that there will be gradual growth in total factor productivity. It may be possible at least partially to emulate the experience of the Asian NIEs to the extent of judiciously targeting industrial subsectors and production clusters and taking measures to promote the necessary investment and technology transfer and total factor productivity growth. This will, however, require a dynamic lead and initiative on the part of host Governments and institutions for subsectoral and enterprise-level industrial activities in areas having potential for competitive development.

51. At the twelfth session of the Conference of African Ministers of Industry (CAMI 12) which met at Gaborone, Botswana, in June 1995, the need was highlighted for dynamic, action-oriented programmes by host Governments for competitive and sustained industrial growth and for the concretization of national industrial programmes and projects, in cooperation with the private sector, and for the establishment of the corresponding institutions for their implementation. Apart from the implementation of the second Industrial Development Decade for Africa, CAMI 12 emphasized, *inter alia*, the necessity of creating an enabling environment for domestic resource mobilization; improving investment conditions for domestic and foreign investors; according priority to the development of human resources and industrial skills, particularly technological, engineering and entrepreneurial capabilities; promoting technological development, innovations and a technological culture; and developing appropriate financing mechanisms and incentives for channelling savings into productive investments.

52. Government promotional policies will need to play a key role in stimulating the growth of investment and appropriate technology usage. In view of the manifold constraints facing sub-Saharan African countries, major changes in industrial structure may have to be undertaken largely through programmes of SME development. These may initially have to be trade-neutral and only gradually develop export capability in

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<sup>14/</sup> UNIDO background paper, prepared by Mudziviri Nziramasanga, *Formulating Industrial Policy in Africa: 2000 and Beyond*, (ID/WG./542/24(SPEC.)).

specific markets and in niche areas. The policy objective should be to create a new class of entrepreneurs and a skilled labour force besides the development of technological capabilities for the manufacture of non-traditional products in new areas in which local enterprises can achieve a comparative advantage in international markets.

53. With the liberalization in global trade following the Uruguay Round Agreements, major industrial restructuring will be necessary in most African countries. It will be necessary for host Governments to take the lead in conjunction with the private sector in each country and in consultation with the international organizations and donor agencies that may be involved. Such restructuring must be based on a realistic appraisal of subsectoral potential in various countries, particularly with respect to agro-processing and agro-related industries, and should be built primarily around the development of SMEs in the manufacturing sector, besides the promotion of foreign investment through TNCs in resource-based industries and in other fields in which TNC investment or participation may be forthcoming. SMEs are likely to be more successful in overcoming rigidities that are inherent in large-scale operations. They are flexible and, because of their investment requirements, can be set up to supply relatively small markets. Their size, however, militates against large investments in technology, and government institutional assistance will be necessary for technological applications and usage, and also with respect to external linkages through a subsectoral approach.

54. It must be emphasized, in conclusion, that a number of measures will be necessary to overcome market shortcomings and to mobilize local industrial investment and participation. While market forces should undoubtedly provide the basic motivation for private-sector growth, this process is likely to require extensive support by host Governments, especially through policies and institutional measures, both for ensuring that industrial investments are adequately mobilized and that the necessary information, financial and technological support is provided for competitive and sustainable growth.