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Panel VII Employment and social aspects of industrialization



Employment and social aspects of industrialization

Prepared by
the UNIDO Secretariat



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

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LIST OF ABBREVIATIONS

GDP	Gross domestic products
MVA	Manufacturing value-added
RTEs	Rural township enterprises
SMEs	Small- and medium-sized enterprises
TNC	Transnational corporation

INTRODUCTION

1. Industrialization is not an end in itself and one of its basic objectives should be to achieve rapid socio-economic development through increased employment and income, and improved living standards. While industrial strategy should aim at ensuring competitive and sustainable growth in selected sectors of production and services, it must also achieve more equitable socio-economic development in poorer regions and for weaker sections of the population. An accelerated pace of industrial expansion must, therefore, be linked with the enhanced generation of employment and income to achieve social progress.^{1/} Many policy initiatives having a direct impact on poverty alleviation in developing countries may fall outside the purview of industrialization. These include agricultural reforms, population control programmes, social and educational reforms addressed to disadvantaged sections of the population, physical infrastructure such as sanitation, water and electricity, and social services such as primary health care and nutritional supplements, as well as a social safety net for the most vulnerable groups. Not only is the socio-economic impact of industrial growth equally vital in terms of generation of employment and income but also through the development of a series of linkages between industry and other sectors of the economy.

2. The effect of rapid industrial growth on more equitable income distribution is more debatable and has to be viewed in terms of its long-term implications. It is contended that income inequality increases initially up to a certain point as *per capita* income rises over several decades, and thereafter income distribution tends to become more equitable. This is generally applicable to the industrialized, developed economies. It is also borne out by the more recent experience of China, the Republic of Korea, Taiwan Province of China, Thailand, and Malaysia, though the rate of industrial growth has to be fairly rapid if it is to have a significant social impact.

3. The rapid transformation of an agrarian society into an industrial economy is the swiftest and most powerful mechanism for generating productive employment, combating poverty and reducing other pressing social needs. Much attention has focused, in recent years, on conceptual issues of post-industrial societies; unfortunately much less attention has been given to the fact that all major economies have developed through economic growth based on rapid industrialization. The satisfaction of basic needs and even of secondary needs, depends now more than ever on the synergy between manufacturing and industrial-service networks, whether with respect to food, nutrition, housing, sanitation, health, education, communications or leisure activities. Growth through industrialization requires the acceleration of education and skill development, not only for manufacturing activities but also for associated services and for society at large. Indeed, the process of economic growth and industrialization, and the modernizing culture and changes in cultural attitudes and priorities that accompany this process, have major multiplier effects and far-reaching consequences for all sectors of society.

4. The extension of industrialization to less developed and rural regions must be an essential goal, together with the provision of employment and livelihood for weaker sections of society, particularly women. At the same time, in most developing countries

^{1/} S. H. Park, *Industrialization and Poverty Alleviation* (UNIDO, 1994).

where significant industrial growth is taking place, it is largely concentrated in metropolitan, urban areas, with rural regions deriving limited benefits. Links between industry and agriculture are weak and the socio-economic advantages of industrialization are not achieved.

5. The generation of increased employment and income may be more important than income distribution at one particular point in time. Employment generation is less susceptible to the conflicts that may be caused by a major redistribution of wealth, and increased employment brings not only income but also greater human dignity and a sense of worth. The question of whether resources can be transferred from growth-stimulating expenditure to social welfare allocations has to be considered in this context. Direct social expenditure on the poor may prove to be a one-shot phenomenon and therefore a temporary measure and, given the sheer magnitude of poverty faced in developing countries, it is difficult to sustain heavy social expenditure over a continuous period. In contrast, growth-induced employment generation is not only sustainable over a long period but is less prone to the problems faced in the implementation of redistribution measures, which may have negative consequences on entrepreneurial initiative and mobilization of investible resources.

6. The current perspectives relating to the socio-economic impact of industrialization must be viewed in the context of increased globalization of industry and liberalization of trade and investment. These trends will have markedly uneven effects in different regions.^{2/} In most economies making the transition from regulation and protection towards greater openness in investment and trade, the industrial sector is being significantly restructured. Industries whose competitive advantage is based on factor conditions will tend to grow at a more rapid pace. Most developing countries, however, will need to accelerate the growth of technological capability and to upgrade technologies and product quality to meet increasingly competitive conditions. Competitive pressures will also lead to the upgrading of some industries through expansion into higher value-added niches and greater investment in the education and skills of labour and management.

7. Small and medium-sized enterprises (SMEs) will have a crucial role to play not only in employment generation but also in utilizing new opportunities in export markets. An extensive programme of institutional support for SMEs should be undertaken, with respect to finance, technology and external linkages, which can be fully justified on the grounds of employment creation and dispersed industrial growth. Export-oriented SMEs can be a vibrant and competitive part of the manufacturing sector. A number of issues, however, relate to the nature and extent of government support for SMEs in an increasingly competitive environment where only the fittest survive and thrive.

8. Industry can also contribute directly to poverty alleviation and social integration through targeted policies aimed at the disadvantaged. Of particular importance are support for rural industry as a means of increasing rural non-farm employment and

^{2/} UNIDO Background Paper, prepared by J. Humphrey, *Industrialization in Developing Countries: The Challenges of Employment and Social Integration* (ID/WG.542/29(SPEC.)).

support for micro enterprises in the informal sector, particularly enterprises operated by women. However, targeted policies for rural industrial development and for promotion of micro enterprises may necessitate a trade-off between efficiency and equity and such units should be developed into viable and competitive small-scale enterprises as rapidly as possible.

I. PRINCIPAL ISSUES FOR CONSIDERATION

9. The principal issues for consideration with regard to the formidable challenge of alleviating poverty and achieving social integration through industrialization are the following:

- a) An appropriate industrial strategy for developing countries, as also for most transition economies, must aim at achieving sustainable and competitive export-oriented growth on the one hand and optimizing socio-economic benefits through increased employment and income, on the other. The question is whether these objectives are consistent. Low wages and natural resource endowments can no longer be viewed as the principal determinants of long-term competitiveness, which is increasingly based on the development of core competencies with respect to technological capability and usage, the continuous upgrading of production techniques, quality and design, human skills, flexible production systems and aggressive marketing. Although export-oriented industrialization will certainly have a favourable impact on employment and income, it is not necessarily the panacea for poverty alleviation, given the magnitude of poverty in most developing countries. It should be considered whether a dual pattern of integrated industrial growth is needed, consisting of: an externally oriented growth pattern driven by export-dominated activities linked with small and medium-scale industries through subcontracting and other supplier linkages; and an integrated rural industry programme operating primarily through small and micro enterprises, producing largely for domestic consumption, and with close linkages to larger enterprises;
- b) The experience of rapidly growing newly industrializing economies suggests that as a result of industrialization, income inequality tends to increase initially, despite an increase in *per capita* income up to certain levels and, thereafter income distribution tends to become more equitable. It should be considered whether this process can be modified by increased emphasis on small and medium-sized enterprises and micro enterprises so that the benefits of industrialization are spread as widely as possible;
- c) It needs to be considered how the growth of manufacturing output can be made more compatible with employment growth, since growth in manufacturing employment may not keep pace with growth in manufacturing output as a consequence of structural change, industrial restructuring and new technological applications. It is necessary, in this context, to take account of the effects of linkages between new technologies, products and applications, especially on employment in industry-related services;

- d) Rapid changes in the external demand for manufactured products will necessitate increased diversification and adjustments in manufacturing processes in developing countries and transition economies. This may well result in changes in employment patterns. It should be considered if the possible negative impact on employment can be cushioned in these countries through a continuous process of restructuring in the subsector concerned, including through retraining of workers and concentrating on products with longer life-cycles;
- e) It is important to examine the correlation between the degree of industrialization and indicators of social progress in order to determine the extent to which industrial growth contributes towards poverty alleviation and social progress. It is generally felt that countries which have grown rapidly in terms of industrial expansion have also achieved substantial improvement in social indicators;
- f) It should be considered whether the promotion of small and micro enterprises in the informal sector is the most effective means of tackling the issue of industrial dispersal and the development of productive employment opportunities in the less developed and rural sector and for weaker sections of the population, particularly women. It is important to note that employment conditions in small-scale and informal manufacturing activities are generally very poor and a comprehensive package of assistance and extension services need to be provided to micro entrepreneurs, particularly women, in order to improve and upgrade their production and marketing capabilities;
- g) A major dimension of socially oriented industrial policy relates to the targeting of specific groups, including disadvantaged groups from different social and economic backgrounds. It is necessary to recognize women as equal partners in the process of industrialization, in this context. It is also necessary for local industry to meet basic production needs, ranging from food and medicine to building materials, and tools and inputs for agriculture. It needs to be recognized that micro enterprises in the informal sector can play a key role and should be provided with institutional assistance, especially finance and technological support through extension services;
- h) There are considerable variations and differences in country-specific characteristics of rural poverty in different regions. It may have to be emphasized that programmes for rural industrialization should be structured to meet specific country needs in terms of potential and market access, including to regional common markets, besides institutional support packages, and the range of extension services that may be required may have to be specified;
- i) In the light of the commitments made at the World Summit for Social Development held in Copenhagen, it is necessary to assess how best the process of industrialization can contribute to achieving the goals of social development and what specific contributions can be made towards generating employment in pursuit of alleviating poverty and fostering social integration. The role of international organizations particularly UNIDO, also needs to be determined. Apart from emphasizing the key role of industry in social development, UNIDO's

activities will need to concentrate on programmes that are especially relevant to poverty alleviation and to strengthen the relationship between industrialization and social progress through a sharper focus on socially relevant project activities.

II. INDUSTRIAL STRATEGY FOR EMPLOYMENT AND INCOME GENERATION

10. The nature of industrial strategy can have a significant impact on socio-economic development and poverty alleviation. Efforts to devise a socially optimal industrial growth path for developing countries and for transition economies have to be structured within the constraints of the new competitive framework as a result of technological developments and globalization on the one hand and the liberalization of global trade and investment, on the other. Industries in the developing world can no longer rely on lower wages alone or on natural resource endowments as a short cut to competitiveness. Increasingly, competitive advantage is based on technological capability, the continuous upgrading of production techniques, quality and design, human skills, flexible production systems and aggressive marketing. In the late 1990s and beyond, employment creation and poverty alleviation will have to be tackled in a very different global business environment, one in which the scope of national industrial policy will be significantly influenced by global trends.

11. During the early stages of industrialization, when inter-industry linkages are weak and *per capita* incomes low, indirect job creation through industry can be fairly limited. However, as linkages develop, an increasing number of indirect jobs are created through the process of industrial growth. At the same time, globalization and rapid technological developments have fundamentally altered the nature of the job creation process. One of the world's leading industrial groups, General Electric (United States), produces three times as much as it did in the 1980s, but with half the number of employees. Furthermore, the average skill level of that smaller workforce is substantially higher than it was 15 years ago. In many industrialized economies, large organizations are shedding labour, leaving the small and medium-scale sector to generate new employment opportunities. This is a consequence both of technological advances and of industrial restructuring, which have resulted in many industry-related service jobs being externalized and outsourced to small- and medium-scale enterprises.

12. It is inevitable, in the above global context, that export-oriented production will constitute an important objective for the next decade, particularly for private-sector enterprises in both developing countries and transition economies. This is all the more so because of recent export-led success stories in East Asia. The favourable effects of export-oriented industrialization on socio-economic growth and consequently on poverty alleviation are fairly well-established and include, *inter alia*, promoting efficient resource allocation, exploiting economies of scale, removing foreign exchange constraints, stimulating competition, generating production externalities, removing the distortions caused by quantitative restrictions and, above all, achieving faster productivity growth. The argument that export-led industrialization would only work well if pursued by a limited number of countries, and might break down if a large number of developing countries were to pursue it at the same time, is highly questionable and is not consistent with the immense potential of liberalized global trade and investment. The experience of export-oriented industrialization in a number of countries within the framework of

increased international sourcing and changing international division of labour clearly indicates that increased exports of manufactured products by a large number of developing countries would not affect the absorptive capacity for such products by the global community.

13. It is, however, necessary to consider whether an export-oriented strategy would, together with the present pattern of industry policy reforms adopted in most developing countries, be adequate to meet the need for employment and income generation in these countries. Such policy reforms have largely concentrated on the liberalization of trade and investment, support to privatization and to private-sector development, and the development of export capability. These measures, by themselves, however, are unlikely to achieve an optimal, positive impact of industrialization on employment and income, particularly in less developed and rural regions and on weaker and more vulnerable sections of the community, particularly women. An important additional policy factor, which will have a direct impact on broadening and diversifying the industrial base, is the promotion of SMEs.

14. The growth of SMEs in developing countries and transition economies may be a crucial element, and even prerequisite, for the increased generation of employment and income. It must be stressed that SMEs constitute not only the most dynamic mechanism for industrial growth in these countries but also for the development of export capability, as discussed in a later section. To a large extent, the accelerated growth of SMEs will contribute significantly both towards export-oriented development and increased generation of employment and income in various fields. At the same time, experience of successful SME activities, including through SME clusters, has, to a large extent, taken place in metropolitan regions and in areas of urban concentration. One of the issues that needs to be considered is how SMEs can be dispersed and targeted towards more vulnerable sections of the population.

15. In order to achieve greater industrial dispersal to less developed and rural regions, industrial development may have to be further decentralized through micro enterprises operating largely in the informal sector. The difference between SMEs and micro enterprises lies primarily in the fact that the former constitute part of the organized industrial sector, with an entrepreneur usually employing from 5 to 100 persons. Micro enterprises, on the other hand, are usually run by individuals, often women, or families. The coverage of micro enterprises can range from tailoring, baking and food products to blacksmithing, equipment repair, production of building materials such as lime or tiles, besides provision of a wide range of agricultural inputs and services. The distinction between micro and small-scale enterprises tends to become blurred and they tend to merge with one another in several production fields. If employment and income are to be generated in rural regions and for weaker sections, such as women, micro enterprises will need to be accorded special attention as part of an integrated programme for rural industrial development.

16. The requirements of institutional support for micro enterprises primarily revolves around short-term finance, usually involving small sums of up to US\$100 at a time, and technological guidance and support. Several financial institutions, such as the Grameen Bank in Bangladesh, have been successful in developing countries in supporting micro

enterprises, and extension services are being undertaken to provide technical and other assistance. Such programmes, however, require integrated support, together with the development of SMEs, if they are to generate adequate levels of employment and income in rural areas, where the needs are most felt and where the weaker sections of the community would be best served.

III. INDUSTRIALIZATION AND INCOME INEQUALITY

17. It is contended that income inequality increases initially up to a certain point with increased *per capita* income, and thereafter income distribution becomes more equal.^{3/} This contention is supported by a large number of empirical studies. There is also growing evidence in several newly industrializing economies, such as the Republic of Korea and Taiwan Province of China, that, as these economies achieved higher levels of industrialization, there was a positive impact on income redistribution and more specially, the absolute income of the poor increased dramatically irrespective of social, economic and political systems and other initial conditions. The Republic of Korea has, within three decades, emerged as the twelfth largest exporter with the fifteenth largest GDP in the world. Phenomenal economic growth has not only eliminated massive unemployment and created acute labour shortages in many sectors of the economy, but also, most importantly, eradicated pervasive poverty and substantially raised the standard of living, including of poorer sections of the population. The same can be said about the experience of Taiwan Province of China, and of China, Malaysia and Thailand in East Asia, to a varying extent.

18. Although the long-term effects of rapid industrial transformation are beneficial for all sections of the population, in the short term and particularly in the early stages of industrialization, income inequality may worsen and employment among the poor may be adversely affected due to structural factors. In such cases, it may be necessary to undertake direct policy intervention in favour of creation of jobs for the poor until such time as the benefits of industrial growth are adequately absorbed.

IV. MANUFACTURING OUTPUT AND EMPLOYMENT

19. While industrialization has been a major objective of most Governments, concern about the limited generation of direct employment by the manufacturing sector has been voiced from the early days of import-substituting industrialization. It would be unusual for growth in employment in manufacturing to keep pace with the growth of manufacturing value-added (MVA). One of the aims of industrial development is to raise the level of labour productivity by increasing the efficiency of existing plants through better equipment, improved technologies and new organizational and management techniques and by developing new and more efficient plants. Measuring direct employment in manufacturing grossly underestimates its full impact on employment in the economy. The impact of industrial growth on employment generation

^{3/} S. Kuznets, "Economic growth and income inequality", *American Economic Review* (1955) vol. 45, No. 1.

should be viewed in the overall perspective of linkages and their ability to generate employment across other sectors of the economy.

20. Direct employment creation in industry has slowed as a consequence of economic progress, structural change, industrial restructuring and technological advances. While the restructuring and outsourcing of services previously performed in-house has meant job losses, the indirect job creation capability of manufacturing has been significant. At the same time globalization and rapid technological development have changed the nature of the job creation process. A rapid pace of industrial expansion attuned to global trends in manufacturing should result in the development of considerable inter-industry and sectoral linkages, leading to the creation of a significant number of jobs in other sectors.

21. With integrated international production, manufacturers establish individual value-adding activities in different locations, leading to greater labour market interdependence and a new industrial structure in various industrial subsectors. Greater crossborder interdependence between transnational corporation (TNC) affiliates also means that various business activities are located in different countries and, in some instances, outsourced to subcontractors. The resulting relocation and interdependence of jobs highlights the enhanced role of education and training.

V. EMPLOYMENT IMPLICATIONS OF INDUSTRIAL DIVERSIFICATION

22. The industrial structures of developing countries are being increasingly diversified, and are becoming more complex, more technologically demanding and more skill-intensive. Concurrently, technological capabilities are also expanding. In the structural transformation of MVA over the years, there has been a shift away from the labour-intensive industries such as food, textiles, leather and furniture, which are, for most countries, the starting-point for industrialization. Overall employment growth in these subsectors has been relatively slow in a number of developing countries. An increase in their contribution to manufacturing employment in selected countries has been due largely to their export orientation.

23. In more industrialized developed countries, traditional labour-intensive industries have been declining in importance, while employment in the machinery and equipment industries has been growing rapidly. This largely reflects the growth of the electrical and electronics industries and the process of industrial deepening. As a result, in the rapidly industrializing countries of South-East and East Asia, the employment share of labour-intensive sectors fell sharply. In Latin America also, labour-intensive industries have tended to decline in importance, but employment has shifted more towards intermediate goods than to other sectors. Thus there are substantive differences across regions in the resultant implications for employment of the structural change in manufacturing.

24. Trade liberalization may lead to job losses in those industries that restructure in order to meet international competition. Liberalization of world trade has been given a major impulse following the Uruguay Round Agreements, which will create continuing competitive pressures for efficiency gains. Liberalization has meant the scrapping of non-tariff and tariff barriers on imports, particularly manufactured imports, and the

abandonment of protectionist support for import-substituting industrialization. This has taken place in Africa mainly as part of structural adjustment programmes, in Latin America as a result of responses to debt and inflation crises, and in South Asia, with the recent economic reforms in India being a notable example.

VI. INDUSTRIALIZATION AND INDICATORS OF SOCIAL PROGRESS

25. The disparities in income and social development between countries with the same level of *per capita* GDP clearly illustrate that poverty alleviation and social progress are not necessarily the inevitable outcome of industrial growth. Countries with the same level of MVA *per capita* do not necessarily demonstrate similar outcomes in adult literacy and infant mortality, which can differ markedly between countries. Social indicators are strongly affected by policy considerations and also by the degree of income inequality in a country. However, a strong case can be made for viewing manufacturing growth as an important part of the process of improvement in social indicators. There is evidence that countries that grew rapidly in terms of industrial expansion also achieved greater improvements in social indicators.^{4/}

26. Although industrial growth has been accompanied by improvements in key indicators of social progress such as literacy, health, and standards of living, the fruits of this progress have yet to reach broader segments of the population, especially in rural areas, where the majority of the poor live.^{5/} The roots of poverty are often traceable to uneven resource endowments and income distribution, disadvantages in location, skewed distribution of physical and social infrastructure and political neglect. The majority of the poor throughout the developing countries are concentrated in rural areas and are usually landless and small-scale farmers. Sustainable social progress requires building up productive capacities, a process of fundamental importance to enhancing the indicators of social progress.

27. The expansion of productive capacities helps to expand the production of goods to meet basic needs, such as food, shelter, clothing, medicine, pharmaceuticals. In addition, industry also supplies an array of products that increase life expectancy and reduce infant mortality. Furthermore, the infrastructural base for socio-economic progress is strengthened by the industrial sector through inputs for the construction of schools, hospitals, universities, bridges and roads, electricity generation and distribution, telecommunication networks and related facilities. However, policy makers are faced with the issue of dealing with a trade-off between achieving social objectives and economic efficiency in the generation and provision of the infrastructure for enhancing social progress.

^{4/} See H. W. Arndt, "Industrial policy in east Asia", *Industry and Development* (UNIDO, 1987), No. 22.

^{5/} See UNIDO, Industrial Development Review Unit, *Social Progress through Industrial Development* (March 1995).

VII. THE ROLE OF SMALL- AND MEDIUM-SIZED ENTERPRISES

28. The rapid expansion of SMEs is of critical importance not only for the development of locally owned enterprises in developing countries but for the generation of income and employment in developing countries and transition economies on a much wider scale, besides extending industrial production over a greatly diversified base. With small internal markets in most developing countries, SMEs represent the most vital and dynamic sector of growth, both to meet local demand and to develop export capability in niche areas. SMEs have demonstrated fast-paced growth, in terms of development of local skills and entrepreneurship, employment generation, flexibility of operations and mobilization of savings. With rapid innovations in technological applications, and growing emphasis on flexible manufacture to meet rapid changes in product demand, SMEs provide immense potential for competitive development in various production and service sectors.

29. The vital role of SMEs has been recognized in most industrialized economies. In Japan, over 90 per cent of industrial establishments employ less than 100 workers.^{6/} In most industrializing economies in Asia, ranging from the Republic of Korea to China and India, a large proportion of industrial production, ranging from 60 per cent to over 80 per cent is through SMEs. The international trend has also perceptibly shifted from giant corporations to smaller specialized, knowledge-based enterprises, which can respond rapidly to technological innovations and changing patterns of demand. Apart from their employment and income potential, SMEs have increasingly emerged as the most vital and dynamic mechanism for achieving sustainable and competitive growth. The success of export-oriented SME clusters in industrial districts in Italy in traditional manufacturing fields such as shoes, leather goods, furniture and textiles through a process of flexible specialization has demonstrated the potential of SMEs in export development. In Taiwan Province of China, the share of SMEs in total export earnings amounts to 56 per cent and in China to over 50 per cent. It is estimated that for countries in East Asia, SME exports account for about 40 per cent of export earnings.^{7/} Through clustering, SMEs in several countries have been able to achieve significant external economies, besides securing the availability of materials and equipment and developing specialized services. Some of the successful instances of clustering include the cotton textile cluster in Tiruppur, India, with over 1,500 small enterprises and exports of around US\$400 million; garment manufacture in Dhaka and Chittagong, Bangladesh, with exports rising from US\$7 million in 1981/82 to US\$1,24 billion in 1992/93; production of surgical instruments in Sialkot, Pakistan, and furniture production in China and in the Philippines. Such instances can be multiplied for a number of countries. The only region where SME clusters have not been effective so far is Africa, partly because the necessary institutional support has been lacking.

^{6/} S. Watanabe, "NC machine tools in Japanese small enterprises", in *Application of New Technologies to Small-Scale Activities*, Geneva, ILO/WEP, January 1985.

^{7/} UNIDO Background paper, prepared by J. Humphrey, *op. cit.*

30. Apart from export-oriented clustering of SMEs, there continues to be considerable scope, both for subcontracting from larger enterprises and from procurement agencies, for SME development to meet domestic needs. With trade liberalization and competition from low-priced imports, SMEs must be able to compete both in domestic and external markets. This has not been possible for several small-scale enterprises in Africa in recent years, resulting in closures. This poses two questions: first, whether the liberalization of imports in these economies should be a sudden and sweeping process or whether it should be more gradual to enable adjustments by local enterprises and, second, the nature of institutional assistance that needs to be provided to SMEs. On the first question, it would appear that if the process of import liberalization were selective and gradual, it would create less dislocation and would enable local SMEs to make the necessary adjustments in terms of the technological upgrading and product and pricing adjustments required to compete against imports. The Uruguay Round Agreements provide for such phasing and this should be fully made use of. At the same time, the adjustment period should be utilized to develop export capability for which there is substantial potential in most developing countries.

31. Institutional support for SME development covers several essential functions, including human resource development, finance, information, technology, quality standardization and certification and inter-firm linkages, besides provision of physical infrastructure facilities, ranging from industrial estates, incubators, technology parks and export-processing zones, to basic infrastructure needs such as electricity and transportation. The most essential need is for human resource development, particularly in countries where entrepreneurship and technological skills are not well developed. Training programmes must be provided for entrepreneurs and managerial personnel of SMEs besides for specialized categories of personnel such as computer programmers and data processing personnel, as well as persons engaged in design, engineering, packaging and the like. Institutional finance for SMEs should be adequately available on reasonable terms and with realistic conditions relating to collateral. Apart from commercial banks, special credit institutions for SMEs may be necessary, besides venture capital bodies. Technological support should include assistance in locating potential sources of technology and in acquiring and absorbing technology, if obtained externally. An information system on technological alternatives and sources in various fields can prove very valuable. It is also necessary to ensure quality standards for SME products, particularly in export markets, and institutional facilities for standardization and quality control are of vital importance, including certification facilities regarding compliance with ISO 9000 and other international standards.

32. Institutional support for inter-firm linkages for local SMEs can be of special importance. First, closer inter-firm linkages should be established within each country for SMEs with TNCs and large-scale enterprises for ancillary or feeder industries or for subcontracting in specific fields or particular products. Second, assistance should be provided to develop external linkages with foreign companies for access to foreign markets, or for technology and know-how, or for buy-backs and marketing. Various combinations of these arrangements is also possible. For increased export orientation, close external linkages with foreign enterprises are essential and institutional support can facilitate such arrangements significantly.

33. Institutional support facilities for SMEs need to be provided through various mechanisms. In several developing countries, separate institutions have been set up for promotion and support to SMEs. In India, the National Small Industries Corporation has been established as a State-owned undertaking, for this purpose. In East Asian countries, the emphasis has been on subcontracting networks and inter-firm linkages. In China, a major role has been played by the Rural Township Enterprises (RTEs), both in rural development and in export-oriented activities. By 1992, there were over 84,000 export-oriented RTEs in garments, silk, arts and crafts, chemicals and other export-oriented fields. Irrespective of the form or coordinating mechanism, SMEs provide considerable potential, both for socio-economic development and for developing export capability in various niche areas.

VIII. SMALL AND MICRO ENTERPRISES AND THE INFORMAL SECTOR

34. The promotion of small and micro enterprises creates the nucleus for future industrial development, strengthens links with larger enterprises and generates employment and income at the grass-roots level. For example, in the agro-industrial sector, small-scale and micro activities create jobs and income, particularly for women, by increasing the use and value of agricultural produce such as vegetables, fruits, grains, fibres and leather, and by supplying key inputs and services. However, gearing industrial policy strategies and development patterns to support small and micro enterprises calls for a conscious choice in creating gainful employment opportunities for vulnerable population groups, in less developed and rural regions.

35. The role of the informal sector as a residual absorber of rural-urban migrants warrants special attention considering that informal manufacturing activities account for a substantial portion of all jobs created in manufacturing and related activities. The informal sector is not only a major source of income and employment for a large portion of the labour force, it also serves as a breeding ground for entrepreneurial development. The graduation of informal activities into formal manufacturing activities may itself be an issue, since persons successfully engaged in informal production and service activities may prefer to remain in the informal sector in order to avoid bureaucratic procedures and tax systems.

36. The promotion of micro and small enterprises in the informal sector undoubtedly constitutes one means of increasing employment and income. For the poor, the most effective strategy is to provide productive employment opportunities, combined with the increased supply of basic requisites. This entails an emphasis on a labour-intensive growth path. Sight should not be lost of the fact that employment conditions in micro and small enterprises and in informal manufacturing activities frequently leave much to be desired, offer an insecure income and difficult and often unsanitary working conditions. Government policy of a catalytic nature is required in order to remove the weaknesses and shortcomings of the informal sector in the interests of efficiency and equity.

IX. TARGETING SPECIFIC GROUPS

37. The economic integration of all segments of the population, including disadvantaged groups from different social and economic backgrounds, is a major dimension of socially oriented industrial policy. Appropriate industrial policies can offset inequalities that would otherwise widen. Equality of opportunity for all within a framework of respect for human rights is the key element in attaining full social integration.

38. Social integration requires that women be fully accepted as partners and recognized as contributing directly to the cohesion of the socio-economic fabric. A correlation exists between the high participation of women in the formal industrial sector and the attainment of high levels of social and human development. Women's limited access to paid employment and corporate networks explains the current gender bias.^{8/} In the countries in transition to a market economy, women are losing jobs at a much higher rate than men. The question arises whether new technologies bode well for women. It is generally believed that women, compared with men, generally possess fewer qualifications and less training than are necessary for progression to new-technology jobs. In the economic climate of shrinking State sectors, maternity leave and consequent absenteeism among women tends to make them a less preferred workforce than men in the corporate sector. The spread of basic computer literacy and of managerial competence would, to a certain extent, help women to sustain a career particularly in SMEs in countries where female literacy rate is reasonably high. The quality and quantity of women's employment, however, largely depends on their ability to acquire relevant skills.

39. Meeting the needs of an increasing number of refugees, displaced persons and victims of natural and man-made disasters also presents a pressing issue. In war-affected areas, the damage and destruction to industrial production and service facilities, as well as to housing and civil engineering structures, are well known. The scope of emergency aid programmes, providing food supplies, health services and shelters, as well as the distribution of goods and services and the relocation of people, can be reduced, and sustained socio-economic development of the community fostered, in direct proportion to the speed with which local industries can be revived. The sooner local industry can meet fundamental needs, ranging from basic food and medicines to building materials and tools, the sooner financial assistance provided by the international community can be effectively utilized.

X. INDUSTRIALIZATION AND RURAL POVERTY ALLEVIATION

40. The principal means by which industry can have a significant impact on rural poverty alleviation is by job creation through forward linkages, backward production linkages and income-induced effects in the form of final demand. Forward production linkages refer to production activities induced by agricultural production, mainly in food

^{8/} UNIDO background paper, prepared by Swasti Mitter, *Does New Technology Bode Well for Working Women? An Evaluation and Analysis* (ID/WG.542/10(SPEC.)).

processing and resource-based manufacturing such as textiles, wood and furniture, cane, and bamboo or other local material-based products. Employment is also generated through backward production linkages, since agricultural production needs a wide range of agricultural inputs such as traditional tools and farm equipment made by local artisans as well as modern equipment, such as irrigation pumps, motors, tractors, fertilizers, pesticides. Increased farm incomes resulting from increased agricultural productivity may lead to increases in the final demand for a wide range of consumer goods and services, many of which could be produced locally and can generate employment. It is widely accepted that final demand linkages for a wide range of consumer goods are far more important than forward and backward linkages. However, such strong income-induced effects are likely to be forthcoming only at fairly advanced stages of industrial development.

41. Many technological and institutional factors must be satisfied if inter-industry linkages are to be translated into actual growth and job creation for other industries. The nature and size of demand, in the case of backward linkages and the availability of supply inputs in the case of forward linkages, should be large enough to provide a viable basis for the establishment of new enterprises or the expansion of existing units. A pool of entrepreneurs should, however, be available to respond to these pressures at the right time. Complementary factors such as skilled labour, land, capital and raw materials should also be readily available. Easy access to credit and other financing mechanisms to expand output should be ensured. Finally, a range of supportive government policies needs to be implemented to facilitate the growth of industries induced by these linkages.

42. Demand constraints appear to be the most binding among the many obstacles facing rural industrialization. The growth of local income often has a negligible effect on the growth of rural industries. Since the viability of rural industries depends crucially on the marketing links forged with major urban centres, non-farm employment is also critically dependent on the links with the urban economy. On the supply side, one of the major constraints on rural industrialization is the lack of external production economies arising from the paucity of various complementary factors such as repair and maintenance facilities, access to credit and finance, alternative sources of raw materials, marketing information and other specialized services.

XI. FULFILMENT OF SOCIAL GOALS FOR INDUSTRY

43. In the light of the commitment made at the World Summit for Social Development to accord priority to redressing current social and economic inequalities, it is necessary to define the role of industry and UNIDO in achieving the goals of social development and the specific contributions that can be made towards generating employment, alleviating poverty and fostering social integration. It is essential, in this context, for the international community to recognize the critical role that industrial development can play in enhancing social progress. Industrialization must be viewed as the most dynamic means to achieve economic progress, and to provide the basis for generating resources, increasing income levels, creating employment opportunities and bringing about more equitable and environmentally sustainable development.

44. Faced with the changing economic challenges of the 1990s, UNIDO has embarked on a set of development priorities as a basis for the Organization's work, which reflect a sharper substantive focus and a strengthened emphasis on the relationship between industrialization and social development. These include industrial and technological growth and competitive development of human resources for industry, equitable development through industrial development, environmentally sustainable industrial development, and international cooperation in industrial investment and technology. Promoting and sustaining SMEs, including strengthening informal micro units, specially in less-developed and rural regions, is considered by UNIDO to be one of the most efficient ways of generating productive employment in developing countries. UNIDO programmes are also concentrated on the special needs of women in industry including development of human resources and entrepreneurship; development and transfer of appropriate technologies; and policy advisory services. The Organization is also committed to the implementation of a priority programme primarily geared to achieving social objectives through socially responsible industrial development and intensifying and expanding socially relevant projects and activities.