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# GLOBAL FORUM ON INDUSTRY

*Perspectives for 2000 and Beyond*

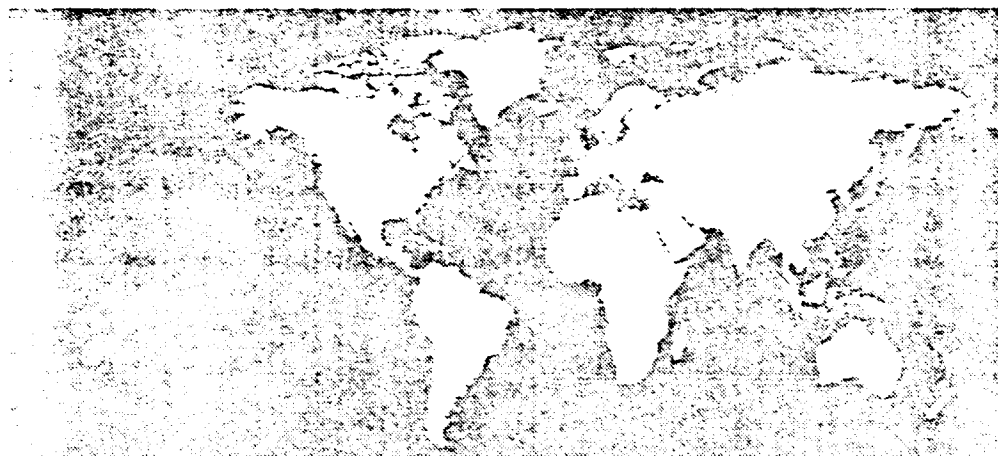
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**Executive Summary**

## **Perspectives on industrialization: Global industrial partnerships, interdependence and competitiveness**

Prepared by  
the UNIDO Secretariat



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

**PERSPECTIVES ON INDUSTRIALIZATION:  
GLOBAL INDUSTRIAL PARTNERSHIPS, INTERDEPENDENCE  
AND COMPETITIVENESS**

**EXECUTIVE SUMMARY**

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**INTRODUCTORY NOTE**

This document is a summary of the Main Paper, Perspectives on industrialization: Global industrial partnerships, interdependence and competitiveness (ID/WG.542/1(SPEC.)), which highlights the principal findings of papers prepared for the Global Forum on Industry, Perspectives for 2000 and Beyond, New Delhi, India, 16-18 October 1995. References are made, where appropriate, to relevant chapters of the Main Paper.

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**LIST OF ABBREVIATIONS**

<b>APEC</b>	<b>Asia Pacific Economic Cooperation</b>
<b>EU</b>	<b>European Union</b>
<b>FDI</b>	<b>Foreign direct investment</b>
<b>ISI</b>	<b>Import-substitution-industrialization</b>
<b>LDCs</b>	<b>Least developed countries</b>
<b>MFA</b>	<b>Multi-Fibre Arrangement</b>
<b>MFN</b>	<b>Most-Favoured Nation</b>
<b>NAFTA</b>	<b>North American Free Trade Agreement</b>
<b>NEC</b>	<b>Non-equity co-operation</b>
<b>TVEs</b>	<b>Township and Village Enterprises</b>
<b>TRIMs</b>	<b>Trade-related investment measures</b>

## **INDUSTRIALIZATION AS THE MAINSPRING OF ECONOMIC GROWTH**

1. Industrialization is the driving force of the development process. Industry and, more specifically, manufacturing is synonymous with development. Rich countries are more industrialized than poor ones, and all major economies have followed the industrialization route to prosperity. Living standards are highest and social development greatest in highly industrialized States, while at the other end of the spectrum, the least developed countries (LDCs) are those where manufacturing value-added (MVA) accounts for less than 10 per cent of GDP.

2. Industrialization is more than the engine of economic growth; it is also the catalyst for the technological, financial and socio-economic transformation of the developed-market economies of North America, the European Union and Japan. Economic growth, driven by industrialization, has multiplier effects across and within economies (see Chapter 8), and contributes not just to improved living standards but also to cultural change and reduced rates of population growth. Technological development is most rapid in manufacturing and related service activities; countries that neglect their industrial sectors run the risk not just of being left behind technologically, but of being vulnerable to the vagaries of commodity price fluctuations and, for much of the past 25 years, deteriorating terms of trade (see Chapter 1).

3. Over the past 50 years, industrialization has transformed the economies of the OECD countries socially as well as economically, and in the past two decades the same process has reached an advanced stage in some newly industrializing economies, especially, but not only, in East and South-East Asia. While the developing countries' share of global MVA has more than doubled since 1960, rising from 8.6 per cent to an estimated 21.3 per cent in 1995, progress has been uneven. The main gains have been confined to a relatively small handful of mainly Asian economies, including China (see Chapter 2).

4. At the same time, industry's catalytic role in the development process is changing in response to the new global pattern of rapid and accelerating technological change, sweeping trade liberalization, far-reaching deregulation of markets - including the privatization and commercialization of State-owned enterprises - and the globalization of international business.

5. Consequently, the pattern and nature of industrialization have changed radically over the past two decades, with far-reaching implications for national industrial policy and for corporate strategies at the enterprise level. In the Uruguay Round era, economic decision-making, at national and firm level, is increasingly influenced by crossborder considerations. Rapidly growing interdependence means that decision-makers cannot ignore trends and developments beyond their national borders. The concept of the domestic market, which was at the heart of industrialization strategies in the 1960s and 1970s, has lost much of its meaning in the single market of the European Union and in the North American Free Trade Agreement (NAFTA). National markets are being regionalized, and the national firms are increasingly being challenged by foreign rather than domestic competitors as the progressive implementation of the Uruguay Round Agreements means that trade barriers are lowered.

6. Competition intensifies as industries and firms are stripped of their protective barriers, highlighting the need for enhanced competitiveness at both enterprise and national levels. Business is responding to this new order by globalizing many of its activities, seeking locations where costs are lowest, where sourcing is most efficient, where labour is most productive, where skills are readily available and where market access is guaranteed.

7. The new challenges are all the more difficult to meet because the pace of change has accelerated - and in the case of technological progress continues to quicken (see Chapter 4) - while product, strategy and policy life-cycles shorten. At the same time the nature of competitive advantage has changed. In the twenty-first century, countries will be forced to reduce this reliance on factor-driven comparative advantage - such as a rich natural resource base, plentiful low-cost labour, abundant cheap energy - as the launch pad for industrial development. National entrepreneurial capability, and the development of innovative skills, technology and market access, often linked to external linkages through foreign direct investment (FDI) and non-equity forms of crossborder business cooperation, have become key sources of competitive advantage for developing countries and a number of transition economies.

#### **A WIN-WIN FORMULA**

8. The implications of the changed industrial environment for developing countries are obvious; those States that fail to lock into the global integration process risk being left behind socially as well as economically. The implications for the developed market economies are no less stark. No nation can isolate itself behind tariff walls or other barriers. Even if it were feasible, prosperous nations cannot afford to disregard the plight of the developing countries. The increased proportion of the global aid budget earmarked for emergencies in the developing world is a reminder that where problems are left to fester and spread, one country's crisis soon takes on a regional, if not an international, dimension. Funds invested now in industrial projects that generate jobs and alleviate poverty help prevent subsequent economic, social and humanitarian crises.

9. Unemployment, political instability, civil unrest, drought and disaster in Africa, Asia, Latin America, the Middle East or the countries in transition quickly translate into social problems in Europe or North America. National boundaries do not block the crossborder migration of the unemployed, the dispossessed, the refugees and the sick. Drug trafficking and money laundering is as much - if not more - a crisis for the industrialized countries as for the developing world.

10. Fortunately, globalization is not a zero-sum game. Enhanced global competition and the growing cross-border mobility of capital, technology and skills heighten interdependence by forcing firms to consider new and different ways of carrying out value-adding activities in different countries where labour, transport, production or marketing costs are lower. Because production - and service - costs are frequently considerably lower in developing countries and the economies in transition than in the industrialized world, there are often substantial cost savings to be made from outsourcing activities.

11. For their part, the developed market economies benefit from increased market opportunities generated by rapid *per capita* income growth in developing countries and economies in transition. Growth in the developing world accounts for roughly half the increase in exports from industrialized countries to that area since 1985. Projections suggest that growth in developing countries could account for up to three-quarters of the increase in their imports from industrialized economies over the next decade.

12. Precisely how industrialized-country firms penetrate such markets - by direct export, licensing technologies and product brand names, joint ventures or FDI in wholly owned subsidiaries - will depend on a whole host of considerations, including the policy environment of the host economy, its location *vis-à-vis* the main markets, its skills and technological capability and the pattern of its resource endowment. Some of these options - such as non-equity ties - might benefit developing countries considerably more than direct imports from industrial countries. Industrial policy - in the very broadest sense of appropriate macroeconomic strategies and targeted selective interventions - has a major role to play in ensuring that developing economies exploit these opportunities to the full.

13. The most vulnerable countries will be those whose "interdependence coefficient" is low; those least integrated with the global economy in terms of exports, FDI and non-equity links; and those for whom manufacturing accounts for less than one-tenth of GDP. The challenge for the next decade is how to integrate small, technologically backward economies with no industrial base to speak of with the developing-world high flyers. A failure to do so would not just perpetuate and exacerbate the widening gap between third world haves and have nots, but expose the global economy to the negative aspects of interdependence. If this is allowed to happen, a potential win-win situation could all too easily degenerate into a lose-lose scenario.

#### **THE NEW PATTERN OF GLOBAL INDUSTRY**

14. While the new global business order has its origins in the reduced role of the State - embodied in trade liberalization, deregulation and privatization - many other influences are also at work. These include:

- The accelerating pace of technological progress - possibly the most important single determinant of competitive advantage (see Chapter 4).
- The new emphasis on core competencies in large businesses giving rise to the "de-layering" and "rightsizing" of manufacturing industry, and the outsourcing and externalizing of many activities that were previously conducted in-house, with adverse repercussions on the level of direct employment in industry. General Electric of the United States of America reports that it has trebled output since 1980, while halving its workforce (see Chapters 1 and 8).
- The quickening pace of globalization reflected in the explosive growth of FDI over the past decade, the emergence of competitive national enterprises and industrial groups in newly-industrializing developing countries, and the widening



range of non-equity links, especially crossborder coalitions and strategic alliances, as well as joint ventures, licensing and technology agreements (see Chapter 3).

- The shifting centre of gravity of global industry as the East Asian cluster - comprising Japan, China and successive waves of newly industrializing Asian countries - builds market share at the expense of the developed market economies. The share of global MVA of the latter declined from 86 per cent in 1970 to an estimated 76 per cent in 1995 and is expected to fall further to 67.6 per cent by 2005. The share of the countries in transition has fallen from more than 4 per cent in 1970 to 2.3 per cent in 1995, while developing countries have raised their share from 10.3 per cent to 21.3 per cent in the past 25 years. More than 80 per cent of these gains were achieved by the South-East and East Asian economies, including China, whose market share rose more than fivefold from 2.1 per cent in 1970 to 11 per cent in 1995 (see Chapter 2).
- With the exception of East and South-East Asia, the service sector has grown faster than any other sector of the economy. Manufacturing industry's share of global GDP fell from 28.8 per cent in 1960 to 22.2 per cent thirty years later. The major declines occurred in North America (a fall of 16 percentage points to 18.5 per cent), Western Europe (down 5.7 points to 23.7 per cent) and Japan, where manufacturing's share in GDP fell 5.5 points to 29.1 per cent (see Chapter 2). This trend is one result of the outsourcing of industry-related services as manufacturing companies restructure their operations to cut costs, enhance efficiency and boost competitiveness (see Chapter 6).
- The rapid growth of financial markets in the developing countries and the countries in transition associated with the liberalization of capital flows, giving rise to substantially enhanced crossborder flows of portfolio investment channelled through emerging stock markets (see Chapter 3).
- The political and economic revolution and subsequent far-reaching industrial restructuring in the countries in transition in eastern and central Europe.
- The resurgence of regionalism, most apparent in the deepening and widening of the European Union (EU), but also in the development of NAFTA, the creation of the Asia Pacific Economic Cooperation (APEC) forum and the period of intense activity since 1990 in developing new regional economic integration agreements (see Chapter 5).
- The disillusionment with the strategy of import-substitution-industrialization (ISI) and subsequent widespread adoption of market-oriented policies emphasizing trade liberalization, deregulation and privatization, often under pressure from donor countries and the multilateral institutions (see Chapter 6).
- The enhanced emphasis on export-driven industrial growth which, in turn, underscores the need for development of technological capability and upgrading and improved competitiveness in manufacturing industry (see Chapters 5 and 6).

- The increased urgency of measures to achieve environmentally sustainable economic growth (see Chapter 7).
- The growing role of small and medium-sized enterprises (SMEs) in industrial development, in exporting and, specifically, job creation (see Chapters 6 and 8).
- The role of rural industry both in creating jobs and contributing towards greater gender equality and social integration (see Chapter 8).

## **THE CHANGING NATURE OF INDUSTRIAL DEVELOPMENT**

15. Taken together, these forces and developments mean that over the next two decades the pattern and nature of industrial development will be very different from that of the past, although industrialization will continue to be the driving force of the development process. Industry's dynamic role in generating economic growth, employment and social progress cannot be separated from that of the service sector, with which it is closely integrated. A feature of recent industrialization is the externalizing and outsourcing of activities by manufacturing industry proper to subcontractors supplying industry-related services. Through these linkages with services, and also with agriculture and construction, manufacturing has substantial multiplier effects across the entire economy (see Chapter 1).

16. Global industrial growth has slowed markedly over the past 30 years, falling from an annual 6.2 per cent in the 1960s to 3.7 per cent in the 1970s, 2.8 per cent in the 1980s and 1.4 per cent during the 1990-94 period. The slowdown has been most marked in the industrialized economies - where growth has slowed from 5.8 per cent a year in the 1960s to 0.9 per cent per annum in the early 1990s - and in Eastern Europe, where output fell by 13.6 per cent per annum in the first four years of the 1990s having registered growth of more than 8 per cent annually in the 1960s and 1970s (see Chapter 2).

17. Developing countries fared better; MVA growth held above 6.5 per cent a year throughout the period, except for the 1980s, when it averaged 4.3 per cent annually. However, growth rates varied widely across regions, with Asia (including China and the Indian subcontinent) performing far better than Latin America and Tropical Africa. In this latter region, MVA growth has not kept pace with population expansion since the 1960s, while in Latin America and the Caribbean, strong growth of 6.3-7.1 per cent a year in the 1960s and 1970s - the heyday of import substitution - was followed by falling output in the 1980s and modest 3 per cent annual growth in the 1990-1994 period. Growth in South-East and East Asia has also slowed - from more than 11 per cent in the 1960-80 period to an average of 7.7 per cent in the past 15 years.

18. The declining share of manufacturing in GDP has been confined mainly to the developed-market economies of North America, western Europe and Japan. In North America, the contribution of manufacturing to GDP fell from 25.6 per cent in 1970 to 17.8 per cent in 1990, while in western Europe and Japan industry's share declined from 30.4 per cent to 23.8 per cent, and from 36 per cent to 29 per cent respectively. However, these data must be interpreted cautiously, since the outsourcing of industry-related services implicit in much of the recent restructuring of industry distorts

the 20-year comparison. Because such services are heavily dependent on output growth in manufacturing and because their reclassification as tertiary services rather than manufacturing activities is more a matter of definition than of structural change, there is a danger of so-called deindustrialization being exaggerated. This danger is enhanced by the fact that these declines in industry's share in GDP, despite an absolute increase in output, reflect the impact of structural change both within manufacturing itself, and between industry and other sectors, which have resulted in the growth rates of some other sectors overtaking the rate of manufacturing growth, even though the latter has remained positive in almost all cases.

19. One region - sub-Saharan Africa - has been left behind; its tiny share of global MVA fell from 0.4 per cent in 1970 to 0.3 per cent in 1994, and there is some evidence to suggest that structural adjustment programmes, few of which include explicit industrialization strategies, have contributed to the lacklustre performance of manufacturing in the region since the mid-1970s. In ten out of 18 countries for which data are available, the share of manufacturing in GDP fell between 1970 and 1993 (see Chapter 6).

20. The challenges now facing industrializing and restructuring countries are heightened by four trends:

- The slower growth rate of "early" industry, in which developing countries have a comparative advantage, relative to the expansion of high technology, skills- and capital-intensive manufacturing;
- The rapid, accelerating pace of technological progress, which is affecting all industries, including those traditionally classified as technologically mature (labour-intensive) sectors. This has raised the spectre of technological unemployment, although there is little evidence of this as yet (see Chapter 4);
- The increasing importance of labour quality in the attraction of FDI, joint ventures and non-equity links with international companies. There is mounting evidence that the availability of higher quality personnel is a more significant determinant of industrial potential than many other physical attributes (see Chapters 3 and 6); and
- The growing realization that industrial development is not to be achieved only from the outside by foreign TNCs, or foreign aid/investment. All the evidence points to a major and increasing role for indigenous enterprise, often at the small- and medium-enterprise level, emphasizing clusters and industrial districts, through technology transfer, technological and skills upgrading, and the development of competitive and sustainable indigenous industrial capacity.

## **INTERDEPENDENCE AND INTEGRATION**

21. Foreign trade and increased integration with the world economy through FDI, joint ventures and non-equity cooperation are the main forces driving industrialization in the 1990s. Those countries that have globalized the most by opening up their

countries to foreign trade, investment and non-equity external links have also achieved the fastest industrial and GDP growth. Some of the stagnation experienced by countries and regions that have not yet participated significantly in the globalization process, such as sub-Saharan Africa and some less-developed countries, is explained by their failure - or inability - to integrate more fully with the world economy by increasing and diversifying their exports, and mobilizing investments including portfolio and FDI inflows.

22. Globalization reflects growing crossborder interdependence and cooperation driven by trade and capital flows. Increasingly, TNCs are adopting global and regional strategies and their offshore investment and location decisions are driven by three crucial considerations: cost reductions, efficiency gains and market access. This has meant that the bulk of FDI and non-equity co-operation (NEC) is attracted by those countries that are part of a strong regional cluster (such as the EU, NAFTA or South and South-East Asia), or have large fast-growing domestic markets and/or a resource endowment and policy framework that makes them profitable locations on cost and efficiency grounds (see Chapter 3).

23. Developing countries seeking to build competitive advantage in the face of intensified global competition, the liberalization of world trade and the widening technological and skills gap (between the least-developed economies and the rest of the world in particular) must:

- Upgrade technologically, necessitating heavy investment in both hardware and software, with a particular emphasis on skills development; and/or
- Industrialize by exploiting their low-cost, locational advantages, such as a rich raw material base, cheap energy, or static if not declining real wages (see Chapter 4). Countries with a rich resource base in agriculture and minerals have the opportunity to follow a resource-based industrialization strategy, developing the capacity to process and beneficiate raw materials, thereby adding value and enhancing their bargaining power in world markets.

24. Technological upgrading is the route to dynamic comparative advantage, involving the development of new skills and capacity as undertaken so successfully by the newly industrializing Asian economies. It implies:

- The more effective transfer of technology from industrialized to developing countries; and
- Institution- and capacity-building to create the skills base necessary for technology absorption, diffusion and adaptation.

25. Contrary to many optimistic predictions, industrial automation has not yet lowered entry barriers to, or scale economies in, many industries. In mechanical engineering, for instance, automation has led to greater concentration and oligopoly rather than enhancing the activities of SMEs. However, while the retention of conventional technologies may be more appropriate for developing countries with a weak skills base and large-scale unemployment, such a strategy could well act as a brake on technological

advance. Developing-country competitiveness depends crucially on technological upgrading, with the more advanced developing countries moving upmarket into higher-tech activities (see Chapter 4).

26. For developing countries, the greater scope for crossborder vertical integration is an important, positive aspect of globalization. Globalization helps to promote subcontracting and offshore manufacturing activities. However, for this to happen, developing countries need to open their economies to enterprise-level linkages of different kinds, including links with TNCs and medium-sized firms in the developed market economies. The latter are more likely to prefer a subcontracting or licensing relationship than the TNCs, who usually prefer FDI with majority ownership of foreign affiliates.

### **IMPLICATIONS FOR INDUSTRY OF THE URUGUAY ROUND AGREEMENTS**

27. Developing countries as a whole will benefit from tariff cuts implemented by industrialized countries and, to a lesser extent, by developing nations, while also gaining from the reduction in tariff escalation, which currently discriminates against imports of manufactures into OECD economies. At the same time, most African, Caribbean and Pacific countries are likely to face negative effects, particularly during the short term, resulting from the erosion of existing preferential arrangements, and they will need to carry out major restructuring in potential growth sectors and enterprises, to achieve greater competitiveness and export-oriented growth.

28. The abolition of the Multi-Fibre Arrangement (MFA) as part of the Uruguay Round Agreements will benefit the more efficient developing-country manufacturers of clothing and textiles, although the main impact will not be felt until 2005 because the reforms are backloaded. China and India are likely to be among the main beneficiaries, although on balance more developing countries seem likely to lose than to gain market shares, underlining the need for them to focus on improving their competitive capability.

29. The phase-out of trade-related investment measures (TRIMs) will have a significant impact on developing countries, in that Governments will no longer be able to use such policies to boost domestic value-added and insist that foreign investors give priority to exports. In general, the TRIMs agreement means that performance requirements cannot be imposed on foreign investors. With the prohibition of such provisions, host Governments will have to seek alternative ways of inducing foreign investors to expand local content and value-added, and boost exports. At the same time, however, TRIMs will maintain the pressure on developing countries to liberalize their investment regimes as part of their drive to attract new investment.

30. The trade-related aspects of intellectual property rights (TRIPs) agreement may well have a more severe impact, especially in high-technology sectors, working to the disadvantage of developing countries in two main respects: countries wishing to place and sell products covered by patents will be forced into licensing agreements involving royalty payments to patent owners; while research and development activities may be stifled since the TRIPs agreement is likely to inhibit "reverse engineering" - the process

by which industrial country products are copied and adapted for developing-country usage (see Chapter 5).

31. The reduction of Most-Favoured Nation (MFN) tariffs under the Uruguay Round will divert trade away from African, Caribbean and Pacific (ACP) suppliers to other developing countries, as well as producers in the countries in transition. Preference erosion is expected to be most severe in the EU market, where ACP exporters enjoy their greatest preferential advantages. However, as a proportion of total ACP exports to the world, the ACP preference erosion loss will be tiny, at just 0.6 per cent.

32. ACP exporters will suffer from the phasing out of the MFA agreement, with total industrial export losses assessed at \$317 million or 44 per cent of their overall losses. ACP producers of clothing and textiles are forecast to lose their market share to their highly competitive Asian rivals.

33. The clothing and textile sectors in the countries in transition - most notably the former Soviet Union, Bulgaria, the Czech Republic and Slovakia - will also gain from the MFA phase-out. Industry in the Baltic States, the Czech Republic, Hungary, Poland, Romania and Slovakia, which appear to have a comparative advantage in manufacturing and semi-manufacturing, should also benefit from enhanced access to industrial country markets.

34. Although resurgent enthusiasm for regional economic integration among emerging economies is not justified by its disappointing track record, many countries now believe that they have little option but to seek closer economic ties with their neighbours. As a result, there has been a marked increase in the number of regional integration agreements, with 33 being notified to the General Agreement on Tariffs and Trade (GATT) between 1990 and 1994. Evidence suggests that such arrangements complement rather than compete with multilateral trade liberalization, while also enabling developing countries to strengthen their bargaining power (see Chapter 5).

## **ENVIRONMENTAL POLICIES**

35. The relationship between (domestic and international) environmental policies and industrial competitiveness is a complex one. This issue has become an important concern for the industrializing countries of Latin America and the Caribbean. Firms in developing countries fear that stricter environmental standards in developed countries will result in a loss in market share and export earnings due to higher compliance and production costs.

36. There may be short-term adverse effects on certain sectors or firms in developing countries, but the impacts at the macro level are insignificant. In the medium to long term, the competitive position of efficient firms in export markets will most likely improve due to improved quality and environmental standards. Empirical evidence shows that the effects of stringent environmental norms on the competitiveness of individual firms will vary depending on a number of factors including: the type of industry and its share in export markets; firm size and location of firms; degree of openness of the economy and rate of economic growth; availability of infrastructure

facilities especially for small firms; and availability of timely information on foreign standards and environmental regulations. Competitiveness is more likely to suffer in small firms and companies operating in natural resource-intensive industries.

37. Eco-labelling has the potential in the short run to reduce the export opportunities of developing countries, assuming that it becomes a significant marketing tool in developed countries. Developing countries lack the pertinent information and infrastructure (certification and accreditation bodies) needed to qualify for many eco-labelling schemes. Their firms have limited access to cleaner technologies and may incur relatively high compliance costs in meeting the requirements for eco-labelling schemes, which are becoming even greater with the growing use of process-related criteria for awarding eco-labels. The ISO/DIS 14000 standard has the potential to overcome some of these negative impacts. However, more efforts in the areas of international labels, mutual recognition, certification, equivalency, transparency, participation and technical assistance are needed to ensure that eco-labelling requirements are not perceived to be, or do not become, barriers to trade.

38. Whereas it is difficult to quantify the impacts of international environmental agreements on competitiveness, the Montreal Protocol on Substances that Deplete the Ozone Layer attempts to reimburse incremental costs through financial assistance. The impacts of environment-related NAFTA clauses on competitiveness are still unclear. However, the existence of parallel provisions for technical and financial assistance provides a reasonable cushion for lessening adverse impacts.

39. Policy responses at the sectoral, national and international levels are necessary to mitigate and alleviate fears about the adverse consequences of stricter environmental regulations on the competitive position of industry in developing countries. Response options include: economic instruments and border tax adjustments, harmonization of environmental policies, environmental/industrial policy integration, facilitation of cleaner production technologies, and a host of measures to lessen the competitiveness impacts of eco-labelling requirements.

## **SOCIAL IMPLICATIONS OF INDUSTRIAL DEVELOPMENT**

40. SMEs will play an increasingly important role in terms of output, exports and, especially, employment. Such a growth pattern, with its strong trickle-down and linkage effects with the rest of the economy, will have positive social implications. Industrial districts and clusters, which enable groups of small firms to exploit economies of scale and enhance collective efficiency, will strengthen and diversify the industrial base of developing economies. By dint of subcontracting and other non-equity relationships, SMEs can be expected to expand their export activities significantly (see Chapters 6 and 8).

41. Direct employment creation in industry has slowed as a consequence of economic progress, structural change, industrial restructuring and technological advance. While the restructuring and outsourcing of services previously performed in-house has meant job losses, the indirect job-creation capability of manufacturing has been much understated.

Research shows that the indirect employment effects of investment in industry are large relative to direct effects resulting from inter-industry and cross-sector linkages.

42. In the 1970s and 1980s, foreign direct investment, joint ventures and non-equity links were the main engine of employment growth, along with rapid job creation in the services sector (especially the public sector), and high levels of informal sector absorption of potential employees. Today, this pattern has changed in three main respects:

- Low-cost unskilled and semi-skilled labour is less likely to attract foreign participation than in the past. Instead, FDI and joint ventures are attracted by high-quality, skilled personnel. On the whole, investment in modern, scale-effective plants creates fewer - and higher-quality - jobs than in the 1970s and 1980s.
- Public-sector employment creation has slowed and, in many cases, turned negative as State-owned enterprises are privatized, invariably with substantial retrenchment of labour. At the same time, in the less-developed countries in particular many Governments have been forced to trim their public service workforce in an effort to curb fiscal deficits.
- The advantages of informal sector development are assessed more critically than in the past.

43. Manufacturing contribution to improved social conditions and reduced income inequality depends on a host of considerations, in particular the pattern of industrial development and the policy framework within which it takes place. Social progress is not guaranteed, the evidence cited in Chapter 1 notwithstanding. Trickle-down linkage effects were invariably weak in those countries that followed capital- and/or natural-resource-intensive growth paths. Trickle-down effects and social progress have been far greater where a country's development strategy has targeted agriculture, labour-intensive industry or services.

44. For a number of reasons, industrialization is unlikely to generate direct employment on the same scale as in the 1960s and 1970s. 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 may become increasingly circumscribed (see Chapters 1, 5 and 6).

45. With integrated international production, manufacturers establish individual value-adding activities in different locations, leading to greater labour market interdependence and a new international division of labour. Greater crossborder interdependence between TNC affiliates and enterprise-level non-equity links means that competitive business activities can be located in different countries and, in some instances, outsourced to subcontractors. The resulting relocation and interdependence of jobs highlights the much enhanced role of education and training in attracting new investments and developing technological skills and capability. Labour quality is increasingly influential in location decisions of foreign investors and partners, and countries able to provide the high-level skills required are much more likely to attract



foreign direct investment and participation in high value-adding activities than countries that are still reliant on low-cost, low-productivity personnel.

46. Efforts to devise a socially optimal industrial growth path for developing countries are constrained by the need to ensure increased competitiveness. Industries in the developing world can no longer rely on "lower order" competitive advantage - in the form of natural resources and low-cost labour. 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.

47. In narrowing the policy options available to national Governments, globalization and the liberalization of trade and investments are channelling developing countries towards a different industrialization path from that taken by OECD countries. For the less-developed countries in particular, a dual pattern of integrated industrial growth may be needed, comprising externally oriented industrial development driven by export-dominated activities integrated with a vibrant medium, small-scale and micro-enterprise sector, focusing on subcontracting and other supplier linkages with the external sector while also satisfying domestic demands for goods and services including in less-developed and rural regions. Because small firms are typically more labour-intensive, the SME sector including micro enterprises, can play a vital role in poverty alleviation by generating jobs and income for the most vulnerable communities, as well as providing an essential element in the value-added chain of manufacturing activities.

48. Until relatively recently, reliance on small-scale and micro enterprises was seen as an indicator of underdevelopment, and the fostering of such enterprises was justified on social rather than economic grounds. Micro enterprises, in particular, were to be encouraged so as to achieve job generation, equitable income distribution and poverty alleviation rather than for any major contribution to economic efficiency and competitiveness.

49. The conjuncture of disillusionment, especially in Africa but also in Latin America and Asia, with industrialization driven by capital-intensive and large-scale enterprise, and growing anxiety about the failure of such investments to generate enough jobs to keep pace with labour force growth has contributed to the revival of emphasis on the key role of SMEs. Three vehicles for SME participation in the globalization process have attracted growing attention:

- Subcontracting relations with large firms;
- The development of industrial districts and firm clusters, especially in Italy (see Chapter 6); and
- Township and Village Enterprises (TVEs) in China (see Chapter 8).

50. As far as globalization is concerned, participation in exports has been a striking feature of recent SME development. In Taiwan Province of China, the share of SMEs in total exports is 56 per cent, in China itself more than 50 per cent, and for East Asia

as a whole about 40 per cent - more than double the estimated 20 per cent for SMEs in OECD countries.

51. SME contributions to exports take various forms, ranging from subcontracting to direct exports, sometimes via associated firms or export market intermediaries. Korean data show a marked increase in direct exports, not just of traditional products like woven textiles, but also more technologically advanced items like auto parts and metal-cutting equipment.

52. Research shows that SME support programmes can make a substantial contribution to job creation. In a study of five sub-Saharan economies, it was found that 43 per cent of the increase in employment during the 1980-91 period occurred in small enterprises employing less than 50 people, while in Colombia, India, Indonesia, Kenya, the Philippines, United Republic of Tanzania and Zambia, SMEs employing up to 50 workers absorb more than half the industrial workforce.

53. In this context rural industrialization is an attractive policy option for a number of reasons:

- Small rural firms use labour-intensive techniques and employ relatively unskilled people;
- They maximize utilization of local raw materials as well as unskilled workers;
- They are often a vehicle for developing entrepreneurship and upgrading entrepreneurial skills;
- They provide the basic needs requirements of the rural population; and
- They contribute to improved gender equality by employing a high proportion of women.

## **INDUSTRIAL POLICY**

54. The impact of national economic policies is becoming diluted as economies are liberalized and decontrolled, and nation States become more interdependent. At the same time, economic policy is converging on the middle ground as policy-makers eschew extreme interventionist or free market solutions.

55. The debate on industrialization strategies has shifted decisively over the past decade; the disagreements of the 1970s over inward-looking versus outward-oriented industrial policy have been replaced by a dialogue on the most effective strategies for building competitive advantage at a time of accelerating technological progress, global liberalization and heightened market competition.

56. The difficulties inherent in designing strategies appropriate to a rapidly changing global business environment, especially at a time when the impact of industrial policy may be reduced by the globalization process, cannot be exaggerated. As Governments

liberalize, privatize and deregulate, the range and nature of national strategies and policies tend to become increasingly complex. Policies designed to foster specific sectors or industries will have to be adjusted within the framework of regional economic interdependence.

57. Against this background, the nature and role of industrial policy are changing: the Uruguay Round Agreements limit the use of tariff and non-tariff measures to protect infant industries; TRIMs restricts the use of trade-related measures to influence the pattern of FDI; industry location decisions are influenced more by growing crossborder linkages and the availability or otherwise of skilled labour than by government fiscal incentives.

58. Policy makers have chiefly responded by:

- Shifting industrial policy "upstream" away from interventions designed to protect and promote a specific industry or sector to more general strategies aimed at boosting economy-wide competitiveness indirectly - e.g. increased investment in infrastructure, education and R&D, improved transport facilities, greater support for technology development and technological transfer, along with a broader and more efficient range of industry-related service activities.
- Generally shifting away from inward-focused intervention in support of industries serving the domestic market towards enterprises targeting export markets.
- Putting greater emphasis on regional objectives - policies designed to help backward regions within a country, or backward countries within a region.
- Providing increased emphasis on industrial promotion, competitiveness and development of innovative technological capability at the enterprise level, including the restructuring and privatization of existing enterprises particularly in the countries in transition and in those developing economies with large State-owned enterprises and greater technological and institutional support for SMEs. This is possibly the field providing the greatest potential for industrial intervention in developing countries.

59. The industrial policy debate has focused on the extent and manner in which developing economies as a group can replicate the East Asian model of rapid, sustained, export-driven economic growth. Because there is no single East Asian model to emulate and no firm consensus on precisely which form of intervention will optimize industrial and economic growth in developing countries, industrial policy is best viewed as a menu of options. Furthermore, policies that succeeded under different global market conditions in the 1970s and 1980s may no longer be appropriate.

60. Two clear conclusions stand out:

- The need for some selective, targeted interventions; and

- The importance of outward-oriented strategies, whereby a country's manufacturing sector is driven by the discipline of market competition.
61. The more advanced the developing country, the greater the range of choice. In the least-developed countries with tiny markets, weak infrastructure and a poor skills and technology base, there may be little option but to focus on simple, consumer-based industries, initially at least. Given their small markets, their prospects for attracting major FDI inflows (other than into natural resource industries) are poor. For such countries, the option of shutting-out technology and FDI has no appeal, and they can do little more than seek to foster labour-intensive operations and develop an export-platform strategy, as in Mauritius.
  62. Domestic rivalry is a prerequisite for competitiveness, underlining the role of competition policy in achieving competitive domestic markets. Technological upgrading and human capital investment are crucial to competitiveness in the 1990s and beyond.
  63. Clusters and industrial districts have an important role in the development of globally competitive SMEs. Such is the pace of technological and organizational change that policies must be flexible and dynamic. Measures that succeeded in the 1980s may have already lost their viability.
  64. Incentives are more likely to succeed than sanctions. Efforts to constrain FDI or limit technology imports run the risk of deterring investment. In an increasingly borderless world, potential foreign investors may merely take their operations elsewhere.
  65. Structural adjustment programmes should include a specific strategy for manufacturing. The expectation that manufacturing will blossom in the absence of a coherent strategy has not been borne out by African experience.
  66. In industrialized and transition economies as well as developing economies, industrial restructuring, including privatization, will only succeed if the policy framework is appropriate. In the past, interventionists have focused on picking winners, but in the 1990s and beyond, policy makers are required to anticipate losers - to forecast "sunset" as well as "sunrise" industry situations - and devise policies to mitigate the impact of industrial closures and retrenchments.
  67. One of the most important lessons of the East Asian experience is that intervention worked where it was carried out in close coordination with the private sector within the framework of a market-driven economy. Industrial policy responded to the problems and needs of private enterprise rather than seeking to impose elaborate schemes according to the dictates of grandiose national plans.
  68. Ultimately, competitiveness succeeds or fails at the enterprise rather than the national level. Governments can - and should - create an enabling environment for business and investment, but the choices of what to make and sell, and how and where to do it, must be left to entrepreneurs.

69. Industrial policy must have a social dimension. The economic integration of all segments of the population - disadvantaged groups from different social, ethnic and economic backgrounds - will require greater efforts than in the past.

## OUTLOOK AND CONCLUSIONS

70. In 1975, the General Conference of UNIDO held at Lima set a target for the developing-country share of global MVA; the so-called Lima target was 25 per cent by the year 2000. This target is likely to be surpassed - the developing-country share had reached 20.8 per cent by 1994 - and the latest projections suggest that the developing world's share in global MVA will reach 30.6 per cent by 2005, while its share in global exports of manufactured goods will increase from an estimated 24 per cent in 1995 to 29 per cent at the turn of the century and to more than 35 per cent by 2005 (see Chapter 2).

71. UNIDO's baseline scenario assumes moderate GDP growth of 2.6 per cent a year in the G-5 countries along with continued global economic reform and trade liberalization, as well as low transport costs and moderate real interest rates. Under the baseline scenario, the industrialized countries' share of global MVA will continue to decline over the next decade, reflecting the fact that industrial production in the developing countries will grow by almost 7 per cent a year compared with just over 2 per cent per annum in the developed economies. MVA growth will accelerate in all developing regions over the forecast period, but East and South-East Asia will continue to grow far faster than any other region. As a result, the latter's share in global MVA will rise from 11 per cent in 1995 to more than 19 per cent in a decade's time. The developing countries' share of world MVA is set to grow rapidly from 21.5 per cent in 1995 to 30.6 per cent by the year 2005, although almost all of this growth will emanate from the high-performing Asian economies.

72. The scenario also suggests that the share of MVA in global GDP will rise marginally to 22.5 per cent in 2005 from 22 per cent at present. This reflects a sharp increase in the developing countries, where the share of MVA in GDP is expected to rise to 25.5 per cent from 21.3 per cent at present. Once again the trend is most marked in Asia, but industry's share of GDP is also forecast to improve in all other developing regions except Latin America.

73. The baseline scenario points to a strong growth of manufactured exports by developing countries, whose market share will rise from 24 per cent at present to more than 35 per cent by 2005. Again, the vast bulk of the increase in market share reflects greater market penetration by the East Asian countries, including China. Their share will rise from 17.8 per cent to 29 per cent over the period, at which stage they will account for more than 80 per cent of developing world exports of manufactured goods.

74. The analysis of industrial growth perspectives, during the next decade and beyond, highlights certain important conclusions:

75. First, the pace of industrialization and technological development in developing countries continues to be extremely uneven. Although spectacular industrial and export

growth has taken place in certain East Asian countries and, to a lesser extent, in some Latin American economies, industrial growth has continued to be slow in most other developing economies and has even deteriorated in sub-Saharan Africa. The technology gap between industrialized countries and most developing countries also continues to increase rapidly, particularly with respect to the application and development of new, generic technologies such as informatics, biotechnology and new materials.

76. Second, the impact of global economic developments and trends with respect to technological innovations, globalization, and liberalization of trade and investment following the Uruguay Round Agreements, is likely to be highly significant for developing countries, as also for transition economies. Enterprises from these countries need increasingly to compete in international markets. Industrial subsectors and niche areas with export potential will need to be identified and such enterprises must not only upgrade their technology usage and product quality but develop innovative capability for products, processes and related services in external markets.

77. Third, industrial policy reforms in developing countries and transition economies will need to be increasingly export-oriented and Governments in these countries will need to undertake selective policy interventions to redress market failures and facilitate industrial restructuring. It will also be necessary for Governments to ensure that the social objectives of industrialization are adequately achieved. This will require special emphasis on the promotion of SMEs and also of micro enterprises in less-developed regions, including rural areas, to provide increased employment and income to vulnerable sections of the population, particularly women. A more proactive role for Governments may be particularly necessary in African countries, and in some countries in other regions, where this pursuit of increased competitiveness and sustainability of industrial growth, following the Uruguay Round, will necessitate considerable restructuring of industrial subsectors and enterprises.

78. Finally, the industrial growth perspectives emphasize the necessity for specialized industrial services through international institutional support. The development and upgrading of technological capability, the enhancement of competitive export-oriented production and marketing, the industrial restructuring of potential-growth subsectors and of export-oriented enterprises, the promotion of external linkages and alliances, and the key and changing role of Governments in developing countries undoubtedly require specialized support services of increasing complexity and magnitude. The pattern of industrialization in the increasingly competitive global environment must be based on an integrated industrial strategy covering interrelated functions, services and programmes. It is vital, for this purpose, that well-defined technological and other support functions are provided at the international level to transition economies and developing countries so as to ensure that competitive and sustainable industrial growth can be achieved in these countries during the next decade. It is in this context that the role of UNIDO should be considered.

#### **UNIDO AND THE NEW PATTERN OF GLOBAL INDUSTRY**

79. Increasing globalization and liberalization of trade and investment flows will inevitably add significantly to the complexities of achieving competitive and sustainable

industrial growth in developing countries. Greater interdependence implies increased cooperation and partnership, and the need for increased technical cooperation with developing countries and transition economies to enable them to achieve their industrial objectives. As the process of liberalization and deregulation gather pace, there will be a growing need for international assistance to provide a wide range of specialized industry-related services with respect to policies, institutional support and enterprise-level assistance.

80. Interdependence implies cooperation and partnership, and globalization itself is an exercise in crossborder cooperation and links of various kinds. In the 1990s, and beyond, UNIDO is committed to a larger role with respect to policy advisory services and the reorientation of industrial support institutions to reflect a greater emphasis on the development of private enterprise in a market-driven environment.

81. While private enterprise will be in the driving seat in the twenty-first century, a key role for UNIDO is envisaged as a catalyst, promoter and facilitator of industrial development:

- UNIDO has a crucial role to play in technology transfer and in the technological upgrading of developing countries, especially the less-developed States. UNIDO is ideally placed to facilitate crossborder flows of ideas, information and technologies and more so than private-sector entities. This is one area where market failure is endemic. It is also an area where developing countries are exposed to severe competitive disadvantage, highlighting the need for UNIDO to facilitate technology transfer and assist in technology upgrading and human capital investment.
- All over the world, policy makers attach great importance to the potential of SME development. UNIDO's long record in the field of SME promotion and the many advantages it can draw upon from its global operations underline the contribution it can make in this area.
- Given the growing importance of foreign direct investment in the global economy, UNIDO's experience in investment promotion is an invaluable asset, especially for developing countries seeking to attract foreign investment. The Organization's activities in investment promotion and technology transfer will need to be expanded significantly so that it can develop and strengthen networks to establish linkages between partners in different countries. At present, no international institution provides such a facility.
- Industrial restructuring is taking place in most regions and UNIDO has the capacity to ensure that the lessons learned from privatization or restructuring in one country are available to others engaged in the same process.
- Industrial policy is a complex area. UNIDO's international exposure means that it can draw on the experiences of other member States, thereby facilitating the transfer of "experience" across borders and strengthening demonstration effects.

- UNIDO is also committed to the substantial expansion of programmes to support entrepreneurial development and institution building, especially, but not only, in Africa.

82. Assistance of the kind proposed will strengthen market forces and private enterprise. Fundamentally, UNIDO aims at improving the efficiency of markets through the dissemination of information, diffusion of technology, upgrading of skills, enhancement of competitiveness, twinning of potential partners, facilitation of SME development, rural industrialization, and promotion of investment in industry.

83. UNIDO has launched seven major programmes covering:

- Strategies, policies and institution-building for global economic integration.
- The linkage of industry with agriculture in Africa and the least-developed countries (LDCs).
- Energy use and the environment, capacity-building for environmentally sound industrialization, the establishment of cleaner production centres, the transfer of environmentally friendly technologies, and improving the efficiency of energy use in industry;
- The enhancing of innovation, technology, productivity and quality for international competitiveness.
- Industrial information.
- Policies and networking for small- and medium-sized enterprises.
- Rural industrialization.

84. UNIDO is uniquely positioned to provide a comprehensive programme of services and support for industrial evolution in economies in transition and in developing countries. Given the central role of private enterprise in accelerating industrialization and economic growth, UNIDO is fostering linkages with private-sector organizations and institutions - such as chambers of commerce and industry - with a view to training staff, supplying equipment, providing advice and developing information services, and thereby helping to build capacity. With the emerging complex pattern of global industry in the next decade and thereafter, the demand for UNIDO's specialized services for industry are expected to be greatly enhanced. These will extend not only to policy advisory services but to institutional support services and the development of increased technological and competitive capability for industrial enterprises in these countries to compete in international markets.



## ANNEX

## List of documents

**Aide-mémoire:** Global Forum on Industry - Perspectives for 2000 and Beyond  
Vigyan Bhawan Conference Centre, New Delhi, India, 16-18 October 1995

**Plenary:**

- Perspectives on industrialization: Global industrial partnerships, interdependence and competitiveness (The UNIDO Secretariat in cooperation with Tony Hawkins)  
(ID/WG.542/1(SPEC.))
- Executive Summary  
Perspectives on industrialization: Global industrial partnerships, interdependence and competitiveness (The UNIDO Secretariat in cooperation with Tony Hawkins)  
(ID/WG.542/2(SPEC.))

**Panel I: State of world industry and scenarios for the post-2000 period**

- Issue paper: State of world industry and scenarios for the post-2000 period (The UNIDO Secretariat)  
(ID/WG/542/3(SPEC.))

**Panel II: New technologies, innovations and competitiveness**

- Issue paper: New technologies, innovations and competitiveness (UNIDO Secretariat)  
(ID/WG.542/4(SPEC.))
- Background paper: Technology, manufactured exports and competitiveness (Charles Cooper)  
(ID/WG.542/5(SPEC.))
- Background paper: Foreign direct investment, technology transfer and exports of developing countries: Trends and policy implications (Nagesh Kumar)  
(ID/WG.542/6(SPEC.))\*
- Background paper: The implications of new organizational techniques for developing countries (Raphael Kaplinsky)  
(ID/WG.542/7(SPEC.))\*\*
- Background paper: Information and communication technologies: Growth, competitiveness, and policy for developing nations (Edward Steinmueller and Maria-Ines Bastos)  
(ID/WG.542/8(SPEC.))
- Background paper: Technological change and dual economics (Charles Cooper)  
(ID/WG.542/9(SPEC.))
- Background paper: Does new technology bode well for working women?: An evaluation and analysis (Swasti Mitter)  
(ID/WG.542/10(SPEC.))\*\*\*
- Background paper: The impact of industrial automation on industrial organization: Implications for developing countries' competitiveness (Ludovico Alcorta)  
(ID/WG.542/11(SPEC.))

**Panel III: Globalization and industrial partnerships**

- Issue paper: Globalization and industrial partnerships (UNIDO Secretariat) (ID/WG.542/12(SPEC.))
- Background paper: Globalization of manufacturing activity: Evidence and implications for industrialization in developing countries (Peter Nunnenkamp and Erich Gundlach) (ID/WG.542/13(SPEC.))
- Background paper: Foreign direct investment, technology transfer and exports of developing countries: Trends and policy implications (Nagesh Kumar) (ID/WG.542/6(SPEC.))\*

**Panel IV: Global trade liberalization: Implications for industrial restructuring**

- Issue paper: Global trade liberalization: Implications for industrial restructuring (UNIDO Secretariat) (ID/WG.542/14(SPEC.))
- Background paper: Effects of the Uruguay Round Agreements on industrialization in developing countries (Tracy Murray) (ID/WG.542/15(SPEC.))
- Background paper: The impact of the Uruguay Round Agreements on manufactured products of the African, Caribbean and Pacific Group (Adrian Hewitt, Antonique Koning and Michael Davenport) (ID/WG.542/16(SPEC.))
- Background paper: Sectoral impact of the Uruguay Round Agreements: Export of textiles from Asian developing countries (Indian Council for Research on International Economic Relations) (ID/WG.542/17(SPEC.))
- Background paper: Sectoral impact of the Uruguay Round Agreements on developing countries: Engineering goods (C. Niranjan Rao) (ID/WG.542/18(SPEC.))
- Background paper: Sectoral impact of the Uruguay Round Agreements on developing countries: Leather industry (Nisha Taneja) (ID/WG.542/19(SPEC.))
- Background paper: Sectoral impact of the Uruguay Round Agreements on developing countries: Pharmaceutical industry (Jayashree Watal and Anu P. Mathai) (ID/WG.542/20(SPEC.))

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

- Issue paper: Industrial policy reforms: The changing role of Governments and private sector development (The UNIDO Secretariat) (ID/WG.542.21(SPEC.))
- Background paper: Recent industrial policies in developing countries and economies in transition: Trends and impact (Katherin Marton) (ID/WG.542/22(SPEC.))
- Background paper: Governments and industrialization: The role of policy interventions (Sanjaya Lall) (ID/WG.542/23(SPEC.))
- Background paper: Formulating industrial policy in Africa: 2000 and beyond (Mudziviri Nziramasanga) (ID/WG.542/24(SPEC.))
- Background paper: Industry-related services - Key to competitiveness (The UNIDO Secretariat) (ID/WG.542/25(SPEC.))

**Panel VI: Environmental policies and industrial competitiveness**

- Issue paper: Environmental policies and industrial competitiveness (The UNIDO Secretariat) (ID/WG.542.26(SPEC.))
- Background paper: Environmental policies and industrial development: Are they compatible? (The UNIDO Secretariat) (ID/WG.542/27(SPEC.))

**Panel VII: Employment and social aspects of industrialization**

- Issue paper: Employment and social aspects of industrialization (The UNIDO Secretariat) (ID/WG.542/28(SPEC.))
- Background paper: Industrialization in developing countries: The challenges of employment and social integration (John Humphrey) (ID/WG.542/29(SPEC.))
- Background paper: The implications of new organizational techniques for developing countries (Raphael Kaplinsky) (ID/WG.542/7(SPEC.))\*\*
- Background paper: Does new technology bode well for working women?: An evaluation and analysis (Swasti Mitter) (ID/WG.542/10(SPEC.))\*\*\*

**Panel VIII: Industrial development and international cooperation: The future role of UNIDO:**

- Issue paper: Industrial development and international cooperation: The future role of UNIDO (The UNIDO Secretariat) (ID/WG.542/30(SPEC.))

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\* Issued as background paper for panels II and III.  
 \*\* Issued as background paper for panels II and VII.  
 \*\*\* Issued as background paper for panels II and VII.