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UNIDO Forum on Sustainable Industrial Development
29 November–1 December 1999

INDUSTRY FOR GROWTH INTO THE NEW MILLENNIUM: CONTRIBUTIONS TO POVERTY ERADICATION AND THE PROMOTION OF EQUITY

Learning from past decades to prepare for the future

SUMMARY OF PROCEEDINGS

Summarizes the proceedings of the Forum conducted during four plenary meetings of the eighth session of the General Conference, under the chairmanship of H.E. Mr. S. Umer (Pakistan), President.

Panel 1
The new geography of industry - insights from economic analysis
29 November 1999, 3.15 p.m.

Moderator: *Ghislain Robyn*
Panelists: *Sylvia Delgado*
Yuko Konishita
Stephen Machin

Introduction

1. This panel was intended to elicit insights on current worldwide trends in industry, and in particular to ascertain answers to a number difficult questions of fundamental relevance to UNIDO: Is industry still the key for growth? How does industry spread? How does industry grow?

2. While for many the link between industry and growth is crystal clear - after all, growth had been driven by industrialization for the best part of three centuries - the growth-inducing capability of industrialization was nevertheless being questioned in some developed countries where this link has become more tenuous. This is due mainly to the fact that although industrial productivity in those countries continues to grow, the actual manufacturing is passing progressively to developing countries and the social importance of manufacturing appears to be fading away.

The Role of Industry

3. The panel first addressed the issue of industry's role in growth. On the basis of both historic and more recent evidence culminating in the emergence of the Asian "tiger" economies, it was shown that industry had always been, and remained, a crucial factor in economic growth. While it is true that in some of the more advanced countries there is a trend towards an increasing emergence of service and info-based industries, this is based on a coupling of services and industry, as in the case of Hong Kong and its industrial hinterland in the rest of China. Even where, in the developed countries productivity is rising more rapidly than production and leading to a decline in industrial employment, productivity remains the key to growth and continues to be generated mainly by industry.

4. The reason for industry's dynamism is that it is based on innovation leading to continuous shifts in the boundaries of the set of production possibilities. Three important reasons were identified for the importance of industry in driving economic growth:
   - The domain in which industry operates - manufacturing
   - The technology of industry, which is characterized by increasing returns to scale
   - The input-output linkages of industry

5. With reference to the first of these points, it was argued that industry was so important because it takes manufactures (intermediate goods) and transforms it through manufactures (capital goods) into manufactures (final products). This has the consequence that industry is better than any other process of utilizing research and development.

6. With reference to the next point, it was noted that the technology of industry was an increasing-returns technology. This allows industry to reduce its costs as its scale increases, and gives it an inherent dynamism. This has important implications for R&D, which involves the production of goods at high risk and expense but which then falls into the public domain and can easily be appropriated by others. R&D would therefore not be viable in the absence of increasing returns, which provide a firm with the option of selecting the quantities it produces to maximize profits. Increasing returns therefore were a solution to the problem of incentive-failure in the field of R&D.

7. Turning to the input-output linkages of industry, it was pointed out that this was also linked to the first point in that it involved manufacturing activities all the way down. The major client of industry were industrial firms, which had the increasing returns characteristics just described. This served to boost the performance of enterprises and the economy as a whole, leading to self-sustained growth.

The Location of Industry

8. The panel then moved to discuss the issue of the geographical concentration of industry. It was found that the same factors which gave industry its dynamism also prompted it to agglomerate in geographical concentrations. The dynamics of input-output linkages, for example, prompt firms to locate near other firms, who are their buyers and suppliers, in order to minimize transport costs. Such a geographical concentration also facilitates face-to-face interaction between firms, which is essential in order to transmit knowledge.

9. In this connection the panel summarized the theoretical evolution of the theories of industrial location from the classical trade theory developed by David Ricardo and its extension by Heckscher-Ohlin, to the emergence of the new trade theory based on trade patterns observed in the developed countries after World War II, and more recently to the emergence the New Economic Geography, It was noted that while the various versions of trade theory were based on the concept of comparative advantage, the New Economic

Geography dispensed with this concept and assumed that market size was the prime determinant of industrial location.

10. An attempt to link the insights of trade theory with those of the 'New Economic Geography' and simulate the effects of globalization was presented by the panel. This showed the complex interplay of comparative advantage and market size effects in determining the location of industry and yielded a number of interesting results, highlighting in particular the decisive role of trade costs in this process.

11. While highlighting the existence of a permanent concentration force prompting industries to concentrate in areas where they have historically developed, the panel also pointed to the fact that there were also dispersion forces arising from such sources as a desire on the part of firms to get as close as possible to their clients and the lack of labour mobility. In attempting to anticipate the effects of the decline in transport costs as a result of recent technological developments on the location of industry, the panel noted that the simulations undertaken in the context studies conducted within the framework of the New Economic Geography allowed many scenarios to be developed. The most popular of these suggests that the dispersion effect of wage differentials between developed and developing countries eventually overcomes the concentration effect and prompts firms to relocate to the low-wage area. This, in turn, leads to the beginning of a new local agglomeration, which reinforces the comparative attraction of the host region. This leads to a wavy, cascading spread of industrialization, with serious implications for countries not in the vanguard of this process, who might have to wait very long before they are reached by the spread of industrialization.

12. In explaining the development impact of this mechanism of the spread of industry, the panel noted that the first industries to move away from existing agglomerations would be those oriented towards final consumers or those with few industrial inputs. These firms would little developmental impact on their host countries, which would only begin to increase when the second wave of more input-intensive firms followed the first wave. The stage of self-sustained development in the host economy would not be reached until the third wave of this migration, however, when firms that were both industry-oriented and input-intensive began to arrive.

Support Measures to Promote Industrial Development

13. The panel showed that while industry was a prime source of increasing returns to scale, and was therefore much needed and wanted for growth in developing countries and economies in transition, it needed special efforts to be attracted and promoted. These included measures to help these countries to overcome 'natural' forces of adverse comparative advantage and of industrial agglomeration in core countries, and others to support the build-up of agglomerative forces in the developing countries themselves.

14. Other such measures have to address the key factors underlying industrial growth – especially the aquisition of technology, but also foreign capital inflows and the build-up of the domestic skill base. Citing empirical studies, the panel showed that technology spillover effects of foreign direct investment (FDI) play a particularly important role in stimulating productivity growth in developing countries, and that the enhancement of the domestic skill base permits these countries to absorb these effects more effectively.

Panel 2
Globalization of production systems and implications for developing countries and economies in transition - the upgrading of local competitiveness
30 November 1999, 10 a.m.

Moderator: *Frederic Richard*
Panelists: *Hubert Schmitz*
Didier Lombard
Claudio Frischtak

Introduction

1. The deliberations of this panel followed directly from those of Panel 1, which had explained why industries agglomerate or cluster in specific geographical locations. The driving force of this process was the availability of local competitive advantages, such as skills, knowledge, resources, the size of the local market and the presence of an efficient supplier base. While the analysis presented in Panel 1 had necessarily been theoretical, this Panel was intended to look at the practical questions raised by these issues: What are the strategies of the multinational companies? How do they affect the possibilities of the developing countries to take advantage of the process of globalization?

2. The Panel noted that in developing countries clusters had a tendency to emerge in resource and labour intensive industries. To achieve sustainable growth, developing countries must upgrade the productivity and capabilities of these clusters, and enter into more sophisticated and knowledge-intensive activities. The purpose of this panel was to address these issues and analyze how globalization affects this process of upgrading and innovation. In this context it was noted that on the one hand the globalization of production systems opens great opportunities for developing countries in terms of access to markets, knowledge and resources, and it also contributes to an integration in the value chain of global retailers and manufacturers. However, it was also noted that on the other hand competition is becoming increasingly strong, in particular in the labour and resource intensive segments of value chains, and the requirements in terms of quality and speed of delivery are also becoming greater every day.

The Effect of Globalization of the Organization of Systems of Production

3. In assessing the impact of globalization on the organization of systems of production in developing countries and economies in transition, the Panel began by emphasizing that the question of whether to integrate into the world economy was no longer an issue given the rampant trade liberalization that had already taken place throughout the developing world. The question was how to integrate, and the choice was between the low road, involving increased industrial and export activity without reaping the benefits of this activity, and the high road, involving the achievement of higher returns and sustainable income growth. It was noted that the principal means of achieving the high road was through upgrading, either by shifting to manufacturing products which command a higher price, or by acquiring new functions in the global value chain.

4. The Panel noted that the research and policy-making communities, including UNIDO, have placed an increasing emphasis on local sources of competitiveness, involving economies of clustering, synergies, systemic competitiveness, local innovation systems and collective efficiency. This has led to a common message: Upgrading is facilitated by sectoral and geographical agglomeration. Such clustering makes it

easier for firms to specialize, to reap the externalities generated by other nearby specialized enterprises, to engage in learning by interaction, to cooperate and to grow in small steps.

5. It was noted in this context that such clusters provide not just favourable growth prospects but also favourable export prospects for the following reasons:
   - C Clusters are common in a wide range of countries and sectors;
   - C Clustering has helped small enterprises to overcome growth constraints and compete in distant markets;
   - C The collective efficiency approach helps to explain the ability to grow;
   - C However, collective efficiency only emerges where trust sustains inter-firm relations and where traders connect clusters to sizeable markets;
   - C The cluster research has practical relevance, contributing to a policy approach which hooks into enterprise networks and self-help institutions.

6. The Panel noted, however, that the optimistic view on the upgrading potential of developing countries through SME clustering and networking needed to be tempered because there were limits to these local upgrading strategies. These arose largely out of the increasing degree of concentration among the foreign buyers of the goods produced by local SME clusters in developing countries. This concentration feeds into two types of chains - the producer-driven chains and the buyer-driven chains. Producer-driven chains occur where the lead firms driving the chains are themselves producers - e.g. in the car industry. In the buyer-driven chains the lead firms have nothing to do with production but concentrate on such activities as branding, designing and marketing.

7. The concentration of power in the buyer-driven chains has particularly serious implications because it is leading to an increasing number of developing countries engaging in contract manufacturing for a decreasing number of global buyers. These chains are driven by price rather than quality, which mitigates against the emergence of long-term ties between local SMEs and the foreign lead firms, who will often resist attempts by the SMEs to move into the higher value-added realms of the value chain where they could emerge as competitors of the lead firms.

8. Arguing that the strategic responses of local SMEs to global competitive pressures cannot just rely on private joint action but require public agencies as catalysts or mediators, the Panel offered the following policy recommendations:
   - C The provision of public support in logistics, including such matters as effective infrastructure and speedy customs clearance.
   - C The integration of global buyers in technical assistance projects through partnerships with bilateral and multilateral donors, for which there are no tested role models and where it is therefore necessary to have the courage to experiment.
   - C Facilitating electronic commerce, in order to enable direct sales from local manufacturers and reduce the power of global buyers.

The Role of Foreign Direct Investment (FDI) in Supporting Industrial Development

9. Foreign direct investment plays a particularly important role in producer-driven value chains, and was seen by the Panel as lying at the core of the globalization process. It has risen steadily in the developing countries throughout the 1990s, and by 1997 the list of the most important recipients of FDI included four developing countries. Similar, the contribution of FDI to GDP and gross fixed capital formation in developing countries has also risen steadily in recent years. Although there was a slight downturn in 1998, this is believed to have been of a temporary cyclical nature, and over the longer term FDI is expected to remain an important force.

10. The role of FDI in promoting industrial development is underlined by the fact that while inflows into developed countries are mainly in services, almost two thirds of investment flowing to developing countries is still in the manufacturing sector.

11. The panel argued that the FDI inflows had a wide range of potential benefits for developing countries and economies in transition: They boosted economic growth, strengthened local industry by exposing it to the international companies investing in the country, and facilitated the transfer of technology.

12. At the same time, however, the Panel acknowledged that there had been considerable variations in the flow of FDI to individual countries and regions, underlining the findings on the location of industry that had emerged from the theoretical discussions of Panel 1. It was noted, for example, that the whole of Africa, including the Arab countries of North Africa, attracted far less investment than Singapore in 1997.

13. From an analysis of the historical trends of FDI the panel concluded that its nature has gradually been changing, with three distinct "generations" of investment being identified.
    - The first generation was driven primarily by an attempt on the part of the investors to access the domestic markets of the host countries, to exploit new sources of raw materials, and/or to establish low-cost supply bases. This generation of investment therefore relies on inherited locational factors such as market size, the availability of raw materials, and the low cost of labour.
    - The second generation was focussed on the achievement of production economies through a complex fragmentation and reintegration of production processes through global sourcing, and a decentralization and regionalization of production. This generation of investment depended on domestically created assets, including a more sophisticated infrastructure (with an emphasis on telecommunications and transportation logistics); an educated labor force to face the growing skill content of production; and systems of national innovation.
    - The third generation of FDI is being undertaken by firms aiming to attain a critical size in the relevant industry and in key markets by setting themselves up as system integrators and problem solvers. This kind of investment is aimed at obtaining critical technologies, specializing around core competences and manufacturing higher-value products. Such investments are being directed mainly towards developed regional blocs and to industrializing countries with sizable economies. Only a trickle has so far gone to the less developed countries.

14. Looking at the reach of industry in developing countries, under the increasingly tough world environment, the panel showed that only industries in large economies can have a global reach, while industries in mid-sized economies may have a regional reach and small economies will only be able to maintain a few traditional industries serving national markets. Based on the findings, the panel concluded that:
    - Poor and small economies should aim at the development of a dynamic and vibrant industrial base catering to domestic needs;
    - Mid-sized economies should establish regional production platforms and integrate local suppliers into global production systems;
    - Producers from the larger economies should attempt to project themselves into the global economy.

15. In order to attain these objectives, the panel argued for the need to endogenize the key drivers of industrial development. These were identified as domestic (including non-resident) entrepreneurs in the case of small and poor economies, regional export platforms and supply-chain integration in the case of mid-sized economies, and technology and capital in the case of large economies.

16. Based on these findings, the panel derived a number of both general and specific policy recommendations to promote foreign investment. The general recommendations included good, effective governance and a vision for the future, as well as the "three fundamentals" - education, infrastructure and institutions. The

more specific recommendations varied according to the size of the economy in question, and the specific drivers of industrial development that they were aiming to modernize, and involved the creation of appropriate enabling business environments.

17. More generally, and based on the experience of the most successful countries, the panel identified the following proposals for promoting inflows of FDI:
    - National investment promotion agencies should be realistic in presenting their countries' assets to potential investors.
    - Efforts need to be made to retain the confidence of existing foreign investors, which can help to promote the host country's investment prospects both through the demonstration effect of their own presence and because they may have an economic interest to attract suppliers, clients or partners.
    - Measures should be taken to achieve consistency and reliability of public policies, and special attention should be paid to policies dealing with all matters related to freedom of capital transfers.
    - The provision of efficient infrastructure, especially telecommunications, should be given priority, as it is emerging as an increasingly important prerequisite for attracting investment.

Panel 3
Industrialization facing environmental challenges - specific contributions to solving large problems
30 November 1999, 3 p.m.

Moderator: *Zoltan Csizer*
Panelists: *Jacquie M. McGlade*
Edward C. Yeh
Cahit Gürkök
Edwin P. D. Barnes

Introduction

1. This Panel is intended to complement the general analyses of the first two panels with specific responses to particular problems. It centres around the relationship between the development of industry on a global scale on the one hand, and crucial environmental concerns, ranging from depletion of natural resources to risks to human health, on the other. It looks, in particular, at the "environmental constraints" to industrialization and the role of "cleaner production" in mitigating adverse environmental effects, especially where those effects are seen to be aggravated by spatial agglomeration. In addition, it advocates the adoption of environmental management methods as a response to the environmental impact of the globalization of production systems. Lastly, for the case of energy in industry, it discusses strategies to combine cost reduction and environmental benefits.

2. The panel noted that the rapid growth of industrial output and trade during the past 50 years has been accompanied by a decline in biodiversity, an increase in pollution, and a serious depletion of the world's natural resources. Its response to these issues was based on the premise that the mere promulgation of environmental laws would not necessarily provide the necessary relief since they cannot be effectively enforced in the absence of a strong financial incentive. The panel noted that such an incentive could be given by a new type of industrial paradigm geared towards the prevention of pollution and the utilization of waste as a raw material, and sought to assess both the degree to which it could be made commercially viable and the role the UNIDO could play in this regard.

Opportunities and Problems of Environmental Management and Governance

3. While recognizing the environment represents both a burden and an opportunity for industry, the Panel suggested that the burden could be minimized in a number of ways. It argued against the adoption of an excessively tight regulatory regime, however, on the grounds that this would be unrealistic. On the contrary, the panel proposed that there should be more flexibility and innovation in the way the current regulatory regime is implemented rather than looking always to add new regulations. One should focus on the so-called " Regulatory Ladder" that gives priority to mitigation and prevention at the source as well as hypothecation (the uses of instruments such carbon taxes). We should use campaigns of social awareness, recognising that these make the difference in the long-run.

4. The Panel also put forward the interesting concept that the world seems to be moving towards a situation of governing without governments. This is particularly significant in the environmental field where traditionally government has been seen as the most important actor in protecting the environment. New ways of governing (corporate governance, new public management, self-organising networks, and so on) have also to be explored in the environmental field.

5. In this connection, it was suggested that there were two ways in which organizations such as UNIDO could assist future efforts in the environmental protection field. First, they could act as a connecting mechanism between the world of industry and the world of environmental protection: UNIDO, as one panelist put it, could be the "and" between "industry" and "environment". In the second place, UNIDO and other international organizations could help small businesses in particular to obtain the information they need but cannot obtain on their own. Development, the Panel reminded the audience, is about linking people, resources and energy in order to go in a preferred direction.

6. The panel also presented concrete examples of how the environment could be used as an opportunity for business. One panellist, Mr. Edward Yeh, described a case study of an enzyme manufacturing company in Wuxi, China. Through international co-operation (in this case between America and China brokered by UNIDO) and international transfer of cleaner and environmentally sound technology as well as know-how, the company made significant improvements in a whole series of spheres. Environmentally, it significantly reduced its pollution loads and energy consumption. Economically, it greatly increased its productivity and sales, and was able to start compete in the international market place. It created a significant knock-on effect, by pushing all enzyme manufacturers in China to adopt its new technologies as well as by encouraging major international players to enter the Chinese market.

7. In much the same vein, another panellist, Mr. Edwin Barnes, showed how the government in Ghana is trying to tackle the increasingly serious environmental problem of post-consumer plastic wastes by turning it into an opportunity for industry and not a burden. Mr. Barnes discussed the mechanisms, in particular the Waste Stock Exchange Management System, and the strategies that the government is working on to encourage the growth of an industry for the collection, recycling and reuse of these wastes. He stressed that Ghana sees the government's role here as creating the necessary enabling environment, while it is industry's role to take advantage of that environment to actually recycle these plastic wastes.

Energy Efficiency

8. The Panel highlighted the importance of energy for development by pointing out that "no energy means no industry, no industry means no development". It therefore noted that access to energy is a key to industrial development. The panel showed, however, that the world is marked by a very unequal distribution of energy use, with the developed countries enjoying an overly preponderant advantage, even taking into account their higher levels of development.

9. At the same time, the Panel pointed to the uneven distribution of energy efficiency, with developing countries being overly inefficient. If this fact is linked to the problems of global warming, and to the fact that the developing countries are showing the highest growth rates in industrial development, then it suggests strongly that solutions are urgently required to remove barriers to increased energy efficiency in developing countries, and that technologies that have low carbon dioxide emissions must be encouraged.

10. The panel consequently concluded that energy might be one of the most important sectors to save dollars and cents in the long term while at the same time decreasing harmful emissions.

Panel 4
The UNIDO partnership programme - a new approach to promoting small and medium enterprises
1 December 1999, 9.30 a.m.

Moderator: *Wilfried Lütkenhorst*
Keynote Speakers: *Ajit Kumar*
Mauro Pasquero
Panelists: *Shantanu Bhattacharya*
Jean-Pierre Brouquil
Robert Davies
Yasuo Konishi
Dinesh Munot
M. S. Ogale

Introduction

1. Following on from the discussions of Panels 1 and 2, which highlighted the important need to provide support services to local SMEs in developing countries and economies in transition in order to enable them to maximize the benefit they derive from their integration into global value chains, this Panel was intended to provide a case study of a particular UNIDO programme to provide such support. This programme, referred to as the UNIDO Partnership Programme, translates some of the concepts discussed in earlier panels, and in Panel 2 in particular, into practical application. It also represents the nexus between UNIDO's globally oriented research role and its crystallization in terms of concrete technical cooperation programmes.

2. Unlike the previous panels, this panel referred to only a single topic, the UNIDO Partnership Programme as applied to India, and was structured accordingly. Its principal components were an introductory statement about the origins, purpose and prospects of the programme by the moderator; keynote addresses by representatives of the two principal partners in the programme, the Government of India and FIAT S.p.A.; and statements by the panelists representing the other partners (Magneti Marelli, the Automotive Component Manufacturers Association of India, the Automotive Research Association of India, the European Institute for Management - INSEAD, and the Prince of Wales Business Leaders Forum) were present as panelists explaining their reasons for joining in the partnership and presenting their experiences as members.

The UNIDO Partnership Programme - Salient Features

3. The UNIDO Partnership Programme brings together partners from different domains that used to be regarded as irreconcilably distinct in the past: government, international and domestic industry, civil society, research and development. This Programme thus epitomizes the emergence of non-governmental actors and the ensuing phenomenon of hybrid governance structures (combining domestic and international, public and private entities), which is one of the most debated trends in the theory of international organization and development.

4. The establishment of this Partnership Programme reflects the growing perception of a mutuality of interests. The private sector has been discovered as a partner by the UN system just as many private companies have come to recognize the value of working with the UN. Their roles are different, of course, and so is their contribution. In a somewhat simplified and stylized perspective, it may be said that in international economic development the UN is more geared towards providing the soft infrastructure of analyses, policy advice,

norms and standards as well as important technical cooperation services, while business contributes primarily wealth-generating technologies, innovation, resources, markets, capital and above all productive employment. In this context it is only natural that UNIDO, as the specialized agency of United Nations with the mandate to promote industrial development, is taking the lead in this process through concrete activities on the ground with carefully selected partners.

5. The specific case presented in this Panel is one of the first joint UN/business activities to have yielded tangible results. It is both sector-specific and country-specific: relating to the automotive component industry in India – an industry that represents a producer-driven global supply chain.

6. The panel discussed the challenges facing this sector, and what the Programme had done to upgrade the capabilities of small and medium enterprises within it for them to become competitive suppliers to transnational corporations and thereby to create productive employment and reduce poverty. It demonstrated the tangible impact achieved by this Partnership Programme which was born only a year ago, and showed how deliberate efforts had been made from the outset to collect appropriate impact indicators, at the level of each participating enterprise, as a basis for future evaluations and lessons to be learned.

The UNIDO Partnership Programme - A Preliminary Assessment

7. The UNIDO Partnership Programme is based on three defining characteristics and seeks to meet three preconditions for its effective functioning.
The defining elements are:
- to agree on joint objectives,
- to engage in a collaborative relationship towards achieving these objectives with clearly delineated roles for each Partner, and
- to share responsibility and accountability for the outcome.

The further preconditions for a partnership to succeed are:
- to consider it as an instrument, a modality – often time-bound - and not as an end in itself,
- to ensure that clear-cut benefits are generated by the Partnership which exceed its costs, and
- to share the resulting value-added in a manner perceived as being fair by all partners.

8. The Panel discussion presented an opportunity for the Partners of the Programme to offer their own assessments as to whether it actually met these criteria, since the Panel comprised representatives of all of the Partners. The statements issued by these panelists with regard to their experience of the Programme were overwhelmingly positive, indicating that all of the Partners felt that they had gained from it as well as contributing to it. In addition, the panel was able to show that within the short period of its existence the Programme had already achieved a number of tangible results in terms of improved management practices and performance indicators for the firms covered by the programme, and in terms of their demonstration effect on other firms.

New Approaches to Promoting SMEs

9. While focussing primarily on the Partnership Programme, the Panel also touched on the matter raised in the sub-title of the theme of Panel 4, i.e. " A New Approach to Promoting Small and Medium Enterprises". The Panel noted that an intense debate was in progress within the development community on best practices and lessons learned in promoting SMEs. In particular, it was pointed out that a new sobriety was gaining ground in assessing the widespread failures of the past resulting from attempts to protect SMEs rather than exposing

them to competition and to build up huge and centralized state capacities to support SMEs rather than creating a decentralized network of service providers.

10. In this context, the Panel referred to some of the best practice principles identified by the Donor Committee for Small Enterprise Development (of which UNIDO is an active member):
    - First, to work with groups of SMEs to ensure a joint learning process and experience-sharing for the targeted industry as a whole, as well as greater cost-effectiveness for development agencies;
    - Second, to insist on at least partial cost recovery for services provided;
    - Third,to directly involve the private sector as provider of services; and
    - Fourth, to design a framework for performance and impact measurement.

11. The Panel also stressed that UNIDO shared the view of the Secretary-General of the International Chamber of Commerce that "Creation of small and medium-sized businesses will be the most effective way to spread genuine wealth, as opposed to handouts." Together with its Partners UNIDO is responding to the needs of SMEs in a quickly globalizing market with a Programme that is technically sound, economically viable, institutionally sustainable and – as a model – replicable in different country and sector contexts. A model that helps developing countries to add value to their resources, to diversify and deepen their industrial structure.

Panel 5
Integration, agglomeration and interaction in world industry - drawing some lessons
1 December 1999, 12 noon

Moderator: *Carlos Magariños*

Introduction

1. This Panel was intended to highlight major points of the foregoing discussions, identify additional links between the various issues, and draw the lessons and conclusions from the discussions of the previous Panels to guide UNIDO in its future efforts to promote sustainable industrial development. These conclusions were presented in a final wrap-up speech by HE Mr. Carlos Magariños, Director-General of UNIDO.

Major Issues Addressed and Lessons Learned

2. The exercise of the Forum on Sustainable Industrial Development was ambitious but worthwhile. In the last 25 years there have been many changes in the way the productive systems have adapted themselves to the possibilities and challenges of the process of international economic integration. This rendered it necessary to reintroduce substantive matters about industry and industrial development in UNIDO's discussions with its Member States.

3. Panel 1 was very useful to set the scene to assess the question that is on the mind of many people - academicians, businesspeople, actors in our societies - about the fact that the role or relevance of industry in some countries appears to be fading away, and that it no longer performs its traditional role as the engine of locomotive of growth in these countries.

4. By using two different approaches, the New Economic Geography and the New Growth Theory, and also by drawing lessons from classical theory, Panel 1 was able to clarify the role and potential of industry in the framework of the new international economic system. It was made clear that new forces such as spatial agglomeration were driving the way in which industry is being developed between and within countries, and it was also made clear that the process of agglomeration poses a problem that one may be able to solve if one looks more closely for solutions like the mobilization of information.

5. The deliberations of Panel 1 highlighted the need to mobilize information, knowledge, technology and skills in order to reconnect the population of the world with the process of globalization. Faced with the process of agglomeration, industrial development around the world is proceeding in waves rather than in a smooth flow, even though the share of developing countries in total MVA is increasing.

6. Some countries are entering the process of industrial production, however, and are generating possibilities for their neighbouring countries and their regions. This situation has very much to do with the need to mobilize information to bring developing countries closer to their potential supplier network. While it is not possible to change geography in order to link SMEs in developing countries with supplier networks in Europe or the USA, it is possible to change the way in which they are connected through the flow of information in the process of production.

7. Panel 1 was also very clear in establishing that it is no longer possible to think in terms of industrial policies confined within national boundaries. To be effective nowadays, policy-makers have to be conscious, willing

and brave enough in political terms to acknowledge that new mechanisms to promote industry need to be developed in today's inter-connected world. The mobilisation of information, skills, technology and knowledge requires more modern tools than the ones that were developed before. It will not be possible to proceed simply by using the traditional interventionist systems of the past. New tools need to be developed, including possibly the development of a foresight mechanism. Such a mechanism is, in fact, being launched at a meeting in Trieste in early December, taking the Latin American region as a test case.

8. Panel 1 also provided an empirical answer to the question about what foreign direct investment (FDI) really means for the transfer of technology, and this answer was both encouraging and policy-relevant. It showed that there is a spill-over of technology to domestic firms through FDI, and that domestic skill-formation and upgrading appear to be a sure way of making the best of FDI as a carrier of new technology. Formation of skills in the industrial labour force works indirectly to increase productivity, and this is precisely the way in which living standards can be improved.

9. At the more general level, Panel 1 showed that technological change and a rising demand for skilled labour go hand in hand. This complementarity between technological change and higher skill requirements is an empirical fact. It stems from the overwhelming dominance of the developed countries, and it is the technology-intensive nature of the new technology produced there that lowers the demand for unskilled labour in industrial production throughout the world. The policy consequences of this development are striking both for the developing and the developed countries. First, given that developed countries are the main source of new technology, which happens to be skill-based, there is an added need for developing countries to upgrade skills to improve conditions for technology absorption. Second, the problem faced by the unskilled portion of the labour force in the developed countries must be regarded as mainly home-grown. It occurs because of the nature of technological change, and cannot be blamed on import competition from the developing countries. This needs to be taken into account when conclusions are drawn that affect policy proposals.

10. In summary Panel 1 hinted at least at some major results of evidence-based economic analysis of industrial development, and one can safely say that industry is by nature the best reservoir of increasing returns to scale. It is much needed, and therefore wanted, for growth. However, it needs some special support measures to be attracted and promoted. These must include some that help countries to overcome the forces of adverse comparative advantage and of industrial agglomeration in core countries. This could include the promotion and establishment of "soft infrastructure", an infrastructure that can help countries to cope with the information flows necessary to get involved in the development of international suppliers networks and with some of the measures that support the build-up of agglomerative forces in the developing countries themselves. Other such measures have to address the key factors underlying industrial growth - technology and its transfer, foreign capital flows and the build-up of a domestic skill base - and in doing so to heed the interaction between these factors.

11. It may also be concluded that because agglomeration derives in part from the immobility of information, anything that promotes information not only counteracts agglomeration but also supports the spread of industry . Logically, therefore, UNIDO must work for the dissemination of information or the establishment of a new type of infrastructure that could be called "soft infrastructure".

12. With the ground laid by the theoretical analysis undertaken by Panel 1, it was possible to move on to Panel 2. This was focussed on how globalization affects the process of upgrading and innovation that developing and transition economies need to master in order to achieve sustainable growth. It showed that the globalization of production systems brings both opportunities and dangers - opportunitiess in the form of expanded markets and hence potential access to information, capital and knowledge, and an increased scope for networking. Dangers in the form of a variety of risks and costs arising from market volatility, and from a possible marginalization due to the agglomerative nature of industry discussed in Panel 1.

13. Panel 2 argued that the important issue for developing countries and transition economies was whether to take a low growth path or a high sustainable growth path involving an upgrading of their activities. Clearly, the latter was the preferable option.

14. Panel 2 found that entrepreneurship development was the key to technological and skill upgrading in countries at all stages of development, but in partuicular for those at the earliest stages. As entrepreneurial skills and capabilities develop, proactive FDI promotion policies can be expected to gain in effectiveness with a view to establishing export platforms and supply-chain integration, especially in the case of mid-size, mid-income countries. In this context good governance may not be sufficient to attract investment, but lack of good governance, including transparency, the rule of law and adequate framework conditions will certainly lead to failure in attracting FDI.

15. From a policy perspective it maybe said that the conceptual framework considered by Panel 2 raised many interesting questions complementing the conclusions of Panel 1, in the sense that the framework linked the reach of developing country industrialization to the size of the economy. It suggested that only large economies have a chance for global reach; mid-size, mid-income economies can establish regional production platforms and integrate local suppliers into global production systams; and that poor and small economies should aim at an industrial base catering to domestic needs. Countries of all sizes would have to develop policies to endogenize the key exogenous drivers appropriate to their objectives and framework conditions.

16. The Director-General noted that he would like to stress the importance of the analysis done by Panel 2, and link it to his initial remarks on 29 November. He expressed his belief that the key issue was to see how international organizations and national institutions could help, through the provision of global public goods. to build up a stronger private sector able to develop new entrepreneurs and new enterprises that would help developing economies to cope with the challenges posed by globalization.

17. The deliberations of Panel 2 suggested a number of points relevant for UNIDO's research and technical cooperation agenda, and for adapting its mandate to the challenges currently faced by developing countries and economies in transition. These include the advantages to be gained from a clustering of SMEs at the local level; the opportunities, risks and trade-offs involved in linking with global production and global producer-driven and buyer-driven value chains; and policy options and degrees of policy freedom entailed in pursuing the high road as opposed to a low road of integration with global networks by shifting to higher value-added products and new functions in the global value-chain. Other policy-suggestions included strategies to couple integration into global markets with local and regional development, and the identification of best practices, strategies and approaches to reap synergies between private-sector driven responses to the pressure of global competition, and government-led catalytic and enabling actions.

18. Having concluded his review of Panel 2, the Director-General of UNIDO proposed moving directly to a discussion of Panel 4 because of its obvious links to the conclusions of Panel 2.

19. Panel 4 presented a concrete new approach to technical cooperation. This UNIDO Partnership Programme is a pioneering effort. It is entering into unchartered waters, and testing the validity of a new approach for providing technical cooperation. Its defining element is a multi-dimensional Partnership bringing together actors from government and civil society, from international and domestic industry, and from research institutions.

20. The opportunity the Partnership Programme provides for UNIDO to work with representatives of private sector institutions and civil society organizations is very gratifying and serves to break new ground. It is very difficult to think how UNIDO could continue to offer technical cooperation in the long run if it could not link

the technical cooperation activities from the multilateral system with the actions taken by the private sector, non-profit organizations, civil society organizations and multinational companies all around the world. UNIDO needs to link its efforts with the sustained processes of private sector investments in order to be sure that the things it is teaching, the knowledge it is transferring, and the information it is mobilizing to SMEs in developing countries will be able to stay there. Unless the SMEs in India are able to supply auto parts to a multinational company like FIAT, which is producing cars there, it is not certain that all the information UNIDO is are trying to mobilize there will remain.

21. Turning to Panel 3, the Director-General described it as very useful. It was included in the Forum as a demonstration of the importance UNIDO assigns to environmental issues in its daily work. The Director-General also noted that from his perspective it was extremely important to assess the situation of the environment and its role in the promotion of industrial development.

22. Panel 3 addressed the question whether the environment is a burden or an opportunity. The anser is that it is both, and that one will have to see how to deal with it. Panel 3 suggested the regulatory ladder approach to minimize the burden rather than impose still more regulations. This is extremely valid. The panel also suggested that the world is moving towards a situation of governing without governments, and a hollowing-out of the state. This was a very valid observation and will require further exploration as a basis of effective environmental protection. This could easily be seen in the negotiations that are taking place permanently on the different protocols and the agreements to reduce environmental pollution and to control emissions. Those are treaties negotiated by governments that should be implemented by private enterprise and the enterprises. The implemention of those agreements will need changes in the behaviour of the consumers. It is therefore clear that one is facing a completely new challenge, and that the traditional ways to assess the international agreements and protocols will not be useful because one is trying to address a more complex problem including more dimensions and mores actors.

23. The potential role for UNIDO as a connecting mechanism between the world of industry and the world of environmental protection could include the identification of the business opportunities offered by an environmental clean-up. The case studies showed UNIDO as a broker for international cooperation between the USA and China, and for the international transfer of environmentally cleaner and sound technology and know-how in the area of enzyme manufacturing and membrane filters. One of the distinguished speakers, Mr Edwin Barnes of Ghana, described how his government is creating the economic environment that will encourage industry to collect and recycle consumer-generated plastic wastes. This underpins UNIDO's view that there is a whole environmental industry that needs to be developed in many parts of the world to turn waste and pollution into a resource.

24. Panel 3 also posed a very interesting question. Given that environmental deterioration does not respect political boundaries, what new types of international cooperation or partnerships, should be developed as the environmental scenario becomes more threatening? Or what types of incentives and enabling legislation would promote the kind of international cooperation in which foreign investment would address both environemntal and industrial growth issues.?

25. Another important question refers to the relationship between the value of environmental public goods in developed countries and the private costs of pollution control and reduction. Are they different to the relationships in developing countries having both high pollution levels and high compliance costs? Many of these questions need to be included into UNIDO's research programme. This does not imply any change in UNIDO's priorities; the Organization should strengthen its contacts with research institutions, as was shown during the presentations during the past two days.

26. Looking back at the Forum as a whole, it was shown that the forces of industrial agglomeration tend to increase – at least up to a certain point – inequalities in economic development, both between and within countries. It was also learned that competition is more and more driven by non-price factors such as product quality, delivery speed, design factors, product-related services etc. The integration of developing countries, and in particular their small and medium enterprises, into global production networks and value chains requires continuous skill upgrading on the one hand and the build up of national innovation systems on the other. Supporting SMEs in improving their performance and competitiveness may indeed be the best long-run investment into poverty alleviation, especially if one accepts the assumption that the integration of the developing countries into the world economy is no longer a matter of debate as such. What can be influenced however, are the actual terms under which this integration will continue to take place.

27. These conclusions of the Forum are expected to be well received by the international community to the extent that one can articulate a positive message in the sense that these ideas would help in the continuous need of the developing countries to pursue economic reforms. Referring again to his speech of 29 November, the Director-General of UNIDO emphasized that both the first generation of economic reforms, those related to the need to introduce sound macroeconomic systems, and the second generation of reforms, known by their accent on institutions\al reforms, are extremely necessary for developing countries to cope with the challenges of globalization. He stressed that the time had now come, after 50 years of discussion whether to finance or adjust an economy to let it grow, to think of how one is going to help to connect the population of developing countries and the world at large with the process of globalization. This new challenge will remain for the coming years, and new challenges cannot be confronted with old instruments or old methodologies or old tools. One is not going to solve the problems of the future with the tools of the past.

28. The Director-General noted that this was precisely the purpose of the Forum during the last two days, and had been precisely what UNIDO was doing through its transformation of the past two years. This was not a transformation just to cut the budget or adjust the number of staff; this was a transformation to try to direct the organization's services to produce public goods able to help to reconnect the population of the developing countries with the process of globalization. The process is potentially beneficial, but we need to assess the difficulties and the problems that the developing countries are facing in moving towards it.

29. The Director-General concluded with a proposal regarding the future of the Forum. He suggested that it had been a good exercise in increasing the interaction between the members states and the Organization, and between the member states themselves. He therefore proposed the institutionalization of this sort of debate in UNIDO's policy-making organs, possibly organized on and annual basis; and certainly on a regional basis. This had already been done in three regions did this year - Asia, Sub-Saharan Africe and Arab World. He also conveyed a proposal by President Bédié to include more representatives of the private sector, and suggested that the Forums could address particular issues of interest to one or other regions or for UNIDO's constituency at large. To increase UNIDO's relevance and practical involvement in the economic agenda, however, these Forums would need to address substantive matters.