OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.

DISCLAIMER

FAIR USE POLICY

CONTACT

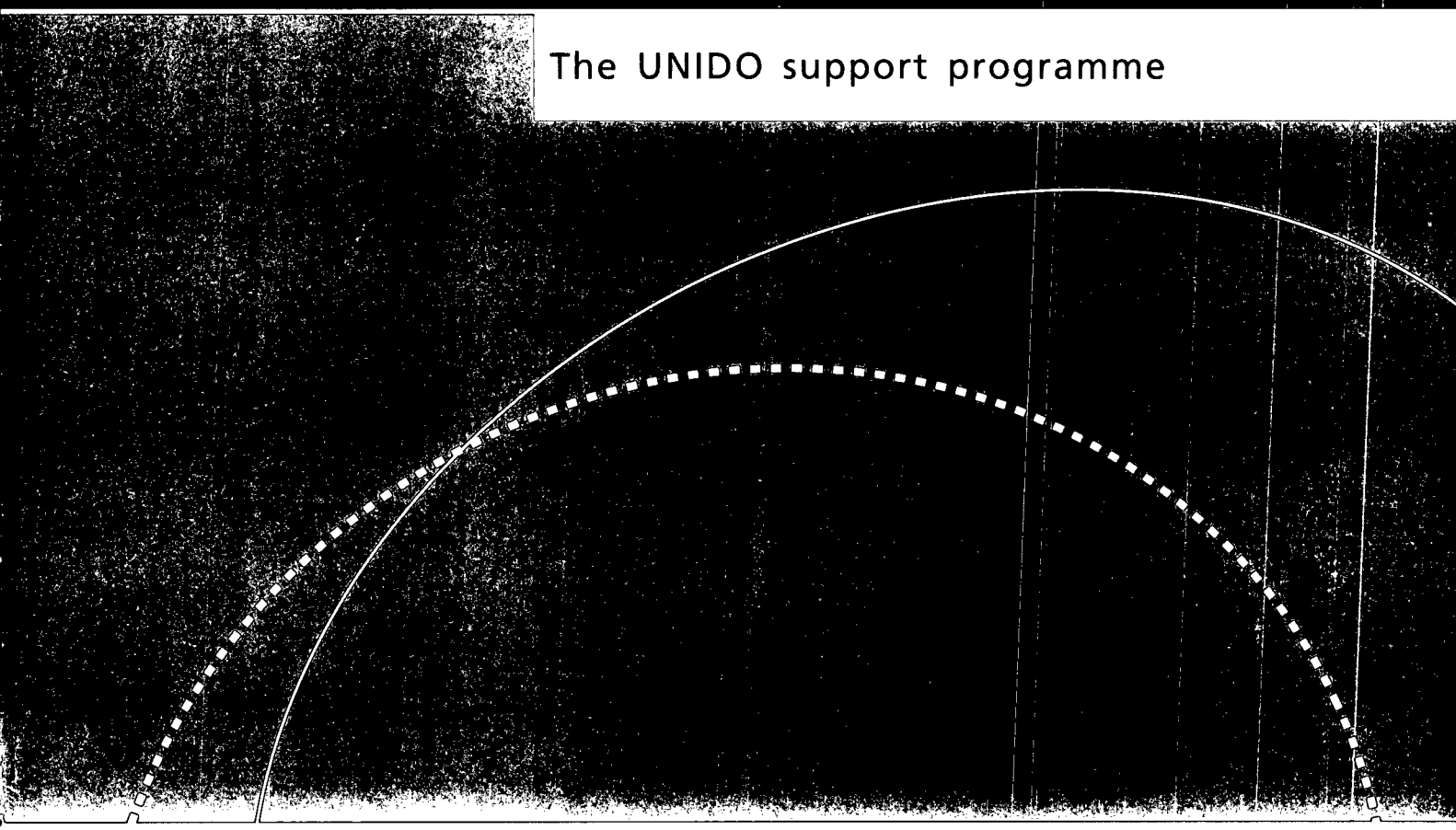
Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

Capacity-building for effective industrial policies and strategies

The UNIDO support programme



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

economy environment employment

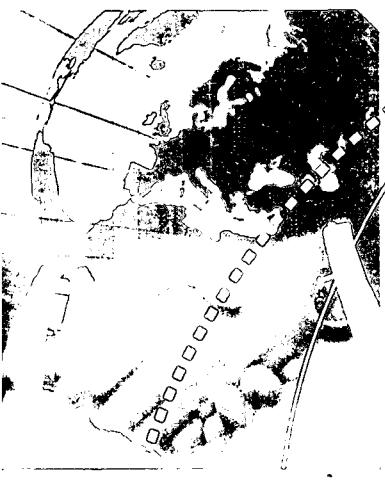
Capacity-building for effective industrial policies and strategies

The UNIDO support programme

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna, 2003

28p. diagrams illus.

CONTENTS



Summary

The aim of this paper is to present—in a concise and reader-friendly form—the range of technical cooperation services offered by UNIDO under the banner of industrial policies and strategies. Industrial policy is the cement which holds together the various actions needed to raise productivity and drive industrial development forward. It creates synergies with other industry-relevant actions and activities and so generates greater returns than ad hoc interventions. It can be argued that the way in which a country manages its industrial policy is the most crucial element of its industrial development. No matter how innovative and effective an action at the subsector or micro level is, without the backing of appropriate industrial policy, that action will not have the optimal impact and, at worst, may fail altogether.

Nonetheless, the content of industrial policy is not uniform and cannot be automatically replicated from country to country. Hence, technical assistance in this area is usually tailor-made according to the individual needs of the country in question. Over the last 50 years, industrial policy has had many faces, from prescriptive master plans in the 1960s, to more indicative guidelines in the 1970s, turning to a more analytical approach in the 1980s and then, in the 1990s, to the emergence of interactive policy-making achieved through consensus of the public and private sectors. UNIDO has kept pace with these developments, adjusting its advisory services on policies and strategies accordingly. Policy makers in developing countries and economies in transition are, for example, facing severe constraints in areas such as knowledge, skills, technology and organization techniques, despite the major advances in the diffusion of information. One way for countries to respond to the challenge is to seek outside assistance from bilateral and multilateral institutions and, in the case of industry, from UNIDO.

UNIDO's range of services in industrial policy and strategies breaks down into four broad categories, with a fifth type of service operating essentially at the in-house level. First comes policy-related economic analysis covering activities such as competitiveness analyses, the setting up of knowledge banks and design of best practices and benchmarking systems, all vital elements in the struggle to boost productivity. The dynamic nature of industrialization necessitates sustained and continuous actions at policy level. UNIDO will help with setting up computer-based systems in order, for example, to track domestic manufacturing performance and to measure it against a group of peer and competitor nations. Assistance is also given in establishing industrial policy knowledge units which will constantly review, monitor and update relevant information, making it available to all the actors in the industrial sector.

The second category of services covers formulation of policies and strategies which may be requested at the industry-wide—or holistic—level or specifically for the SME sector. Policy formulation can range from a very comprehensive exercise, perhaps drawing up a 20 year "vision" of how industry should evolve through medium-term industrial strategies designed to help the insertion of national industry into the global economy over a number of years to short-term help, perhaps in the form of a paper on one specific phenomenon

such as the impact on industry of joining a regional trade arrangement. In the case of the SME sector, a coherent SME policy framework constitutes an integral component of overall policy. It is also often important to ensure that a clear responsibility for SME policy is designated within government structures as well as ensuring the participation of SME representative organizations.

The third category of services covers policy implementation. Traditionally—and understandably—governments have preferred to carry out implementation themselves even if they have first called on outside assistance in design and formulation. But even the best thought-out policy can prove painstakingly difficult to put into practice and some countries are now seeking advice and assistance at the implementation stage. Public-private partnerships are also becoming a sine qua non of successful policy-making and implementation and UNIDO has been active in helping to set up such mechanisms, not only at national but also at local level. However, the success of a public-private partnership is dependent, to a large extent, on the strength of the institutions which service that mechanism, both public and private. Consequently, institutional capacity-building is another important feature of these technical cooperation services.

The task of policy makers does not stop at implementation; hence, UNIDO's fourth category of services—policy monitoring and assessment. The dynamic nature of industrial competitiveness makes it more essential than ever for stakeholders to monitor continuously the progress of strategies and policies and to measure their performance against that of regional neighbours, other developing countries and industrialized nations. This is an exercise in "learning by monitoring" in order to fine tune and improve strategies. Although many countries prefer to keep monitoring essentially as a task for national execution, UNIDO can help in designing mechanisms for that policy monitoring as well as in carrying out policy impact assessments before, after or during the implementation phase. If used early enough, an impact assessment can help policy makers to think through the consequences of policy proposals. It can improve the quality of policy advice to government and can encourage more informed public debate on policy issues. Perhaps most importantly, an impact assessment can summarize the lessons learned from design and implementation and its findings can be made good use of in future policy formulation and implementation.

Finally, UNIDO's industrial policy and strategy work plays a unique role inside the Organization. It is the only technical service to analyse and work at the level of industry as a whole and thus occupies a special niche in helping to lay solid foundations for the development of Integrated Programmes and Country Service Frameworks. This paper draws on UNIDO's extensive experience in industrial policy and strategies to present a number of case studies of technical cooperation within each category and throughout all regions of the developing world and economies in transition.

Introduction

UNIDO has been active in the field of industrial policies and strategies—in their many shapes and sizes—throughout the Organization's long existence. During that time it has served governments whose policy-making was based on master plans, with little attention paid to the needs and wishes of the private sector, through to the first tentative steps towards collaboration with the private sector in policy formulation, and into an era in which public-private partnerships are considered a sine qua non in policy design and implementation.

Following a period of quasi neglect at the end of the last century, industrial policy practitioners are much heartened, in the 21st century, to see a growing recognition of the importance of industrial policies and strategies in laying the foundations for and ensuring the continuity of sustainable development. Industrial policy, whether in the form of a long-term vision, a medium-term blue-print, or a short-term strategy is the cement which holds together the various actions needed to raise productivity levels and to drive industrial development forward. A well-thought out and balanced industrial policy creates synergies with other industry-relevant actions and activities and so generates greater social and economic returns than a series of ad hoc individual actions—on the part of either the public or private sector, or jointly.

This paper seeks to present a definition of industrial policy, a rationale for the design and use of industrial policies by developing countries and economies in transition and, having provided a rationale for UNIDO's involvement, outlines the various types of technical assistance provided by the Organization in this sphere.

What is industrial policy?

Whilst industrial policy is essentially a generic term, the varying—and sometimes opposing—interpretations of such policy have frequently engendered heated debate. For industrial policy is, in essence, merely a subset of a government's overall economic policy which, in turn, depends on the political complexion of the government in power. Thus industrial policy is merely the instrument through which government seeks to attain specific objectives for national industry, the economy and the nation as a whole. And often industrial policy will go beyond the realm of economics, embracing social and environmental objectives as well.

It might be assumed that the globalization of the world economy has simplified and reduced the role of the industrial policy maker. The reality, however, is otherwise. This is particularly so in the case of developing nations, who must struggle constantly to adapt and update their existing policies and devise new ones to keep pace with the dynamics of global economic, environmental and social trends. Although nations now find themselves furnished with "ready-made" global policies, such as the World Trade Organization's trade rules and environmental agreements such as the Montreal Protocol, this does not mean that the task of policy makers has become easier. In practice, one set of policy tools available to nation states prior to globalization—such as tariff walls, subsidies to infant—and even mature—industries and the granting of monopolies—has merely given way to another set of policy tools, such as instruments for technology transfer, the attraction of

foreign investment and for skills upgrading. These new policies are often far more complex than the former ones and they grow ever more so in the face of dynamic changes in the world economy.

Against this background, industrial policy in the 21st century is called upon to span a wide range of issues including enhanced productivity, industrial efficiency and competitiveness, industrial regeneration and expansion and the creation of employment opportunities. It may encompass competition policy, regional development, measures for technology acquisition and transfer, investment and export promotion, innovation, human resource development, investment and trade policies and schemes for small business including financial assistance. Industrial policy is vital for it is the steering wheel of the industrial engine. The driver—whether the public, the public/private, or (occasionally) the private sector—is free to choose the direction in which the wheel should turn but may choose to seek advice on driving techniques. This is where UNIDO and its policy advisory services come into the picture.

Before reviewing UNIDO's policy-related services, it may be useful to review the recent trajectory of industrial policy.

The industrial policy debate

The years following Independence in many developing countries were marked by a generally interventionist attitude on the part of government. In the case of industry, many countries drew up industrial master plans. These were typically based on a series of sectoral studies, which provided a highly technical map of the manufacturing industry and its development prospects. The road to industrialization was often seen as based on import substitution, protectionism and high tariff walls nurturing an (often state-owned) industry which would cater primarily to domestic markets. The issues of competitiveness, foreign investment and private sector development in general were hardly touched upon.

Towards the end of the 1980s, these authoritarian master plans took on a more indicative tone and began to serve more of an analytical than prescriptive purpose. This was the era of external debt crises and the introduction of Structural Adjustment Programmes. As government spending was curbed either voluntarily or involuntarily, so government scope for wide-scale intervention, both as a producer of industrial goods and an investor in the industrial sector, was also reined in. Hence, the space was created for the private sector to come to the fore in industrial activity.

In the second half of the 1990s, a further shift saw the private sector not only invited to take part in the implementation of industrial policy but to participate actively in its formulation. Moreover, policy, including the strategies with which to achieve policy objectives, was no longer seen as a one-off action. Mechanisms for consultation and consensus building between the public and private sectors were established, with government and industry agreeing on common objectives and joint strategies. The concept of actively monitoring and managing policy implementation also gained recognition.

The next step was to refine the tools and methodologies used to guide policy makers in their assessment of private sector needs and expectations and to support interactive policy formulation intended to create a better business environment for private entrepreneurs. Indeed, from authoritarian, then indicative, and later interactive, industrial policy making today has become responsive to market signals.

In a wider global context, the start of the 21st century has seen a near-universal acceptance of the market economy in which price determines the allocation of resources and output and in which most of the means of production are privately owned. The removal of internal and external distortions and, in particular, of trade barriers and tariffs has greatly accelerated the phenomenon of globalization and, thus, the exposure of developing and transition economies to more rapidly and freely moving flows of goods, services and capital.

In the industrial sector, the old concept of static comparative advantage determined largely by endowments of natural resources has diminished in importance as technology and intangible assets, such as human capital—and knowledge in particular—innovation, organization and intellectual property grow in importance in their contribution to manufacturing value and enhanced productivity. At the same time, pressures have increased from civil society to consider the qualitative aspects of economic growth, such as the environment and labour conditions.

The constraints facing policy makers in developing and transition economies

The less developed an economy, the more likely a country is to suffer from misallocation of resources. Market forces alone are unlikely to correct these failures automatically and appropriate policies can help to improve the allocation of scarce resources although governments face several constraints in designing and implementing policies to overcome this problem. Industrial policy makers are confronted with constraints on three broad levels:

- **Knowledge**
  Policy design and implementation calls for a large amount of data and the constant monitoring of internal and external variables and trends. The policy maker in a developing country typically has to operate on the basis of incomplete and/or inaccurate data and of imperfect information.

- **Skills**
  Globalization has greatly expanded the range of skills needed by industrial policy makers and has made the mastery of advanced analytical skills increasingly important. Many developing countries have been unable to keep pace with such advances and, thus, are falling increasingly behind.

- **Organization**
  Market-based economies are driven essentially by the price mechanism and economic growth stems from a large number of independent initiatives (unlike the former centrally planned economies). This means that the design and implementation of effective policies involves a much wider range of organizational capacities than was formerly the case. For example, privatization programmes call for new modes of organization with a clear separation between the running of the privatized enterprises and the regulatory environment in which they operate—hence the need for a broader range of organizational skills.

One way in which governments can overcome these constraints is to call on technical assistance from bilateral and multilateral institutions and, in the case of industry, on UNIDO.

The rationale for UNIDO's involvement

The rationale for UNIDO's provision of technical cooperation in the field of industrial policy and strategy has been presented in detail elsewhere.[1] The basic argument is four-fold and runs as follows:

- Industry generates employment and income and so contributes to poverty alleviation and higher living standards in developing countries and transition economies. It also has spillover effects, such as the creation of demand for industry-related services from other sectors of the economy, and it contributes to economic output and social development in general through the creation of higher labour productivity and a skilled human capital base.
- Whilst manufacturing activity in a market economy is driven essentially by the private sector, it does not necessarily follow that government has no role to play in industry-related policies and strategies. Developing countries and transition economies are likely to suffer from wide-ranging market and institutional failures, thus justifying comprehensive policy support.[2] When the market fails to generate an appropriate response to the needs of the industrial sector—for example, the private sector is unlikely to create sufficient training institutes to cater for specific skills needed by industry—then government must try to fill this vacuum by designing and providing appropriate response mechanisms, sometimes in the form of public goods. Even where there are no market failures, it may be appropriate for government to devise interventions—in the form of policies and strategies—designed to further broader social objectives, such as poverty reduction, improved income distribution and respect of the environment. Nonetheless, it is essential that these government-led interventions are complementary—and not contradictory—to the overall economic framework.
- The fight against poverty can only succeed if productivity differentials between countries are narrowed through the mobilization of skills, knowledge, technology and information. This is a pre-condition of equitable development but calls for capacity in formulating and implementing effective interventions to stimulate productivity growth and to ensure that productivity trends are constantly monitored.
- Thus, developing countries need help in building new capacities at national level, including capacities in the good design and management of industrial policy. In this respect, UNIDO has a competitive advantage, not only through its long accumulation of knowledge and experience of industrial policy throughout the world but also because it is an impartial body offering entirely neutral advice. Moreover, the systematic collection, analysis and diffusion of policy experience has the attributes of an international public good. Consequently, the private sector will not respond effectively to demand for this type of information and services and it is only public, non-profit making institutions such as UNIDO who will be prepared to act as suppliers.

It can be argued that the way in which a country manages its industrial policy is the most crucial element in its industrial development. No matter how innovative and effective an action at the sub-sectoral level or micro level, without the backing of appropriate industrial policy, that action will

[1] *Industry in Development—Why it matters—Wherefore it suffers—What it needs.* UNIDO, September 1999.
[2] *Industrial Development Report 2002/2003, Competing through innovation and learning*, UNIDO, July 2002.

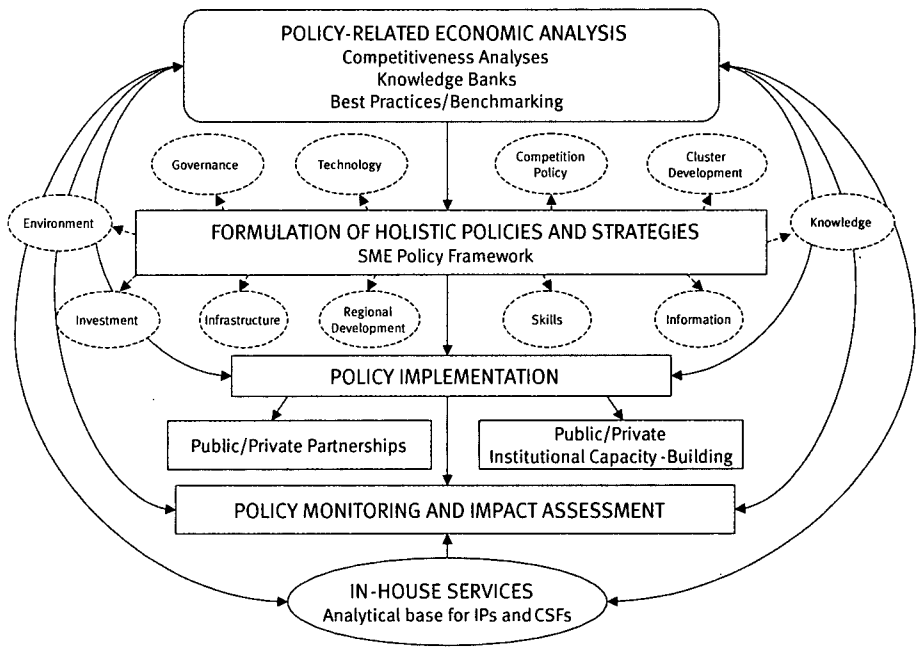
not have the optimal impact and, at worst, may fail altogether. Thus the provision of industrial policy-related services by UNIDO ensures that other technical cooperation (TC) activities generate greater returns, in social and economic terms, for the client country, as well as greater returns in financial and social terms for the donors.

Internally, a similar argument applies. As most of UNIDO's TC programmes are implemented in the framework of its eight service modules, industrial policy services have a crucial role to play in providing the overall cohesion of the programme and its complementarity with national economic policy, particularly at the design stage. Without the cement of an industrial policy component, a TC programme may, in the extreme, end up advocating contradictory and incompatible types of intervention at the subsectoral and micro levels. It may also miss out on the synergy and economies of scale to be gained through a holistic approach in which industrial policy services play a catalysing and coordinating role.

UNIDO'S RANGE OF INDUSTRIAL POLICY-RELATED SERVICES

These services break down into broad categories of policy-related economic analysis, direct policy advice, capacity-building at the institutional level (public and private sectors), facilitating the establishment of public-private partnerships, and an "in-house" service of orienting programme activities to ensure better integration and, thus, greater impact. A distinctive feature of this type of assistance is that it is nearly always "tailor-made". Moreover, policy projects rarely involve extensive provision of equipment, with the main inputs being in the form of human know-how. This work

Support Services for Industrial Policy and Strategies



is consequently highly labour-intensive. Many projects are modest in terms of cost, involving perhaps assistance in preparing a short paper on industrial policy. Other projects are far more ambitious and enduring, involving working closely with ministries and the private sector over a number of years as a fully comprehensive medium to long-term industrial strategy is worked out and put into operation. Whether short or long-term, low cost or more expensive, it should be noted that it is frequently policy-related work which brings to light the need for downstream and perhaps subsector specific TC such as the promotion of clusters and networks of businesses, investment promotion, or agro-industrial technology upgrading.

1. Policy-related economic analysis

An essential prerequisite of industrial policymaking is a solid foundation of accurate and up-to-date economic data and analyses with which to orient formulation, implementation and monitoring. In many developing countries, this is a particularly challenging task.

The level at which UNIDO starts work on economic analysis will depend on various factors and, above all, the existence and quality of industry-related studies, analyses, statistics and data banks. Reliable statistics are essential but emphasis in the last decade or more on macro-economic adjustment and stabilization means that efforts in data collection and storage have tended to focus on macro-economic data to the detriment of the industrial sector. In transition economies, earlier runs of figures based on a market economy simply do not exist. Consequently, it may be advisable to start by building a general equilibrium model which can be used to demonstrate the impact of market-related variables on a projected trajectory for industry. Provided the basic macro-economic data exist, an overall review of industrial structure and performance will be the starting point, followed by individual sectoral analyses.

Once a reliable picture of industry and its subsectors has been established, most governments are anxious to evaluate existing and potential competitiveness. The competitive position of industry, and of subsectors in particular, may be measured in a number of different ways, ranging from methodologies stemming from traditional neo-classical economics to methodologies evolved far more recently and embracing a business school approach.

One traditional—and popular—method of competitiveness analysis is to measure a country's Revealed Comparative Advantage (RCA) in the export of a specific product over time. If the country's share of trade in that product has increased at a more rapid pace than that of other producers, then the country is assumed to have a comparative advantage in the product in question. However, RCA is essentially a static measurement and does not, for example, identify emerging trends in factor productivity, a phenomenon increasingly recognized as the crucial element of industrial development. Moreover, RCA tells us little about a product's competitive position in the domestic market as a country opens up its borders to imports of that same product. This is a phenomenon of growing concern to developing countries as they sign up to the World Trade Organization and to large regional trading blocs. Nor will RCA be the most appropriate competitiveness measure in the case of a small economy seeking to carve out a niche market in a particular product.

Indeed, the concept of comparative advantage in the 21st century is far removed from its original image determined mainly by endowments of

natural and human resources. The distinction is further blurred by the phenomenon of global value chains in which inputs are imported and re-exported many times over before the final product is exported or consumed directly in its end market. Today, competitive advantages have as much prominence as inherited comparative advantages. Competitive advantages are generated through the interaction of human resources, capital, skills and knowledge since these are the factors which facilitate the steady accumulation of technological capabilities and the ability to reproduce, improve or create sophisticated manufacturing processes. Strengthening and developing these capabilities is a lengthy process in which government most certainly has a critical role—and thus a need for well defined policies and strategies.

One ex ante variant for measuring competitiveness builds on a detailed survey of factor costs in the client country and in relevant competitor countries. This will involve looking at measures of productivity, defined as MVA per worker, unit labour costs, total factor productivity and making inter-country comparisons of their evolution over time. Major differences identified in relative factor costs then point to comparative and competitive advantages. However, this is only one facet of a reliable measurement since many other factors, including socio-economic variables, will come into play, and the translation of factor cost profiles into comparative advantages for a given country is a highly complex exercise.

Measuring and comparing inward investment flows, which are market-determined and therefore up-to-date measures of a country's attractiveness, is similarly a helpful—but not exclusive—indicator of competitiveness. Moreover, the mere existence of investment in the industrial sector does not guarantee industrial success, as demonstrated by the large number of "white elephant" industrial projects now lying abandoned and forgotten throughout the developing world. An assessment of a country's ranking in the acquisition and use of technology is another vital aspect of competitiveness. Consequently, an analysis should include data on the technology intensity of industrial goods (from resource-based to knowledge-based), the technology content of imports, the significance of FDI in technology acquisition and an indicator of technology development systems and other mechanisms designed to upgrade factors and enhance factor markets. Industrial governance is another intangible factor which undoubtedly influences competitiveness. Universal recognition of this is such that governance indices, like those of the World Bank and Transparency International, are now regularly included in competitiveness assessments, particularly at country level. Consequently, a competitiveness analysis should take into account the level of a country's industrial organization, as demonstrated by the business environment, regulatory framework, industry associations and mechanisms for public-private consultations and partnerships.

Thus, when asked for assistance in the complex task of competitiveness analysis, UNIDO will first work with the client to review a wide number of approaches and to determine the most appropriate methodology and scope of such an exercise. Moreover, whilst a thorough analysis of the competitive position is an advisable first step in the formulation of policies and strategies, competitiveness is a fast moving, dynamic phenomenon. A "one-off" analysis will achieve very little unless its findings are constantly reviewed and updated, serving as input to the formulation of new policies and strategies and also as the substantive justification for regular policy fine-tuning and adjustment.

If national industrialization efforts are to succeed and a country is to maintain its competitive edge, then both government and the private sector need access to the statistical and analytical tools with which to inform major policy and strategy decisions. Appropriate tools include computer-based systems for tracking manufacturing performances and the establishment of industrial policy knowledge units and benchmarking

systems. Recognizing this new and complex competitiveness paradigm, UNIDO has recently developed a set of Competitive Industrial Performance (CIP) indicators, based on dynamic variables and incorporating features such as share of medium and high-tech exports in manufactured exports and the correlation between industrial performance measures and carbon dioxide emissions. Originally developed as part of the Organization's research programme, the CIP index is now being introduced as a component of policy-related economic analysis TC services.

Working closely with UNIDO's statistical services, a user-friendly computer-based system can be set up to track domestic manufacturing performance and that of a group of peer and competitor nations and can use the new CIP index as its base. This system will bring together relevant trade statistics, manufacturing and investment statistics and design relevant breakdowns of the figures, including productivity measurements. It will input data on domestic prices and factor costs and include a methodology for regular updating. Once operational, data generated by the system can be used as the basis for regular—probably quarterly—abstracts of manufacturing performance to be widely distributed to the manufacturing sector and also abroad through, for example, the country's overseas investment offices or commercial missions.

Keeping ahead of the competitiveness game involves, however, more than just specific data bases. Knowledge is now recognized as an essential tool for achieving competitiveness and the challenge is all the greater in developing countries despite the huge advances made through access to the Internet. In this context, the relevant government ministry and/or professional association will find it most helpful to establish an Industrial Policy Knowledge Unit, which will have responsibility for identifying economic and industrial information sources, organizing and disseminating information, and presenting and distributing those findings both internally and externally. UNIDO's long and worldwide experience has enabled it to build up an extensive knowledge bank of industrial policies and strategies, as well as a unique network of contacts and consultants with expertise in this field. This experience can be drawn on to help a dedicated industrial policy knowledge unit to, for example, establish an information bank on best practices in competitor and more industrially advanced countries and also to design systems for benchmarking relevant competitor practices such as the use of technology in manufacturing processes.

2. Formulation of policies and strategies

(a) Holistic policies and strategies

The opening up of the global economy over the past two decades has made it increasingly difficult—and impractical—for a country to seek to "go it alone" in its style of economic management and in terms of macro-economic policy in particular. On the one hand, this has led to a levelling of the playing field yet, on the other, it means that effective policy design can no longer be carried out in isolation but calls for wide-ranging knowledge of policy experience throughout the world and equally broad skills in policy formulation. Moreover, the ever more complex nature of economic development has expanded the range of topics which come into play when formulating industrial policy. The growing awareness of the importance of productivity gains and technology acquisition and transfer, for example, means that industrial policy must include specific strategies for achieving these objectives. Similarly, investment flows are an influencing factor, as are environmental considerations. The wide spectrum of

expertise and knowledge implicit in industrial development is one of the reasons why governments, and occasionally private sector institutions, turn to UNIDO for assistance in policy formulation.

Requests may be for comprehensive and substantial (usually long-term) assistance in formulating overall policy or may be short-term assignments concerned with one specific aspect of industrial policy. The techniques used may be equally diverse—ranging from econometric modelling to sending a world-renowned expert on a short field assignment. Much will depend on the client government's macro-economic orientation. In the mid-1990s, for example, Viet Nam decided to steer its economy towards more market-oriented forces whilst maintaining a firm emphasis on social development and poverty alleviation. It turned to UNIDO for help in drawing up a medium-term industrial strategy which would ensure a gradual insertion of its industry into the global economy over a number of years. Other countries may already have a long-term industrial vision and turn to UNIDO for short-term help in designing strategies to address one particular phenomenon, such as helping industry to cope with the impact of membership of regional or world trade arrangements.

VIET NAM: Smoothing the path of economic transformation

Policy-related work in Viet Nam started in the second half of the 1990s with a large-scale umbrella project known as the "Medium-Term Industry Strategy". A wide range of donors, including Sweden, Japan, UNDP, Republic of Korea, the Netherlands and UNIDO contributed funds for the project. The counterpart was the Development Strategy Institute (DSI), a think tank of the Ministry of Planning and Investment. The main aim of this three-year project was to build capabilities to conceptualize, formulate and implement effective strategies for public support to the industrial sector in the context of a "socially-oriented market economy" emerging from 20 years of political isolation. A team of international experts (industrial and trade economists, subsectoral specialists, and econometricians), worked directly with a national team, comprising mainly DSI staff. The first step was to prepare an economic overview to outline the premises on which the strategy would be based. One aspect of this work was the building of an econometric model which highlighted the functioning of a market economy, the interaction between markets, the leverage offered by policy instruments such as tariffs and corporate taxation, and the inevitable trade-offs between policy objectives. In a second phase, the project moved on to an industrial competitiveness review by way of analyses of manufacturing performance in the electronics, food processing, mechanical engineering, textiles and automotive subsectors. On the basis of this work, a Medium-Term Industry Strategy Report was then drafted and discussed extensively with a wide range of national and international experts, as well as being reviewed at a two-day seminar hosted by the DSI. In recognition of the work done, UNIDO was subsequently invited—as the only external agency—to contribute to the formulation of the "Socio-Economic Development Strategy to the Year 2010", a key policy document which was discussed during the Ninth Party Congress in 2001 (the Congress gathers every five years to map out the broad policy guidelines of the country). Technical assistance for this was mainly executed at national level and funded by UNDP. UNIDO supported the preparation of the document in two ways: *(a)* by providing the services of a science and technology policy expert in Hanoi and *(b)* through a desk study produced by UNIDO staff drawing on their respective field experiences worldwide in areas of direct relevance to the Vietnamese policy makers.

The very different approaches to policy formulation taken by mainstream economists and business strategists further complicate the exercise. Methodologies for policy design—once the exclusive realm of government officials—have now been extended to accommodate the views of the private sector, and hence those of entrepreneurs. The challenge is often to find a compromise between two fundamentally different concepts—one based on traditional economic theory versus one that is more consistent with business management techniques.

NICARAGUA: Helping to project the voice of the private sector

In the 1990s, Nicaragua's industry was emerging from a very difficult period under the Sandinista regime, during which a large proportion of private enterprises were expropriated and industrial output contracted from around 15 per cent of Central America's regional output to barely 5 per cent. In addition, Hurricane Mitch hit the country in 1998 and the Government was faced with a humanitarian crisis. With emphasis on macro-economic adjustment and emergency measures, industrial policy was not among the government's immediate priorities. Seeing this, the sector's main professional body, the Cámara de Industrias de Nicaragua (CADIN), decided to channel its energies and ideas into an industrial policy paper which it would present to government in a spirit of cooperation. In doing so, it sought the assistance of UNIDO, via UNDP, which provided funding of around US$60,000. CADIN wanted to move quickly, with a target of six months for completion of the paper. Working groups of its members were set up to deal with various aspects of industrial policy, such as technology, quality, standards and metrology, finance, and governance, and a national coordinator worked on a regular basis with the Chamber. In addition, regional experts provided advice and information on specific topics to the various groups and participated in workshops to which government representatives were also invited. The experts' knowledge of policy experiences in many different countries in Latin America was of particular interest. One of the central points to emerge from the paper was the need for continuous consultation between the public and private sectors and for joint policy formulation. The paper was presented to the government early in 2001 and marked the establishment of a new and much closer working relationship between the public and private sectors.

UNIDO's industrial policy team will work with a team of nationals to put together a holistic industrial policy covering a broad range of aspects, including macro policy (such as fiscal and regulatory), strategies to increase productivity in the industrial sector, governance, human resource development, finance for industry, technology, investment, environment, etc. Should the client subsequently identify specific policy areas—such as technology or environment—which need more in-depth attention, the industrial policy team can then hand over the baton to more specialized UNIDO experts in these areas.

The impact of such "upstream" advisory services in industrial policy is inevitably difficult to assess. It is diffuse in its direct and indirect effects and slow in trickling down into tangible results. Putting policy recommendations into effect can be a long, difficult and politically sensitive task. In transition economies, in particular, support may exist in the more progressive—often intermediate—levels of government for policy recommendations which would move the economy towards the free market but which then remain blocked at more senior levels where the vestiges of central planning mentality still remain. Even in countries with a fairly

substantial private sector, there may well be resistance from groups of private entrepreneurs who have long benefited from protectionist measures or monopolies and an attempt may be made to reject new policy recommendations. Such reactions do not invalidate UNIDO's work in industrial policy; rather they underline the extremely complex and challenging nature of the task.

NEPAL: Moving industry forward with a strategy and action plan for industrial competitiveness

With a per capita income of about US$250, Nepal is one of the poorest countries in the world. Nearly half its population is estimated to live below the poverty line. There are large disparities across income/consumption groups, between urban and rural areas, and within areas, as well as across socio-ethnic groups. The economic challenge for Nepal is to fight its way out of stagnation and move towards long-term sustainable development. Industrial development will necessarily be one of its cornerstones.

In a project executed in 2001/2002, UNIDO provided a comprehensive set of recommendations for industrial development during the first two decades of the 21st century. These recommendations support the strategies of Nepal's Tenth Five-Year Plan, emphasising four core issues: poverty alleviation, regional balance, gender equality and environmental health. The analytical report prepared by UNIDO gave a thorough analysis of the industrial sector in terms of macroeconomic environment, past and present performance, policies affecting industry, infrastructure for industry, relevant government and non-government institutions, and the international outlook. In addition, a nationwide sample survey of the manufacturing sector was carried out to obtain an up-to-date snapshot of its characteristics and performance.

Turning to policy prescriptions, Nepal will be increasingly unable to rely on a regulatory approach and policy tools used in the past to spur manufacturing growth by promoting a narrow range of exports, such as carpets and garments, based on largely imported inputs, and the use of tariffs and import restrictions to protect domestic firms. The changing international environment, which places pressure on all parties to liberalize trade and investment regimes, calls for a creative and innovative industrial strategy, relying on close public-private partnerships to enhance the productive and transaction efficiency of manufacturing firms, to diversify export products and markets, to create a conducive business environment, to invest in the necessary physical infrastructure, and to develop industrial technology at the firm level in order to raise the technical and managerial capabilities of domestic industrial firms.

On the basis of this comprehensive assessment of the manufacturing sector, UNIDO also produced a concise, action-oriented Strategy Paper highlighting five key components of manufacturing progress. Each of these requires government and industry to determine the actions that must be taken to build on the country's strengths and to remedy its weaknesses. The aim of the manufacturing strategy is to help more manufacturers to produce efficiently, to compete in international markets, to fight competition in the domestic market, and to raise innovative capabilities and diversify markets by identifying future market niches. The paper puts forward a strategy for helping manufacturing firms fulfil their potential in Nepal. It is the first stage in a process of consultation with the private sector to frame a long-term vision for the manufacturing sector and to establish public-private implementation mechanisms. This strategy is not intended to be the "last word" on the subject. It is neither a hard and fast prescription nor a formula for instant initiatives. Instead, it is offered as the basis for continuing to develop a robust partnership with management, employees and their unions—a partnership based on best practice in industrial strategy and policy formulation that must be effective at the national, regional and sectoral level.

(b) An SME policy framework

At all levels of development, SMEs have a significant role to play in economic development in general and in industrial development in particular. Yet SMEs are too often viewed as a means for generating jobs, as opposed to fostering growth, innovation and exports. Important opportunities for dynamic industrial growth are lost if the potential contribution of SMEs in developing countries is overlooked. Thus, institutional and policy interventions need to be designed to harness the potential of the SME sector for improved economic performance and technological catching up with industrialized countries. It is then hardly surprising that governments have committed themselves to the promotion of SMEs and have launched specific support programmes to this end. In many cases, however, a policy bias against SMEs paradoxically coexists with the stated policy objective of promoting SME development. This bias usually arises from policies that in themselves are not specifically aimed at SMEs (such as trade, monetary, fiscal, tax, labour, and price policies) and from the regulatory framework which then have unintentional adverse effects on SMEs. This is increasingly leading to a shift in emphasis from the adoption of direct SME support schemes towards the removal of prevailing policy biases with the objective of creating a level playing field for SMEs; in other words, with the objective of creating an overall enabling policy environment for SMEs.

Viewed in this context, it is imperative to set a clear agenda for the role of the SME sector in achieving the broader overall goals of social and economic development. Thus, a coherent SME policy framework constitutes an integral component of an overall industrial development strategy and policy. Ideally, SME policy should take the form of a statement setting out the macro and social economic goals of the government (related to growth, employment creation, regional balance, social equality) and the role that SMEs might play in fostering these goals. The effectiveness of specific policies and measures to support SME development and entrepreneurship will depend on the clarity of such objectives on the one hand and, on the other, on the interaction of different institutions and stakeholders.

A clear policy statement is closely linked to the question of where responsibility for SME policy development lies. Designating clear responsibility for SME policy within government structures is important to avoid a situation in which different ministries create their own SME development agendas. It is important to have a representative agency/department within the government at a sufficiently high level to play an advocacy role for SMEs and to ensure synergy among the various SME-related activities of different government departments and ministries. UNIDO SME policy support focuses, therefore, on building national capacities that can perform effectively that advocacy role for SMEs and function as a "clearing house" for respective departmental programmes to meet the needs of SMEs.

For governments to gain a better understanding of SMEs, effective channels of communication are essential. It is important to provide a mechanism for pro-active participation of SME representative organizations in stimulating legislation and acting as a barrier to frequent changes in policy and institutional structures. Consultative procedures and processes of communication between government departments and relevant pressure groups need to be developed. A number of UNIDO programmes aim to create such dialogue on SME policy between private sector representative organizations and public bodies as well as to assist these organizations to self-organize and present their view points. A prerequisite for such partnerships is developing the competency of the advocacy organizations in negotiation and in the effective implementation of their tasks.

The respective powers of local, regional and national authorities have considerable influence on the nature of policies and the ability to create differentiated strategies based upon different local needs. Where regional and local govern-

VIET NAM: Supporting the SME Decree and the SME Development Department

An initial UNIDO SME assistance project[3] was implemented in the second half of the 1990s together with the Industry Department of the Ministry of Planning and Investment (MPI). Up until then, the Department had mainly been involved in activities related to state-owned enterprises, focusing on those that were facing difficulties due to the opening up of markets. In the non-state sector, cooperatives took priority over other types of private enterprise. As the project developed, reports, discussion papers and day-to-day exchanges of the project team contributed to a far more prominent place being accorded to SMEs on the policy action agenda. Several of the recommendations reflected in the "Decree of the Government on Support for the Development of Small and Medium Enterprises" (issued by the Prime Minister in 2001) emerged as a result of activities supported and sponsored by this UNIDO project. Activities centred on a "route to on-the-job learning", providing a capacity-building experience for those in MPI as well as other partner institutions for whom private SMEs were a new phenomenon. Periodic Advisory Board meetings and a series of workshops organized throughout the project provided the beginnings of a discussion-and-advocacy platform for SME issues at large. Interaction resulted in a road map for policy actions and implementation steps involving all stakeholders. The dialogue between Government, support providers and the SME business community is now here to stay. The announcement of the establishment of a "Small and Medium Enterprise Development Encouragement Council", to provide advice to Government on SME promotion policies is also a "spin-off" of the suggestions generated by the project. The design of an institutional capacity-building follow-up project "Support to Private Sector Development: Modeling the National SME Promotion Agency and Private Sector Promotion Council" was recently completed. The project focuses on defining the necessary institutional structures for SME policy development and implementation. The national and provincial SME support infrastructure proposed by the project has resulted from an assessment of different options by various government ministries, business associations, People's Committees and the SME sector through a number of focus group meetings and workshops held in different regions of the country. As a result, a number of national and provincial support structures and policies are being initiated, namely the Department for SME development, SME Development Promotional Council at the national level, and linkages with a network of provincial focal points.

ments have legislative and financial power, it is more likely that they will favour SMEs. It is also more likely that innovative solutions will be introduced that are closely related to regional and local networks of support to SMEs. To promote such bottom-up policy development, UNIDO projects aim to build up competence within local authorities to enable them to formulate coherent sectoral or local strategies.

UNIDO's SME policy advice is increasingly shifting towards assisting public and private stakeholders in the process of policy development, implementation and monitoring. In this context, UNIDO's approach can be described as moving from direct policy and legal advice towards "institutionalizing" SME policy and building national capacities to:

- Develop a coherent SME policy framework linked to broader economic and social goals;
- Create/strengthen appropriate institutional infrastructure for development and implementation of SME policies and strategies;

[3] *US/VIE/95/004 "Assistance to Industrial SMEs in Vietnam"* executed by UNIDO.

SLOVAKIA: A strategy for regional development

In the European transition economies, local communities are going through the difficult process of adapting to a globalizing economy while still acquiring the know-how which will allow them to make effective use of local industrial potential in this new context. In doing so, many are trying to emulate the success of more advanced regions: for example, by setting up industrial zones and science parks in the hope of attracting strategic partners. These attempts often fail because the regions have no clear strategies or knowledge of the appropriate instruments. Realizing this, the Government of the Slovak Republic requested UNIDO to support selected regions in their efforts to formulate viable development programmes. In response, UNIDO, in cooperation with the Lower Austrian regional development agency, Eco Plus, organized a series of workshops for three Slovak regions: Galanta, Spiš and Trencin in 2001-2002. The link with Eco Plus ensured access to practical experience and synergies with EU-funded programmes promoting cross-border cooperation among regions in transition economies. The first workshop focused on industrial strategies in order to provide the general context for development and the right selection of industrial support infrastructure. The main activity was a simulation game. Using "anonymous" case studies (of unidentified regions in the Czech Republic, Hungary and Poland), participants were asked to formulate their own solutions to the problems experienced by these regions. Representatives of those regions then compared the projected outcomes with actual developments. The realism of this innovative approach was much appreciated. "Homework" for the Slovak regions consisted in formulating their own industrial infrastructure project in the context of a regional strategy. The types of infrastructure chosen by the regions—an incubator, an industrial park and a science incubator/park—reflected regional strengths. The second workshop evaluated each region's "homework". Experts from the same Czech, Hungarian and Polish regions which were the subject of the case studies, as well as representatives from Eco Plus—which has wide practical experience with all three types of infrastructure—commented on the proposals. The projects were then revised accordingly. Representatives of the Slovak Government and UNDP also took part in the workshops. UNIDO monitored the finalization of the project proposals and provided advice. While problems surrounding the commercialization of scientific findings have so far prevented the realization of the Trencin science incubator, the Galanta region has taken the first steps towards the creation of industrial parks, and the project in Spiš is ready for funding. During progress monitoring in Spiš, a clear interest was identified in cluster building and partnerships with foreign investors. The last workshop, in early 2003, followed up on these topics while concentrating on Spiš, which is a priority region within the Slovak national development strategy. Wide participation of the local business community also helped to promote business contacts.

- Monitor the needs of the SME sector as well as the impact of different policies and produce information on this on a systematic and continuous basis in order to support effective policy formulation;

- Promote public–private sector partnership in policy formulation by enhancing the dialogue on SMEs between business representative organizations and public bodies;

- Develop the competency of business representative organizations to participate actively in the policy dialogue.

Finally, as a global forum, UNIDO has a role to play in facilitating exchange of experience and disseminating information on "good practice" for supporting a conducive policy framework for SMEs. The approach is to promote continuous policy dialogue aimed at the sharing of knowledge and pooling of expertise. The Forum on Enterprise and

Entrepreneurship Development (FEED) is an example of such a mechanism and was initiated by OECD and UNIDO in 1998 to assist governments and institutions of Central and Eastern Europe and the Newly Independent States to work together to develop effective framework conditions to stimulate entrepreneurship and SME development. The "Policy Guidelines and Recommendations" (known as the "Green Book") developed by FEED has proved a useful tool for governments to monitor the progress of SME policy development in their countries.

3. Policy Implementation

The concept and design of industrial policy is only one part of the struggle for economic success. No matter how well thought out and painstakingly a policy is formulated, putting it into practice often proves more difficult then either government or the private sector had imagined. Despite this, UNIDO has traditionally been less involved in policy implementation than in policy formulation. Often external expertise has been called for in the design stages on the assumption that actual implementation should be essentially a task for national execution. Now, as it becomes increasingly evident that implementation is not as straightforward as assumed, some countries are seeking external advice and assistance in policy implementation, with an increasing emphasis on fostering technological innovation and industrial clusters. Conversely, there are examples of countries, such as the United Republic of Tanzania, which formulated its Sustainable Industrial Development Policy (SIDP) without external assistance but subsequently decided to call on UNIDO for help in the actual implementation.

(a) Public-private partnerships

As the momentum of globalization and integration into the world economy gathered pace throughout the 1990s, the need for multiple layers of analysis and action to address the complexities of economic development was increasingly recognized. The result has been a growth in importance of public-private partnerships at national level, including partnerships for cluster development which aim at improving the business environment, providing cluster specific information and fostering business networking and inter-firm collaboration.

There are limitations in the extent to which either government or the private sector can foster economic development—and more specifically industrial development—on their own. The public sector per se does not have adequate financial resources, technological know-how and the administrative capacity and human resource capabilities with which to address the fundamental issues. Yet the private sector, whilst not being a genuine driver of developmental objectives, is also confronted with "classical market failures that continue to confound purely private sector market-oriented development".[4] In the face of this dilemma, a culture of consultations and consensus building has emerged in many countries as stakeholders have gradually acknowledged that neither the government nor the private sector alone has

[4] *Public-Private Partnerships for Economic Development and Competitiveness, with Special Reference to the African Experience*, UNIDO, April 2000.

UNITED REPUBLIC OF TANZANIA: Implementing the Sustainable Industrial Development Policy (SIDP)

After more than two decades of socialist policies, the Tanzanian economy began to move towards a market economy in the late 1980s. In 1997, the government launched a 25-year Sustainable Industrial Development Policy (SIDP) which aimed to promote private sector-led industrialization and to stimulate industrial competitiveness. The private sector, however, found some shortcomings in the policy and felt that strategic targets were not clearly defined. Both the public and private sector stakeholders recognized the need for deeper analysis of the industrial sector and for a clearer policy framework for SMEs. With this in mind, UNIDO was asked to help in the design and implementation of a Private Sector Development Programme. One component of this was a strategy and action plan for industrial policy implementation. Although the SIDP was commendable in several aspects, it had not been formulated jointly with the private sector and did not place sufficient emphasis on competitiveness. Consequently, the first step recommended by UNIDO was to carry out a competitiveness analysis based on which a realistic strategy and action plan could be developed. The analysis reviewed the competitiveness of Tanzanian industry both in absolute terms and measured against regional and international competitors, and developed a competitiveness platform. This platform is based on several determinants which, individually, or collectively as a system, help to create a conducive environment to enable the country's industrial enterprises to compete on international terms. The findings of the analysis were then used as the basis for formulating an action plan. That plan focused on the competitiveness infrastructure and on overcoming shortcomings through a longer-term infrastructure plan. This included strategies such as promoting development corridor initiatives, like the Maputo Corridor; fiscal-based incentives, trade initiatives and human resource development, including the impact of HIV/AIDS. The plan demonstrated the horizontal nature of such initiatives, which spill over beyond the remit of the Ministry of Industry and Trade and call for the support of other ministries and government departments which were encouraged to "buy into" the action plan.

the resources to ensure sustainable economic growth and development. In view of this, a sustainable consultative mechanism is essential for policy development. Public-private consultation is a process whereby the public sector consults with the private sector and the final decision on policy issues rests with government. Public-private partnerships, on the other hand, are forms of collaboration in which the public and private sectors assume co-ownership and co-responsibility.

In terms of policy development, public-private consultative mechanisms are considered appropriate to improve the efficacy and efficiency of public policy. There are certain policy areas in which input from the private sector will make a positive difference in terms of the design, support and governance of public policies and public institutions. In addition, contentious issues can be negotiated before they become policy, thus reducing frictions and resistance to the implementation of policies and strategies.

UNIDO has been involved for some time now in raising awareness of the potentials of public-private sector consultative mechanisms and, in some cases, in actually helping in the formation of such mechanisms. Its experience has enabled it to formulate a basic methodology for its role in advancing the public-private sector consultative process including, inter alia, a specific menu and

The Tanzania National Business Council

The Tanzania National Business Council (TNBC) provides a forum for public-private sector dialogue with the aim of reaching consensus and mutual understanding on strategic issues related to the efficient management of development resources. It is responsible for reviewing development in the global/external and domestic business environment as well as the challenges and opportunities posed for Tanzania. The Council also reviews the prevailing operating and regulatory environment with a view to recommending measures for facilitating private sector development, improving service delivery and making the civil service more market- and service-oriented and more business friendly. The TNBC also plays an important role in policy formulation, implementation and monitoring. It is expected to address the investment environment and to propose changes that will make Tanzania more attractive to foreign direct investment and to improve the competitiveness of local industry. At the apex is a Council, made up of 20 representatives from the public sector and 20 from the private sector (including organized labour and academia). Members of the Council, other than those representing the Government, are nominated by their sectoral associations. Tanzania's President is the Chairman of the Council and therefore of the TNBC. There is an Executive Council comprising five representatives each from the private and public sectors, which draws up the rules and procedures of the TNBC. Critical issues to be discussed are first reviewed by the Executive Council. Two main committees have also been established in the framework of TNBC, namely, the Investment Round Table and the Committee on Smart Partnership. Other working committees and task forces are now being set up, including an Industrial Partnership Consultative Committee for which UNIDO technical assistance has been requested.

The Ministry of Industry and Trade (MIT) and Tanzania's professional associations

The main thrust of capacity building in the public sector was the strengthening of Ministry staff in effective policy research and analysis and implementation and monitoring of the SIDP. Project activities also aimed to make the Ministry a more market- and service-oriented institution, capable of establishing strategic alliances with the private sector. Based on a situation analysis, jointly reviewed by management and professional staff of MIT, the vision of the Ministry, its mission statement, managerial and other functions were redefined and an action plan was prepared to strengthen capacity. One of the main features of the plan was a series of detailed training programmes including the participation of Ministry officials in a UNIDO Regional Workshop in Dakar on the dynamics and implications of public-private partnership (PPP) for economic development and competitiveness. A core policy team (public/private) was trained in industrial policy development. Although a good number of training programmes have yet to be implemented, the Ministry's capacity to collect and analyse information and statistics of relevance to industrial policy development and implementation has been enhanced to such a point that it is now able to prepare periodic reviews on industrial and trade performance with very little support and advice from UNIDO. Also in place in the Ministry is an industrial information system with an internet cafe.

In the private sector, the focus was on strengthening the capacity and capability of the Confederation of Tanzania Industries (CTI) and the Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA). These rather staid and traditional institutions needed to meet the challenges of the global business environment and to contribute meaningfully to governance, as well as providing value added services to their members. In the case of TCCIA,

regional chambers were established and facilitated by electronic networking among members. A membership database was set up in CIT and TCCIA, as well as a local area network linking CTI and TCCIA members. Both associations are now in a position to publish regular business and market information and to provide revenue-generating consultancy services. Exchange programmes and networking with industrial associations in Denmark and Sweden and in Asia were also introduced. A directory of selected project profiles for small industries was prepared to provide information on small industries with potential, with or without foreign investment. The publication of the directory has created greater awareness of possible areas of business for small-scale industries and it is hoped that this could help existing or potential entrepreneurs/enterprises to take decisions on establishing new production units using domestic resources.

scoreboard for assessing such partnerships. Here again, however, putting theory into practice is not always straightforward. Whilst it is essential that those who are taking the risk in developing industry be involved in policy-making, choosing the partners for continuous policy dialogue is a very sensitive and crucial task. Not all dialogue between the public and private sector is positive. In the past, developing countries in particular have seen small groups of influential persons or individuals with vested interests abuse the process in order to obtain unfair advantages, such as tariff protection for their products. On the other hand, opening up the process to all can lead to a never-ending debate with no concrete action or results and can result in the eventual frustration and disenchantment of dynamic entrepreneurs. One option is to decentralize the dialogue and to set up consultations at local level.

(b) Institutional capacity-building

No matter how carefully crafted an industrial policy or strategy, without the appropriate human resources to implement it, that policy will never succeed. Hence, capacity-building—in both the public and private sectors—is often a major priority in policy-related technical support. Assistance may be needed in various areas, not just in policy formulation, implementation and assessment but also in the setting up and management of public-private partnerships. However, it must be recognized from the outset that, whilst training can help build the capacity of staff in existing institutions, it does not address the basic human resource constraint experienced in most developing countries.

Capacity-building involves a range of interconnected activities which aim to improve the ability of a country's policy makers, entrepreneurs and civil society actors to formulate and implement industrial policy at national level as well as to strengthen the capacity of both private and public sector institutions to participate in regional and international activities which shape and influence industrial policy at national level. It also involves improving the capacity of industrial institutions to provide effective services to the industrial community.

4. Policy monitoring and impact assessment

The more open a country's economy, the more complex the task of monitoring the progress and impact of government policies and strategies. Even with a solid analytical and knowledge base in place, the dynamic nature of competitiveness makes it more essential than ever for stakeholders to monitor continuously the progress of strategies and policies and to measure their performance against that of regional neighbours, other developing countries and industrialized nations. Policy monitoring in this context should not be confused with the old-fashioned concept of state surveillance of industrial performance; rather it is an exercise in "learning by monitoring" in order to fine tune and improve strategies. Although most countries will prefer to keep policy monitoring essentially as a task for national execution, UNIDO can, nonetheless, assist in designing the mechanism for that policy monitoring.

Effective monitoring will be dependent, initially, on the prior existence of a suitable system for tracking manufacturing performance. The stakeholders in the industrial sector will then need to decide on the respective merits and drawbacks of alternative sets of indicators and select those which are most appropriate for monitoring the evolution of industry under the influence of a certain policy or strategy and for measuring economic, social and environmental impact. This discussion may bring to light the need to introduce further variables into the tracking system and/or knowledge base. Agreement must also be reached on the frequency of performance reviews. The experience of other industrializing countries in monitoring (and implementing) industrial policies and strategies may be useful in helping the stakeholders to design their own policy monitoring mechanism.

A policy impact assessment may be carried out before, after, or during the implementation phase of a policy project. It should assess the impact, in terms of costs, benefits and risks of a proposed/existing/past policy or strategy and examine the ways in which it has affected industrial stakeholders and society in general. If used early enough, an impact assessment can help policy makers to think through the consequences of policy proposals. It can improve the quality of policy advice to government and can equally encourage more informed public debate on policy issues. As with a monitoring exercise, national ownership of policy impact assessments is essential. UNIDO, can, however, help in designing the methodology of the assessment.

An impact assessment must first identify the purpose and intended effect of a specific policy or strategy. It must assess the risks attached to putting that policy into effect and then identify the benefits and costs. It may involve looking at more than one policy option and should include not only direct but also indirect costs and benefits. It is crucial that the assessment involve a consultative mechanism to ensure that not only formal—but also informal—views are gathered from those concerned. In consulting with stakeholders, the assumptions and options on which the policy is based must be made clear. The final active stage of an impact assessment may include the establishment of criteria for monitoring and evaluation. However, the most important aspect of the assessment is its end result, which should be a cogent summary of the lessons learned from the design/implementation of the policy or strategy under review and the use of those lessons in future policy formulation and implementation.

THAILAND: Designing an early warning system

The financial crisis sparked by the flotation of the Thai Bhat in July 1997 quickly spilled over to the wider economy, where it exacerbated severe structural deficiencies. The manufacturing sector which, at that time, contributed nearly one-third to the creation of domestic wealth was particularly hard hit. In an effort to stem the contraction of the manufacturing sector, the Government in 1998 unveiled an ambitious Industrial Restructuring Plan (IRP) built on the premise that, since exports of manufactures had driven economic growth prior to the crisis, a prompt recovery required the restructuring of export-oriented industries. Thirteen such industries were identified and diagnosed, and an array of eight programmes was designed to correct observed constraints and set the sector on the path to sustainable growth. Some of the overriding objectives of the IRP were: *(a)* upgraded technologies and increasingly sophisticated product lines; *(b)* greater productive efficiency, thanks to improved processes and stronger management capabilities; *(c)* a better-trained workforce, conducive to the technological deepening of the domestic industry, and *(d)* stronger internal linkages and strategic alliances with external partners. At the same time, the Thai Government initiated research on an early-warning system that would help foresee— and possibly defuse—impending crises. The National Economic and Social Development Board, together with the Ministry of Finance and the Bank of Thailand, reviewed alternative specifications of leading indicators, analysed their respective merits in anticipating economic downturns, and designed a composite indicator tracking essentially macro-economic variables and monetary indices. A similar exercise was undertaken by the Office of Industrial Economics (Ministry of Industry) and UNIDO, focusing this time on "real"—as opposed to financial and monetary—aspects of growth, with emphasis on the manufacturing industry. The project known as "Tracking Manufacturing Performance: Towards an Early-Warning System of the Real Economy" was launched in June 2000. It set out to delineate measurable indicators that, either individually or as a composite variable, could help to anticipate turning points in domestic business cycles. The approach was derived from that pioneered in the 1970s by the National Board of Economic Research in the United States, but was customized to reflect data availability constraints in Thailand. The coincident indicator taken was the Manufacturing Production Index and short-term early-warning properties were shown in such variables as imports of intermediate products and raw materials, exports of manufactures, real effective exchange rates, domestic wholesales of manufactured goods and net flows of foreign direct investment. Nonetheless, the basic phenomena that together shape industrial growth typically exhibit long-term maturities. In its analysis of the determinants of technological capabilities, UNIDO's *Industrial Development Report 2002/2003* highlighted the importance of learning and innovation and the particular forms of industrial organization that bolster these clearly long-term processes. The UNIDO project contributed to the design of an early-warning system for Thailand by adopting a long-term perspective of structural issues such as the composition of industrial output and manufactured exports, underlying productivity fundamentals in relation to skills and wages, industrial linkages, and the institutional infrastructure for technology development. The research combined the analysis of time-series in Thailand as well as, where warranted, international comparisons of performance in a spectrum of industry-related variables. It concluded with a set of recommendations to the policy maker in the form of "earlier" warning signals or indicators tagged to relatively slow processes of resource accumulation which need to be closely monitored since they bear the seeds of long-term industrial progress.

5. In-house services in industrial policies and strategies

As the only technical service within UNIDO which analyses and works at the level of industry as a whole, the industrial policy function has a unique role to play in helping to lay solid foundations for the development of Integrated Programmes (IPs) and Country Service Frameworks (CSFs). As pointed out earlier, the design of IPs and CSFs cannot be embarked upon in a fragmented manner or approached from only one perspective, such as environment, investment or technology. A broad overview is essential in order to identify those areas most relevant for UNIDO intervention and also in order to envisage just how a package of technical expertise, such as improving food security, cleaner production centres, investment promotion, etc. will complement and interact with other services, thereby creating synergy and generating a greater impact than isolated interventions. Activities such as competitiveness analysis, in particular, provide a solid basis for the design of TC services.

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Small and Medium Enterprises Branch
Programme Development and Technical Cooperation Division
Vienna International Centre, P.O. Box 300, A-1400 Vienna, Austria
Telephone: (+43-1) 26026-4820 or 4821, Fax: (+43-1) 26026-6842
E-mail: unido@unido.org, Internet: http://www.unido.org

Printed in Austria
V.03-84940–July 2003–600