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Herman Muegge*

Industrial Development and International Cooperation

A long road to substantive levels of industrialization still lies ahead of most developing countries. The challenges facing policy-makers and industrialists in these countries are enormous. What role should the international community play in the second half of the '90s to support these countries' economic development endeavours?

In spite of major achievements by the group of developing countries as a whole in building up value-adding industrial capacities as well as the capability of managing them, effectively only a very limited number of countries have been able to pass over the threshold to sustainable development.

With growing demographic, social, environmental, technological and competitive pressures, the great majority of developing countries are entering into a new, more complex and challenging phase of their industrialization process. Earlier progress can easily be wiped out and most developing countries may fall further behind in their endeavours to build equitable and sustainable societies. The international community needs to respond to this continuing challenge.

Industrial development in developing countries has gone through various phases in terms of policy orientation, market orientation, institutional framework and the key challenges to be met. Similarly, international cooperation in support of this development process underwent a series of changes. A short review of these past patterns of development and cooperation relating to the build-up of industrial capacities in developing countries can provide the context and a useful perspective for understanding current and emerging patterns – and the urgent need for adjusting the policies, institutions, structures and programmes of the international system of cooperation. This system covers the United Nations (including the Bretton Woods institutions and – as lead specialized agency – the United Nations Industrial Development Organization), the bilateral aid agencies, regional organizations and various private entities.

Most developing countries began to industrialize in the late 1950s or 1960s when former colonies had gained their independence. In fact, industrialization efforts formed part of broader endeavours towards economic independence. Through the build-up of domestic industrial capacities, developing countries strived to generate an overall, indigenous base for socio-economic development based on continuing value-adding processes.

The absence of functioning markets and growth stimulants led to the formulation and application by governments of various development planning models. The lack of domestic private risk capital and entrepreneurship was seen to require a central role by governments, which assumed an interventionist and entrepreneurial function and initiated industrial development with significant public ownership of large-scale enterprises.

Towards the end of the 1970s, industrial development in many developing countries had reached a stage at which structural constraints became evident. Structural imbalances, prompted by the effects of internal policy and market distortions and domestic market limitations as well as several waves of external shocks, led in many countries to “deindustrialization”, external debt crises and sharp falls in income and employment.

Yet, over time, to use just one indicator, the share of developing countries (excluding China) in total world manufacturing value-added (MVA) increased from below 10% in the 1960s to 13.7% in 1980 and – after a temporary decline – to 15% in 1992.¹ This in itself represents a major achievement. One might be led to believe, therefore, that developing countries have been able to build up significant industrial capacities,

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¹ Cf. UNIDO: International Yearbook of Industrial Statistics 1995. The share of China alone in global MVA, according to UNIDO estimates, surged up from 3.9% in 1981 to 10.5% in 1992.

generating employment, overall income growth and export proceeds – thus enabling access to goods and services, know-how and higher standards of living. This is true, however, only to a very limited extent.

A closer review of the industrial development process reveals that the pace of development has been very uneven in the various regions. Africa's share in total world MVA moved only slowly from 0.9% in 1975 to 1.1% in 1992. The share of all least developed countries (LLDCs) worldwide remained static over this period at 0.3%. This reflects the continuing lack of resources and opportunities for development, and the prevalence of significant constraints in building up viable industrial structures. In contrast, the South and East Asia region increased its share from 3.3% in 1975 to 7.8% in 1992.

Moreover, population increases have been significant in many countries, resulting in only modest per capita growth. Thus, in developing countries as a whole, MVA per capita grew only by 1.9% and 1.6% annually in the periods 1975-1985 and 1985-1992 respectively. Per capita MVA in African LLDCs even fell by an annual rate of 2.4% in 1975-1985 and 0.3% in 1985-1992. Deteriorating social conditions and widespread poverty have been the consequence.

An accentuation of industrial development disparities was the result, with a limited number of developing countries accounting for the lion's share in manufactured exports, foreign direct investment and technology advancement. In 1992 some 60% of foreign direct investment to developing countries went to Asia alone – as opposed to some 2% going to Africa.² Similarly, manufactured exports are highly concentrated on a small number of countries in South East and East Asia as well as in Latin America.

The beginning of the 1990s showed a reassessment and the emergence of a widespread change in the macro-economic context, involving the concept, strategies and policies for industrial development in developing countries on the basis of the drastically changing conditions in the global economy. A new orthodoxy gained momentum with greater reliance on market forces, policy deregulation, trade liberalization, rapid technological innovation, privatization and a lead role given to the private sector. Experience gained became largely irrelevant under this changed context. This implied that most developing countries had to shift policies and launch major adjustment programmes so as to be able to respond to the changing conditions, capture new opportunities and build up resilient and sustainable industries in the globalized production and trade system.

These adjustments have proven to be more complex than originally anticipated and tend in some cases to place a heavy burden on the weakest segments of the economy and society. At the same time, social and environmental concerns are gaining increased attention in the global arena and in many developing countries. It is this reconciliation of sustainable competitiveness and equitable development which is a central theme in the formulation of socio-economic policies, geared towards the creation of an overall enabling environment, including proper institutional infrastructure, incentives and regulations. The least developed countries, most of which are in Africa, are facing particular problems and resource constraints in their endeavours to meet these emerging challenges.

Sustainable Social Development

In spite of past, partial set-backs in many developing countries, the key role of industry as the main engine of growth and as a basis for a country's overall socio-economic development is beyond question. A sustainable increase in the standard of living of a population, in productive employment, in education, in health and in the supply of basic needs is achievable only through a dynamic industrial development process.

The historical impact of industrialization on social change in the developed world holds significant lessons for the developing countries. Industrialization resulted in a momentous social transformation in the "industrialized countries" and provided the stimulus of growth for economic and social development. There is no reason to doubt that a similar transformation will take place as industrialization advances in the poorer sections of the globe.

History has shown that the transformation of agrarian societies into industrial economies is the swiftest and most powerful mechanism for generating higher productivity rates and employment levels, combating poverty and meeting other pressing social needs. The process of economic growth and industrialization has multiplier effects and far-reaching consequences on all sections of society.

No other linkage seems to be more important for poverty alleviation than the linkage between agriculture and industry in the early stages of economic development. Agricultural growth stimulates domestic demand for industrial products, supplies food for industrial workers as well as raw

² Cf. UNCTAD: World Investment Report 1994.

materials for agro-based industries. At the same time, industry provides agriculture with intermediate inputs such as fertilizers and pesticides, and supplies essential producer goods such as farm implements, irrigation pumps and transport equipment. Furthermore, the acquisition of manufactured products is an essential incentive for raising agricultural productivity. Given the size of agriculture in terms of output and employment in most developing countries, the strengthening of agriculture-industry linkages takes on singular importance as a means of alleviating rural poverty through the development of labour-intensive agro-related industries.

In a similar vein, industry could play a catalytic role in reducing widespread urban poverty by expanding employment opportunities in the urban services sector through inter-industry demand for service inputs and income-induced demand for various types of services. Numerous empirical investigations have confirmed the crucial role of manufacturing in this regard.³

Equitable Development

It is widely recognized that industrial development patterns in most developing countries have not so far fully been able to meet key socio-economic objectives. No automaticity prevails for ensuring sustainable and equitable development. Sound economic policies are needed to create an "enabling" environment for dynamic and more resilient economic growth and to reconcile global industrial interdependence and competition with national socio-economic imperatives.

In many developing countries, increasing income disparities among regions, rural/urban areas and segments of the population demonstrate the need for a stronger emphasis on social aspects in the industrial policies and strategies pursued. In general, income and wealth disparities can be effectively reduced, *inter alia*, by adopting industrial development strategies that promote small and medium-sized enterprises, stimulate employment creation in poor rural and urban areas, centre on human resource and entrepreneurship development and are thus oriented towards achieving long-term social objectives through a process of dynamic industrial development. Gearing industrial development towards such socially desirable patterns is a key task of industrial policies at the national level.

Poverty alleviation, employment generation and, in general, human development, remain issues of growing concern to developing countries and the

international community at large. The current and potential social conflicts, including migration flows, largely resulting from these problems, add importance to an enhanced and effective international development cooperation. In this, industry also plays other key roles. For many developing countries faced with severe population pressure and growing unemployment, industry offers the greatest opportunity to absorb directly and indirectly a rapidly growing labour force. Furthermore, value-adding to natural resources and the most dynamic types of services, with their significant employment potential, rests upon demand from an expanding industrial sector. The task is to create global stability and peace by bringing investible resources and economic development to the poorer, populous countries at a time when other safety valves, such as massive emigration, are closing.

Environmental Issues

Over the years, growing recognition has emerged in both developed and developing countries of the need to pursue rigorous protection of the environment and of depletable resources, including energy resources. Major efforts by the international community are needed at all levels to solve these growing problems of national, regional and global dimensions. The industrial sector needs to be assigned its proper role in this context. The development and transfer of clean technologies, the conservation and more efficient use of energy resources, the phasing out of ozone-depleting substances, the management of toxic substances and many other equally urgent tasks require the build-up of commensurate industrial capabilities. At the same time, it is clear that industrial production, distribution and consumption patterns have a major impact on the use and future availability of natural resources.

Industry-related environment protection covers a wide field of issues, such as:

- industrial policies and institutional measures to promote environmentally sustainable industrial development;
- measures to induce clean and safe production, *inter-alia*, through the transfer of clean technologies in specific industrial subsectors;
- implementation of international conventions, such

³ For a comprehensive empirical analysis of manufacturing-service linkages and their implications for urban employment generation in developing countries, cf. UNIDO: Global Report 1992/93, chapter 3.

as the Montreal Protocol on protecting the ozone layer;

technologies for reducing the use of hazardous or toxic substances;

increasing energy/efficiency in industrial processes.

The issue of energy consumption is intimately connected with the global concerns of environment protection. Industrialized countries by far dominate the quantifiable world use of energy. However, developing countries are expected to increase drastically the use of energy in coming years. It is estimated that they will triple their energy demand in the period 1985-2025. Currently, developing countries invest annually some US\$ 75 billion in energy supply (without the petroleum exploration sector). There is scope for very significant energy savings and also for utilizing new and renewable energy supplies – currently only covering some 7% of global primary energy supply. Major efforts will need to be undertaken by developing countries to this end.

With the increasing, world-wide application of environment-related regulations and standards, developing countries need to build up systematically the awareness and response capabilities of their industries in this field. Growing ecolabelling requirements and the introduction of new environmental standards (ISO 14,000) call for major adaptation efforts by developing countries' industries in terms of clean production processes and environmentally friendly products, including product commercialization and product application activities.

Industrial Competition

The global economy has witnessed a general trend towards global trade liberalization particularly following the recent conclusion of the Uruguay Round trade agreements. This trend has also found concrete expression in the growing number of regionally integrated trade groups, policy deregulation of national economies and the increasing role of the private sector in developing countries and the countries in transition.

As a consequence, competition in industry is increasing and the patterns of competitiveness are changing. Emphasis will further shift from quantitative to qualitative dimensions of industrial development. Clearly, the level of industrial wages is losing its role as a key determinant of a country's competitiveness. Rather, it is the integration in international networking and the flexibility and speed of the entire design, production and commercialization processes which

together constitute the major elements of competitiveness. At the enterprise level, the requirements for competitiveness thus concern:

core capabilities and skills in production, management and commercial services;

efficiency in organization and technical production systems;

efficiency in sourcing, distribution and international networking;

total quality control, flexible manufacturing, energy efficiency and environment protection.

Support to, inducement and facilitation of enterprises' build-up of sustainable competitiveness are provided in most, if not all, industrial countries and need to be pursued also by developing countries if these are to be able to compete in increasingly open markets. Such support covers services by institutions specialized in technology management, including technology transfer and R&D, human resource development, information and data systems, venture capital financing, new enterprises incubation, as well as in metrology, standardization and testing, management and engineering consulting.

At the macro-level, the creation of an overall economic "enabling environment" is of key importance for industrial competitiveness and specifically for the attraction of foreign direct investment. Major efforts will be required by the less advanced and in particular the least developed countries to build up the conditions for attracting and reaping benefits from foreign direct investment which can yield significant impulses to the domestic industrial sector.

On the other hand, it must be recalled that the ratio of FDI inflows to gross domestic capital formation in developing countries as a whole throughout the period 1985-1990 amounted to less than 3% on average, reaching 4.9% in 1992. This shows clearly that although FDI is an essential growth stimulant, it is the mobilization of domestic investible resources, the use of domestic skills and the domestic policies and efforts which are the decisive issues.

While the competitiveness of a country's industry is increasingly dependent on the prevailing technological level of manufacturing processes and products, the pace of technological advancement in developed countries' industry is simultaneously accelerating. The international technological race requires more and more specialized resources, and entry barriers are therefore rising. The rate of

innovation is clearly dominated by a few developed countries, with most developing countries falling behind.

Declining commodity prices and, consequently, decreasing prospects for developing countries to attain sustained growth on the basis of the primary sector accentuate the need for building up more creative and sophisticated value-adding capacities.

Human resource development will have to be a prime task for developing countries in the coming decades for managing industry and for being able to move the industrial structure gradually towards more technologically sophisticated industrial activities so as not to be caught in a low skill/low development trap.

The current challenge for most developing countries in pursuing their industrialization will be firstly to solve the problem of the accumulated structural adjustment gap through plant rehabilitation, modernization, SME development etc. and secondly, to build up a competitive basis for the years to come. Obviously, within the group of developing countries, a small number of them are already well advanced in these endeavours, but for the great majority these constitute a formidable task, in a time of scarce resources, for which international support is badly needed.

External Debt

The external debt of all developing countries is now expanding more slowly and, as a result of debt restructuring operations, substantial changes in the debt profile have taken place. However, the burden imposed on developing countries by high amounts of accumulated external debts – while no longer a threat to the global financial system – continues to impede their economic development process. The focus of attention has shifted from large middle-income indebted countries to the severely indebted low-income countries: 32 low-income countries, 25 of which in sub-Saharan Africa, have debt-to-GNP ratios of above 80 per cent and debt-to-export ratios of above 220%.⁴ Many of these countries, despite their access to long-term borrowing on favourable terms, have not been able to avoid debt defaults. In general, they are also being bypassed by foreign direct investment flows to the developing world.

Debt relief, while required and justified in many cases, will not in itself be able to trigger a process of sustainable economic development. What is needed

above all in these countries is support to the strengthening of productive capacities and to the build-up and diversification of export capabilities, which rests significantly on a dynamic manufacturing sector.

Some Conclusions

The challenges confronting policy-makers and industrialists in developing countries are enormous. Above all, they require:

- the building of industrial competitiveness through technological innovation and skill advancement;
- the development of socially sustainable and viable industrial structures; and
- the establishment of environmentally sustainable industrial activities.

A long road to substantive levels of industrialization still lies ahead of most developing countries. There are no short-cuts and quick fixes neither by means of enlightened policy packages nor by the replication of formulae that may have proven successful only in highly exceptional cases. The backwardness of entire developing regions and lack of integration into the world economy continue to be a far greater and more imminent risk to the stability of the global system than is the rare occurrence of newcomers to industrialization.

The United Nations' Role

The UN system has a major role to play in supporting the economic development endeavours of developing countries. The work of the UN is, however, changing. There is clearly a need for increasing cooperation with the private sector and with NGOs.

The UN Secretary General has in recent years launched a number of initiatives for reform of the UN system as a whole and for ensuring a clearer "division of labour" among the various agencies and bodies of the system, including the Bretton Woods institutions. This needs to be seen against the background of changing global conditions, the need for Africa's recovery and mounting calls for emergency assistance. The Agenda for Development – in its section "The Economy as the Engine of Progress" – underlines the specific role of the UN in the changing development process: "The basic lesson of recent decades remains valid; as conditions, circumstances and capacities differ, so too must the mechanism for generating growth. Growth requires political commitment and vision. The United Nations can act as facilitator and communicator, but it cannot

⁴ Cf. Overseas Development Institute: Briefing Paper, 1995(1), March.

substitute for the commitment of individual States and their domestic and international partners.”⁵

Development cooperation needs to take place through a participatory process in which the developing countries themselves are key actors. This must involve a long-term perspective: sustainable solutions will not result from simple “hand-outs” of ODA. What really matters is the commitment of both donor and recipient countries to support the complex process of building up productive capacities.

Industry – the most dynamic and globalized sector of the economy – constitutes a key vehicle for these endeavours. New international partnerships for promoting industrial development in the developing countries need to be initiated.

Because of institutional, social and capability constraints, developing countries share a very limited ability to incorporate technological change and adapt their industrial policies and strategies to the changing global economic environment. This not only severely weakens their own welfare; it also detracts from their contribution to the growth of the world economy. Added to this long-term structural problem, these countries are currently facing the high social and political costs of major market-driven economic reforms. To weaken the multilateral technical cooperation system at this precise juncture would amount to putting at risk the stability of the global system.

The Role of UNIDO

UNIDO can be of key assistance in making sure that the sizable resources allocated to the industrial sector in the developing world are not wasted but, drawing on the best international experience and expertise, well used to attain gradual but effective progress on the long and painstaking road to the mastery of competitive economic development. This will also help create more effective partners in developing countries for industrialized countries’ enterprises, enabling both to take full advantage of the business opportunities offered by the globalization process. The rapid “catching up” of a small group of newly industrializing countries (NICs) does not imply that the vast majority of developing countries are no longer in need of support. It is precisely the role of an international organization like UNIDO to make the experience of the NICs available to all developing

countries and, to the extent possible, apply the lessons learned.

In a recent, far-reaching reform process, UNIDO has responded to the need to adjust to the new and emerging challenges of economic and industrial development of developing countries and of the global economy at large. Based on a thorough analysis of demand for its services in all developing regions, UNIDO has adjusted its priorities, sharpened its focus and streamlined its organizational structure. As part of its reforms, UNIDO has set up five overall development objectives for its programmes:

- industrial and technological growth and competitiveness,
- development of human resources for industry,
- equitable development through industrial development,
- environmentally sustainable industrial development,
- international cooperation in industrial investment and technology.

Outlook

With the achievements in industrialization in past decades, the globalization of production and the growth of related international trade as well as investment flows, the developing countries have progressed significantly. However, major challenges have also increased and new constraints emerged: environmental pollution, widespread poverty, population pressures. In the years to come, for the global economy, two contrasting scenarios can be pictured:

- a pattern of increasing disparities, widespread poverty and transboundary pollution, and consequential national and international conflicts;
- a process of sustainable socio-economic development involving all countries and population segments including those currently being marginalized.

At the end of the century, following the fading out of previous ideology based on international tensions, a unique chance exists for the international community to face the common problems jointly and to set the course for a genuine global partnership. Just as most global problems are man-made, so also the solution towards a globally sustainable socio-economic development pattern can only result from the will and commitment of the international community as a whole. The UN system has a major role to play in these endeavours.

⁵ United Nations General Assembly, forty-eighth session, document A/48/935, 6 May 1994, para 67.