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**INDUSTRIAL RESTRUCTURING IN  
COSTA RICA**

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## PREFACE

As a result of the domestic and international economic circumstances of the early 1980s, Costa Rica embarked on a path of industrial modernization through public sector divestment and the initiation of an industrial restructuring programme in 1989. In April 1990, the Government of Costa Rica together with private industry and UNIDO, jointly organized a High-level Workshop on Industrial Restructuring in order to present and discuss the domestic and international trends in industrial policy and selected subsectors and arrive at an evaluation of the progress achieved and recommendations for the continuity of the modernization of the industrial sector. This report attempts to reduce the large volume and variety of analysis, presentations and discussions, which were carried out in the context of the Workshop, to a synthetic and manageable document which summarizes the main issues and recommendations presented regarding industrial restructuring and its technical assistance requirements in Costa Rica.

Acknowledgement is due to all those persons, be they representatives of successive Costa Rican administrations, the private sector and scientific and technological institutions or UNIDO sponsored personnel, who contributed to the field work and results of the Workshop.

### LIST OF ABBREVIATIONS

§	United States dollars
AID	Agency for International Development
BCCR	Banco Central de Costa Rica (Costa Rican Central Bank)
CACM	Central American Common Market
CAT	Certificado de Abono Tributario (Tax Rebate Certificate)
CCPI	Consejo de Concertación de Política Industrial (Council for Industrial Policy Concertation)
CCRI	Comisión Consultiva de Reconversión Industrial (Consultative Commission for Industrial Restructuring)
CCSS	Caja Costarricense del Seguro Social (Costa Rican Social Security Fund)
CEGESTI	Centro de Gestión Tecnológica e Información Industrial (Technology Management and Industrial Information Centre)
CENPRO	Centro Nacional de Promoción a las Exportaciones e Inversiones (National Centre for Export and Investment Promotion)
CES	Comité Empresarial Subsectorial (Subsectoral Enterprise Committee)
CINDE	Coalición de Iniciativas para el Desarrollo (Coalition of Development Initiatives)
CITA	Centro de Investigaciones de Tecnología de Alimentos (Centre for Food Research and Technology)
CODESA	Corporación de Desarrollo Costarricense (Costa Rican Development Corporation)
CPI	Corporación Privada de Inversiones (Private Corporation for Investment)
GDP	gross domestic product
IDB	Inter-American Development Bank
INI	Instituto Nacional de Industria (National Industry Holding)
ISIC	International Standard Industrial Classification
MEIC	Ministerio de Economía, Industria y Comercio (Ministry of Economy, Industry and Commerce)
MICIT	Ministerio de Ciencia y Tecnología (Ministry of Science and Technology)
MVA	manufacturing value added

NCT	Nucleo de Gestion Tecnológica (Entrepreneurial Nucleus of Technology Management)
R&D	research and development
SIS	Special Industrial Services
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization

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## I. INTRODUCTION

Since the crisis of the early 1980s, economic policy in Costa Rica has been dominated by a combination of stabilization and adjustment measures aimed at promoting the transformation of the productive sector and the restructuring of the public sector. The country adopted a new development strategy based on export promotion which has, in turn, led to the design of a new industrial policy.

The main elements of this industrial policy include: (i) a new macroeconomic framework which incorporates a re-ordering of relative prices in the economy; (ii) commercial liberalization through gradual tariff reduction; (iii) new systems of incentives for investment and export activities; and (iv) a comprehensive industrial restructuring programme, all of which are designed to achieve greater competitiveness.

Although the crisis of the early 1980s produced an overshadowing of industrial policy by macroeconomic adjustment strategies, the resultant stabilization facilitated the re-emergence of sectoral-level strategy questions. Through a process of concertation, the Costa Rican economic decision-makers and the private sector concluded that, although the adjustment of relative prices had moved in the right direction and was a necessary condition for the restructuring of the productive sector, an industrial policy which stimulates the process of structural adjustment must go beyond pure price correction. As part of this approach a National Industrial Restructuring Programme was put into operation in 1989, which combined with the new macroeconomic framework, the system of export incentives and commercial negotiation mechanisms, science and technology policy and other elements constituted a new phase in Costa Rican industrial policy for the decade of the 1990s.

UNIDO's involvement in this programme commenced upon the request of the Government of Costa Rica with a technical assistance project to advise on the development of operative industrial restructuring instruments in late 1989. Subsequently a joint initiative was undertaken to organize the First High-Level Workshop on Industrial Restructuring in Costa Rica from 4-6 April 1990 in order to analyze and evaluate the National Programme.

The main objectives of the Workshop were:

- To present both the Costa Rican and international experience in industrial restructuring to representatives of Government, the private sector, research and development institutions and international organizations;
- To present and discuss the results of the selected subsectoral competitiveness analyses (*footwear, metalworking, textiles, pharmaceuticals and processed fruits and vegetables*) undertaken within the framework of the Workshop;
- To consolidate the progress made to date and secure the continuity of the Industrial Restructuring Programme by presenting a global vision of international experience and the structure and state of advance of the National Programme from an institutional, policy and subsectoral perspective, thereby bridging the transition between the outgoing and incoming administrations;



- To produce recommendations for the effective implementation of the Costa Rican Industrial Restructuring Programme and to further the development of a medium- to long-term technical co-operation programme in the field of industrial restructuring between the Government of Costa Rica, UNDP and UNIDO.

The Workshop was organized jointly by the Ministry of Economy, Industry and Commerce (MEIC), the Costa Rican Development Corporation (CODESA), the official body in charge of the Industrial Restructuring Programme and the Chamber of Industries, under the guidance of the First Vice-President of the Republic. The duration of the Workshop was three days with the first day dedicated to the opening and the presentation of international and national policies, trends and experiences in industrial restructuring. The second day comprised the organization of selected working groups at the subsectoral level and a simultaneous plenary session on the financing of industrial restructuring followed by the presentation of the conclusions of the subsectoral working groups and the signing of a Letter of Understanding between the Government of Costa Rica and UNIDO. The third day centred on the aspects of technology and the development of a UNIDO technical co-operation project followed by the closure of the Workshop (see Annex 1. Agenda).

The activities of the subsectoral working groups commenced prior to the Workshop with the undertaking of an assessment of the competitiveness of each subsector by teams of national experts supplemented by one international expert fielded during the month of March to review the domestic situation in the light of the international context. The findings of this work are presented in a number of reports prepared by CODESA and UNIDO which were used as a basis for discussion in the Workshop (see Annex 2. List of documents presented at the Workshop).

The present report provides a review of the technical presentations made at the Workshop and a summary of the main conclusions and recommendations emanating from both the plenary and subsectoral discussions on the competitiveness of the industrial subsectors and the effective implementation and consolidation of the National Industrial Restructuring Programme. Chapter II covers the international experience in industrial restructuring and competitiveness whilst Chapter III deals with the Costa Rican experience. The subsectoral analyses and recommendations are reviewed in Chapter IV whereas elements of central importance to all subsectors such as technology and finance appear in Chapter V followed by a final Chapter which highlights the main conclusions and recommendations of the Workshop. The two annexes contain the agenda and list of documents presented at the Workshop.

## II. INTERNATIONAL TRENDS, POLICIES AND EXPERIENCES IN INDUSTRIAL RESTRUCTURING AND COMPETITIVENESS

### 1. OVERVIEW

Many of the current problems and features of the international industrial development process are not new and have received considerable attention in the past. However, in an increasingly complex and rapidly changing international system it is essential to re-examine the international restructuring process and to continually assess the new dimensions, features and determinants in order to apply the requisite measures to maintain or achieve domestic and international competitiveness. Specific areas which necessitate this attention include financing, technology, markets and industrial restructuring policies.

Financing of industry: In the developed countries there has been a trend towards increasing economies of scale and of scope of industrial production involving greater technological intensity and shorter product cycles which result in higher capital investment. Furthermore, the external debt levels of a significant number of developing countries constitute a major obstacle to their financing of industrial restructuring programmes. Easy money in the 1970s led to a build-up of industrial capacity in a number of developing countries, but did not entail a sufficient built-in ability to adjust this capacity to meet the emerging challenges.

With respect to foreign direct investment (FDI), recent UNIDO studies indicate that, although total FDI has increased rapidly over the past few years, the share of developing countries has fallen sharply and there has been a greater concentration of FDI in relatively few countries, predominantly in the Asian region. FDI is increasingly being directed to more technologically sophisticated manufacturing and service sector activities. At the same time there has been a trend towards the downscaling of industrial activities and the emergence of small- and medium-sized enterprises as a highly dynamic innovative segment of the industrial economy. The significance of inter-country differentials in labour cost as the key investment incentive has diminished. It can be assumed that, to the extent that future FDI flows will be based on more advanced technologies and new organizational approaches, they will essentially be determined by: (i) the availability of high levels of skills relevant to specific areas of production, design or management; (ii) the availability of a variety of supporting firms providing components, services and technical back-up of various kinds; and (iii) the existence of an efficient power, transport and particularly telecommunications infrastructure. Furthermore, FDI flows are extremely sensitive to economic conditions and economic policies in recipient countries, therefore, the absence or elimination of structural economic weaknesses also constitutes an important determinant of these flows.

Technology: A country's capacity to carry out technological innovation is crucial for its advancement and the future competitiveness of its industry. One indicator of this capacity is the level of research and development (R&D) expenditure which varies from around 2.8 per cent of GNP in advanced countries such as the USA, Japan, UK and Sweden to usually far less than 1 per cent in the majority of the developing countries (Brazil 0.7 per cent, Mexico 0.6 per

cent and Thailand 0.3 per cent). Besides the relative and absolute size of R&D, of critical importance are the proper utilization of the resources in terms of the selectivity and management of R&D programmes and the direct linkages to manufacturing. Hence, especially for developing countries with relatively scarce R&D resources, the efficient interaction between the scientific, manufacturing and policy-making entities is of vital importance. Technological development is not only a matter for researchers and technologists but forms an essential part of industrial policies and restructuring. R&D is a risky investment with a long gestation period and needs to be subject to the same scrutiny as other investments. Moreover, a close monitoring of international technological developments is needed in order to be able to identify and assess the emerging prospects and challenges for developing countries.

The complexity of industrial technology is increasing and the implications of scientific and technological advances in industrial subsectors such as telecommunications, machine tools, bio-technology and new materials in terms of their informational, skills, organizational and policy requirements are overwhelming. Industrial strategies and policies should not merely aim at breaking existing technology barriers. In fact, policy-makers are faced with a 'moving target' in the sense that technological innovation takes place continuously and new barriers arise all the time. The main objective should therefore be to promote national technological innovation and technology-diffusion capabilities.

New technologies neither automatically re-establish an overall industrial superiority of developed countries nor do they provide across-the-board opportunities for developing countries to leapfrog into a high-tech future. Technological innovation does not provide ready-made solutions to any country's industrial development. It generates tools, however powerful they may be, to increase productivity and improve human well-being. Whether the inherent potential of technological advances is translated into successful industrial development is largely a question of economic and social organization. Policy issues are therefore of crucial importance.

Markets: Recent worldwide trends in manufacturing trade show that the structure of international trade is less and less an expression of the level of production costs of companies operating in an anonymous market. Whereas competition in international markets is increasingly fierce, many past assumptions about its nature are being eroded. Tariff and non-tariff protection measures, voluntary export restraints, anti-dumping regulations and trade-related investment measures affect to a large extent trade in a variety of subsectors such as steel, automobiles, electronics, machine tools and textiles and clothing. Some 10 to 25 per cent of world trade is currently done in the framework of counter-trade agreements. Intra-company trade i.e., trade amongst parties of the same corporation is estimated at some 30 per cent of world trade. A large part of international trade can, therefore, be seen as "managed trade" of which, to a considerable degree, parameters other than pure economic or cost factors are the determinants.

Another feature of international competition is the shift from price to non-price competition in many industrial product groups. Quality competition including services embodied in the product requires that companies be able to produce a greater variety of custom-made product models through the incorporation of new technologies and flexible manufacturing systems thereby capturing special market segments through refined product differentiation.

This trend has been coupled with a concomitant growth in "non-material" (non-physical) industrial investment in areas such as R&D, market research, design, testing, engineering, training, after sales service, market intelligence systems and other information activities. The strategy of large industrial companies gaining foreign market access by investing in the build-up or acquisition of production and distribution systems in a new market is becoming widespread. The emergence of regional trade blocs in Europe through the EEC, between the USA, Canada and Mexico and in the Pacific Basin may further accentuate this development.

Due to the above-outlined trends and the effects of government policies and intervention, a growing number of the so-called "natural" competitive advantages seem to be losing their validity. Advantages are being created more and more or are arranged through far-reaching investment incentives, export development and credit schemes, which are part of the arsenal of measures used by governments to support (or distort) the struggle for competitiveness. Thus, in spite of an international wave of deregulation and endeavours by GATT, major impediments and distortions prevail in international markets. These need to be duly accounted for in the formulation of company strategies and national industrial policies of developing countries.

Industrial Restructuring Policies: In their endeavours to retain or attain international competitiveness, both developed and developing countries are pursuing a wide range of programmes and policies for modernizing and restructuring the industrial sector. Besides the application of macroeconomic policies and general financial policies, a wide range of specific measures is being used to support the build-up of industry's competitiveness and the national economy's development strength. The concept of the developmental or competitive strength of an economy can be defined as the ability of a country's productive sectors to dynamically develop and secure future competitiveness and thereby enable future increases in real wages and the living standard of the economy as a whole.

It is important to differentiate the concept of a longer-term increase in welfare from that of short-term partial competitiveness, which could be achieved simply through wage cuts and currency devaluation, in that the former is a much broader concept which includes the following set of parameters:

First, it entails the ability of a country to timely and effectively adjust its overall production and trade structure to the pressures of international restructuring and thus be in the position to sustain its external equilibria. This presupposes, inter alia, a national policy framework which allows for and stimulates both the discontinuation of unviable production activities and the start-up of new production lines which have growth potential. This framework thus requires policies to facilitate the entry and exit of enterprises and supporting measures to minimize the associated adjustment costs as well as measures to induce and support the modernization of plants.

Secondly, in order to remain competitive, a national economy has to ensure that its companies are able to fully participate in and take advantage of the globalization of production and thereby directly and indirectly bring resources and growth impetus to the national economy.

Thirdly, a country needs to ensure that its national economy constitutes an attractive location for foreign financial and technological resources.

Fourthly, a country needs to be able to cater for the social pressures and avoid major unrest which may arise from industrial restructuring. To this end, social awareness and consensus must be built up and advance attention needs to be given to issues such as emerging structural unemployment, associated retraining of labour and the mobility of resources.

Against this background a wide range of "positive adjustment" policies and measures for building up competitive strength have been pursued by countries embarking on industrial restructuring programmes. A first set of measures concerns the promotion of technological advancement in industry through the diffusion of advanced production process and support to domestic R&D activities as outlined above. A second set of measures covers those of an industrial and financial nature in support of the development of an industrial production system composed of a network of large and small companies. Such a system presupposes the existence of a sufficient number of corporations with the minimum size needed to realize economies of scope in research and development, marketing and sourcing networks and financing, enabling them to attain and keep a lead role in the specific subsector. These corporations would act as engines of growth in the economy with the ability to stimulate the establishment of and acquire and further develop small enterprises. A dynamic small- and medium-scale industry sector is indeed a major element in a competitive economy. It can be innovative in terms of identifying product and market niches and process development and can offer itself as a nucleus for future growth industries. A national system of competitiveness entails the effective linkage and interplay between the various types of companies such as through: subcontracting of products; sub-deliveries of parts, components and services and; joint small-scale firm co-operation. Such production networking is seen in many developed countries as the key to industrial competitiveness.

A third set of measures concerns human resource development comprising not only the skills in actual manufacturing but - primarily - in management, financing and design, both at the company level, and outside the companies in the various service and administrative functions which constitute the institutional environment of industrial enterprises. In order to cater for this need for constant skill creation and upgrading, major efforts are made today in most advanced countries to create demand-oriented, flexible training and retraining schemes. These are carried out either by companies themselves or in special training institutes, some of which operate on a commercial basis selling their services to enterprises and public labour market authorities. An efficient, forward-looking training system is an essential part of any restructuring programme as it can greatly reduce social costs and permit a high pace of industrial restructuring. It can thus actually constitute a crucial social net for the endangered workforce in declining industries.

The fourth essential element of industrial restructuring programmes is the provision of special financial facilities in support of rehabilitating old plant and equipment and - above all - for entrepreneurship and new investment. The financing of industrial restructuring is a key issue in the process of modernizing existing and creating new capacities and is also a severe constraint for many countries, especially those developing countries which are heavily indebted. It is important that structural adjustment finance be channelled through an appropriately equipped banking sector rather than being disbursed directly from general government sources. Major attention needs to be given to the ability of the banking sector to handle project evaluation and other investment-related functions including assessing the value of existing

assets and also covering "non-material" investments. Industrial restructuring therefore often entails the modernization of the banking sector and neglect of this critical resource allocation aspect can lead to the perpetuation of structural deficiencies.

In conclusion, national developmental strength implies that a country is organized to use its technologically innovative capacities and human skills and that it maintains an efficient administrative machinery and policy climate for entrepreneurship and innovation; that information and communication is utilized to capture the emerging international business opportunities; and that the establishment of an integrated and dynamic industrial structure is pursued to enable effective interplay between specialized companies. Close government, industry, academia, labour union and banking sector interaction and consensus are needed. A strong emphasis on education is required to provide a solid skill base for industry and its technological development. Industrial restructuring must be seen and accepted by all the actors in the economy as a process in which industrial activities and companies that are not competitive need to be "rehabilitated" or closed down so as to free scarce resources and stimulate the development of alternative, more competitive activities.

## **2. INDUSTRIAL RESTRUCTURING IN SPAIN**

The dynamism and increased interdependence of the international economy since the 1970s has been compelled to continuously adjust to both exogenous and endogenous shocks in order to maintain competitiveness. The oil crisis of 1973 can be seen as a turning point, when the majority of the industrialized countries were forced to restructure their industrial sectors which were heavily dependent on petroleum.

Given this situation, governments of the industrialized countries were faced with two possible choices: either a policy of savage adjustment based on the survival of the fittest with the associated political and social implications or an interventionist policy to salvage those parts of the industrial fabric, which, with appropriate restructuring, could be competitive. The latter approach with national variations has been the norm. Industrial restructuring in the USA has been characterized by little intervention, whilst in Japan it was undertaken through close collaboration between the public and private sectors, financial institutions and the trade unions. The European experience has been varied with restructuring of the public sector being the driving force in Italy, France and Spain as opposed to Great Britain, Germany and The Netherlands, where the private sector played a greater role in determining the nature of public intervention.

There are no universal magic recipes for industrial restructuring programmes. The key to success lies in adapting to the peculiarities and requirements of each country. However, the following basic premises are common to all countries and situations:

- (1) an understanding on the part of all actors of the need to implement clear and effective economic and related social policy measures;
- (2) that in the absence of consensus, the decisions must be made by the political leaders;

- (3) that decision-making be backed up by rigorous and coherent plans and policy mechanisms which establish internal and external credibility;
- (4) that the industrial restructuring plans be formulated in a clear, normative and specific manner which allows their development and implementation in a predetermined time-frame;
- (5) that legal and financial mechanisms as well as those required for the putting into operation, development, monitoring and evaluation of the plans be foreseen.

The situation in Spain at the onset of industrial restructuring in Europe was characterized by a series of structural deficiencies including on the one hand over-bureaucratization, high tariff protection, labour market rigidities, weak fiscal pressure on business and a shortage of entrepreneurs with innovative or risk-taking spirit and on the other hand high external technological dependence coupled with low domestic R&D capacity and a weak industrial financing structure. The vulnerability of the economy was further exacerbated by political instability relating to the transition from dictatorship to democracy. Industrial policy was of a defensive nature with assistance to enterprises being directed fundamentally towards preventing the break-up of companies and the resulting unemployment. Through the nationalization of large private enterprises which would not have survived the crisis, the public sector effectively absorbed the social crisis by writing off large financial losses. In fact, in 1983, 40 per cent of the total losses of some \$2 billion of the main public sector industrial group INI were attributed to those enterprises.

The process of industrial restructuring in Spain was intimately linked to the rationalization of the role of the public sector in industry in order to form profitable groups of companies in a more open European economic context. This was carried out through internal company restructuring, capacity reduction, the closure of enterprises which were not viable and the privatization of others which no longer necessitated public management in order to increase overall competitiveness. The success of the process can be measured by the turnaround from a public sector loss of \$2 billion in 1984 to a profit of \$1 billion in 1989. However, this does not take into account the cost of the various social measures implemented, which are outlined below.

The implementation of industrial restructuring began in full force only after 1982 and at different points in time the following subsectors were affected: steel, construction, shipping, electro-domestic goods, textiles, metalworking, footwear, electrical industrial goods, auto-parts, automobiles and fertilizers. No characteristic common denominator can be identified for all the subsectors. In the case of steel and shipbuilding, there was international excess capacity which necessitated worldwide restructuring. In other areas where the contraction of demand was not too severe such as in electro-domestic goods, textiles and footwear, selective restructuring measures to increase value added were utilized. These tended to include investments in more productive equipment and rationalization of enterprises to raise competitiveness through better quality, design, brand-marking and the establishment of improved export marketing networks abroad. Other sectors were modernized bearing in mind the need to generate employment and to adapt national standards to international levels in order to foster competitiveness.

Independently of the human and financial resources dedicated to industrial restructuring, the key to the success of the process lies in the efficiency and agility of its decision-making, monitoring and evaluation mechanisms and instruments. In Spain the process was made up of a preliminary phase to determine the subsectors to be covered, the setting up of a specific organ answerable to the government which was to supervise the elaboration of the restructuring plan involving the unions and the employers followed by the development phase. Enterprises voluntarily presented their restructuring plans according to a pre-established methodology. In order to supplement budgetary resources private participation was permitted through the capitalization of enterprise debt by the banks. A variety of measures were implemented to alleviate the adverse employment and social effects especially at the regional and local level. These included different subsidies, early retirement schemes and employment promotion funds for retraining displaced labour and providing incentives for enterprises to relocate and retrain workers. Such policies for the softening of the negative effects of an aggressive industrial restructuring programme in the short-term must be considered as an essential complement.

The following broad conclusions can be drawn from the Spanish industrial restructuring experience. Even though a subsectoral approach is adopted for industrial restructuring, the main reorganization must be implemented at the enterprise level with the objective of streamlining or creating competitive entities in those subsectors which for reasons of comparative advantage are considered of priority. This policy requires pragmatism and the stipulation that enterprises which are not viable will be closed down. The restructuring programmes must also be pragmatic as well as flexible enough to incorporate continuous reformulation. The programmes should also be seen as exceptional and finite in that their continuity over long periods of time would give rise to serious distortions in markets and in the allocation of resources. Vertical or subsectoral programmes should lead to superimposed horizontal promotion programmes which enable the development of infrastructural support mechanisms and the stimulation of competitiveness.



### III. INDUSTRIAL RESTRUCTURING IN COSTA RICA

Throughout the period from 1960 to 1980, Costa Rica's industrial value added grew at an annual average rate of 8.3 per cent, more than two percentage points above that of gross domestic product (GDP), leading to an increase in industry's share of GDP from 13.8 per cent in 1960 to 22.0 per cent in 1980. This growth was achieved predominantly within the Central American Common Market (CACM) framework by expanding the domestic market through the use of incentives and protective barriers which promoted an import substitution development model. As a result, productive processes tended to concentrate in the final stages of production with a high dependence on imported inputs and technology and low levels of quality.

Just as the majority of Latin American countries had established public sector institutions to promote industrial investment either by setting up enterprises and projects which would later be transferred to the private sector or by acting as financial intermediaries in channelling financial resources to the productive sector, in 1972 CODESA was created to serve this purpose in Costa Rica. As part of the policy of the public sector playing a leading role in industrial activity (*Estrada Empresario*), the state through CODESA entered into a variety of industrial and service activities covering cement, agro-industry, fertilizers, aluminium, fisheries and others. CODESA was given access to direct credit from the Central Bank which enabled it to rapidly expand its activities. For the period 1979-1984, its average annual investment was of the order of US \$40 million backed by increasing its share of Central Bank credit from 10.7 per cent to 18.2 per cent and consequently its share of public sector borrowings from 28.8 per cent to 52.2 per cent over the same period. By 1984, it had accumulated \$200 million of Central Bank credit and controlled some 40 enterprises which accounted for approximately 10 per cent of industrial value added and 4 to 5 per cent of the industrial labour force.

In practice CODESA never assumed the role of a true development bank, rather it functioned as an instrument for setting up state investment projects, many of which were ill-conceived or mismanaged, never being transferred to the private sector as profit-making ventures, as originally contemplated in its constitution.

At the on set of the crisis in the early 1980s, Costa Rica was confronted with the following conditions: (1) an import substitution model of industrial development showing clear signs of failure; (2) a high dependence (more than 80 per cent) of industrial production on the domestic market; (3) a diminishing dynamism of the CACM and the possibilities for commercialization of domestic products due to both political and economic factors; and (4) an over-extended public sector participation in productive activities coupled with increasing internal and external debt constraints.

The crisis provoked a severe re-orientation of macroeconomic policies and by 1983, when the stabilization measures had taken effect and after wide-ranging national debate on the direction of a new development strategy, consensus was reached on the need to gradually transform productive structures emphasising the promotion of exports, and in particular non-traditional exports. The mechanisms for implementing this strategy included a reduction in the Central American Common External Tariff; the establishment of export incentives basically of a fiscal nature; the reorganization of institutional

support to non-traditional exports; and a new and more liberal exchange rate policy. From 1986, the value of non-traditional exports grew by an annual average of almost 30 per cent. However, the net impact on export growth was relative given the high level of imported components of exports of manufactures, the amount of resources allocated to these purposes by the State, and the performance of traditional exports which suffered a decline.

Clearly such an outward-looking growth strategy, if implemented by rapid commercial liberalization without an adequate support system, would involve high economic and social costs and debilitate the industrial base. Therefore, the economic development strategy adopted incorporated the following fundamental characteristics:

- (1) gradualism of adjustment measures;
- (2) simultaneity of state support measures;
- (3) technological, marketing and external commercial negotiation strategies which complement and are consistent with the elimination of distortions in the price system;
- (4) a comprehensive industrial restructuring programme with both general and specific measures to facilitate the adaptation of industry and enterprises to the new economic conditions; and
- (5) the execution of the above within an effective framework of diagnosis, monitoring, co-ordination and decision-making which, based on full concertation among the concerned agents, would involve rationality, a sense of direction and equity in the process of change.

These characteristics were postulated in the National Development Plan 1986-1990, which also contemplated the guidelines for the establishment of an industrial restructuring plan.

The responsibility for the supervision of the restructuring of the industrial sector was assigned to the Minister of Economy, Industry and Commerce together with the President of the Republic and its execution was to be undertaken by the institutions which make up the sector. The system of co-ordination of industrial policy would be based on the central instrument of State concertation under a new philosophy aimed at transforming the role of the state from the model of the entrepreneurial State (*Estado Empresario*) to one with the State as the driving force in the concertation of industrial policy (*Estado Concertador*). The State would thus play a critical role in the formulation of a strategic vision of the direction and pace of economic adjustment, while at the level of the industrial sector the energetic participation of entrepreneurs themselves would provide the dynamism for the industrial modernization of the country.

The development and implementation of this new philosophy had already begun prior to the formulation of the National Development Plan, with the passing of a law in 1984 (No. 6935) which declared in the public interest the disposal of the majority of the enterprises held or controlled by COBESA, laying down the main rules for its implementation. The objectives of this programme of transfer, sale and liquidation of CODESA's holdings were to: reduce losses; increase the efficiency, quality and management of those

entities which were to be maintained; contribute to the fiscal adjustment of the public sector; and promote the development of capital markets and economic democracy. The legal framework was complemented by two basic mechanisms to facilitate the process: (a) the creation of a National Commission for the restructuring of CODESA and (b) the setting up of a Trust Fund to administer the resources donated by the Agency for International Development (AID) for the purchase and temporary administration of the largest enterprises of the corporation. This divestment programme was energetically implemented, in particular from 1986 onwards and by April 1990 only four of an initial 42 entities remained under the jurisdiction of CODESA.

The almost complete transformation that CODESA underwent can be seen as a fundamental part of industrial policy, in fact one of the major industrial restructuring projects of the 1980s. One of the consequences of this was that in October 1988 CODESA was proposed as the institution which would play the role of the Agency for Industrial Restructuring. After consultation with the private sector this proposal was accepted on the basis of the fact that CODESA had undergone a profound restructuring and also possessed the flexibility of organization to be able to serve as the instrument of both the public and private sectors in executing and co-ordinating industrial restructuring and the transformation of the productive apparatus.

In April 1989, CODESA presented its Industrial Restructuring Programme to the Government. For the purposes of the national programme, industrial restructuring was defined as the transformation of the manufacturing sector in order to increase its competitiveness and enable it to successfully compete with foreign products in both the international and domestic markets. The main objectives of the Programme are to facilitate the adjustment of industrial sectors and enterprises to the new economic conditions and to provide a framework for concertation between all the relevant actors in order to formulate and implement a national strategy for industry. More specifically, the Programme would promote an industrial policy framework which would favour the development of domestic capacity and efficiency, improved administrative and financial management of enterprises and a more equilibrated industrial development. At the level of industrial branches and product groups, the Programme aims to strengthen and expand production in branches with existing or potential comparative advantages in the context of both external and domestic markets as well as promoting more highly integrated forms of production in order to reduce the imported component in industrial production. The underlying conceptual base of the Programme incorporates on the one hand, growth as a succession of structural changes each with its own infrastructural development requirements in terms of technological capacity, human resources and institutional reform, and on the other, the idea that structural competitiveness encompasses both the endogenous competitiveness of enterprises themselves and the strength and/or efficiency of the productive structure of the country as a whole.

As a complement to the techno-economic aspects of the Programme and in order to achieve the above-mentioned goals, a number of general characteristics have been incorporated. These include: the emphasis on increasing awareness of the Programme itself and its medium- and long-term effects; the importance of concertation between the public and private sectors, research and development and labour organizations; effective co-ordination; the rational and efficient use of financial and human resources whether they be public or private, internal or external; the need to be as selective as possible, given the limited resources, both at the level of

industrial branches and product groups using criteria such as dynamic and strategic comparative advantage and export potential; and the need to consider the industrial sector as a whole with a variety of sub-groups in terms of industrial size, ownership and manpower.

The institutional framework for the Programme is based on the leading roles of the President of the Republic and the Minister of Economy, Industry and Commerce in the definition of policy guidelines and the monitoring of their implementation, with the back-up of the Ministry of Science and Technology, the Chamber of Industries and CODESA. For the purposes of policy decisions and operative mechanisms, two governing bodies were created, the Council for Industrial Policy Concertation (CCPI) and the Consultative Commission for Industrial Restructuring (CCRI), both of which constitute representatives of the above-mentioned institutions, with the exception of the President of the Republic. Additionally the Executive Planning Secretariat of the MEIC was designated as the Technical Secretariat of the two bodies.

In operative terms, the Programme envisages three distinct levels of action and concertation, namely:

Level I: Policy and global actions including the formulation of general industrial restructuring objectives and strategies, the division of labour, and the criteria and mechanisms for the monitoring and evaluation of the programme.

Level II: Subsectoral strategies and action plans for those areas selected covering their formulation and systematic implementation, and

Level III: Enterprise projects which would involve either the support of the restructuring process of a leading firm or the development of new enterprises around a specific technological base as applicable to the concept of the entrepreneurial nucleus of technology management (NGT).

CODESA, as outlined above, was given the role of the Agency for Industrial Restructuring, which involved programming, co-ordinating and monitoring the distinct work programmes at the various levels and acting as an interface between the private and public sector in order to enhance the implementation of the entire Programme through specific policy measures and support actions. Among these actions was also envisaged the provision of advice to entrepreneurs concerning technical assistance. For the purposes of effectuating concertation and actions at the branch and industrial enterprise level it was decided to establish Subsectoral Enterprise Committees (CES) of an ad hoc nature, made up primarily of entrepreneurs from the respective branches and members of the public sector. These committees would act as fora for analysis, problem-solving, the formulation of a strategic vision and the co-ordination of the orderly implementation of specific action plans in areas selected by the Programme. At the time of the Workshop, committees had been formed in: food processing; footwear; textiles; metalworking; pharmaceuticals; and wood products, representing six of the nine industrial branches identified. These branches, which also included cardboard, paper (graphic arts) and plastics, were the outcome of a selection process which grouped the important areas of industrial activity into (a) those particularly affected by the tariff reductions but with export potential plus those with a high degree of integration of production; and (b) those with the potential to

develop dynamic comparative advantages and/or of strategic importance for the economic and social development of the country.

The resources assigned to the Programme include: the direct support of CODESA through personnel and financial resources; technological development assistance through the CODESA-Ministry of Science and Technology (MICIT)-UNDP Agreement to establish a project for the entrepreneurial nucleus of technology management (NGT) and the Technology Management and Industrial Information Centre (CEGESTI), and the IDB-CONICIT-CONARE project for technological change, norms, metrology and quality control; additional resources allocated to financial analysis, the development of securities, other financial services and investment which originate from the agreement signed between CODESA and the Private Corporation for Investment (CPI) and the IDB credit line for tourism and industrial restructuring. The Programme also envisaged the creation of a specialized unit within CODESA to establish and maintain links with the various financial instruments and programmes. However, the commercial banks would assume the responsibility for financial evaluation and credit-giving activities. Similarly the Agency would play a co-ordinating role in the implementation of training programmes together with the relevant institutions in order that the courses offered are related to the industrial restructuring programme. Furthermore, the Programme will be backed up by a multi-purpose system of information which will monitor the industrial adjustment process, preview developments, provide information to entrepreneurs and back up the decision-making, formulation and evaluation functions of CODESA.

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<sup>1</sup> In broad terms group (a) comprises yarn, textiles, apparel, leather footwear, wood, cane and metal products having competitive advantage with preparation and dyeing of hides being highly integrated, whilst group (b) includes fruit and vegetable processing, tanning, paper and carton packaging production, printing and publishing, pharmaceuticals, medicaments, plastic and metal products, wood and metalworking machines, industrial machinery, electrical goods, radio, television and communications equipment.

#### **IV. INDUSTRIAL RESTRUCTURING EXPERIENCE AND STRATEGIES FOR SELECTED SUBSECTORS**

As stated in the Introduction, one of the main objectives of the Workshop was to present and discuss the results of selected subsectoral competitiveness analyses which were undertaken by teams of national experts supplemented by an international expert, within the framework of the Subsectoral Enterprise Committees (CES), for the following subsectors: footwear, metalworking, textiles, pharmaceuticals and processed fruits and vegetables. The criteria for selection of these branches were outlined in Chapter III and the aim of the subsectoral analysis was to determine the level and potential of competitiveness of the subsector in terms of product groups utilizing both price and non-price factors of competitiveness. On the basis of these results, strategies and actions would be recommended in order to undertake restructuring and increase competitiveness. For the effective completion of the analyses, the following aspects were proposed for inclusion in the diagnosis wherever practicable: the recent evolution of the domestic industry including inputs, production processes, technology, size and structure, internal and external market conditions and related policies; an assessment of competitiveness with particular emphasis on foreign trade, product characteristics and production technologies; and the financial and commercial capacity. The outcome was reviewed and discussed in the light of the international trends in the subsector and the national policy framework leading to the formulation of recommendations for the implementation of the industrial restructuring programme for the chosen subsector. Given the variation in the initiation and rates of progress of subsectoral activities and the resource and time constraints, a uniformly detailed coverage of all aspects was not feasible. Nevertheless, the mechanism of complementary national and international diagnosis followed by round table working groups proved an effective form of concertation in the discussion of problems and identification of solutions for the subsectors analyzed. The ensuing account represents a concise review of presentations, discussions and conclusions at the subsectoral level.

##### **1. THE LEATHER FOOTWEAR SUBSECTOR**

The leather footwear producing industry in Costa Rica, as defined by the ISIC branch 3240 is relatively small in terms of production, number of enterprises, employment, trade and share of industrial value added. Most of the factories were set up between 1965 and 1970 within the framework of an import substitution policy with growth relying on the expansion of domestic demand and the adjacent Central American Common Market (CACM). The subsector comprises 136 enterprises, of which 7 are classified as large and generate 57 per cent of total employment and 80 per cent of total production, 12 medium-sized generating 16 per cent of employment and 13 per cent of production, and 186 small, which account for 17 per cent of employment and 8 per cent of production. There also exist numerous small unregistered workshops with significant production. Some 2,900 persons are employed in the subsector (2.7 per cent of the industrial labour force) and production in 1988 was of the order of 1,500 million colones (some \$21 million), approximately 0.7 per cent of manufacturing value added, down from 1.36 per cent in 1982. Whilst annual growth rates averaged 9 per cent for the period 1979 to 1983, they declined on average by 10 per cent from 1984 to 1987. Export performance has shown a similar trend and the share of exports in domestic production was

24 per cent for 1989 as opposed to 26 per cent for the share of imports in consumption. In 1989 the value of leather footwear had a value of \$5.1 million with 73 per cent of the value going to Central America and the United States. For imports, which totalled \$4.9 million, 80 per cent originated in Central America. In terms of their share of the country's foreign trade, both exports and imports of leather footwear represent less than 0.5 per cent.

Evaluation of the leather footwear industry in Costa Rica indicates that productivity is well below that in countries such as Italy, Spain and France and that international competitiveness has decreased in recent years as a result of the weaknesses listed below and the growth of non-leather footwear demand. However, specific product groups such as mens moccasins and uppers have maintained acceptable levels of competitiveness. It is noteworthy that this situation has not been induced by the process of tariff reduction, which only in 1989 led to a reduction in the level of protection from 80 per cent to 70 per cent. Nevertheless, given the dualistic structure of production with few large technically advanced enterprises and numerous small holdings operating at the level of handicraft production, continued tariff reduction will have a serious impact on the smaller-scale units.

The leather footwear subsector has a number of weaknesses and strengths which affect its international competitiveness. The most significant weaknesses lie in the internal operation of the industry and the quality of the factors of production, whilst the strengths are mainly related to location and economic climate. The principal weaknesses include:

- raw materials are of low quality; a substantial portion of high quality hides are exported; the need to import all non-leather basic raw materials which also vary in quality; the lack of raw material control and associated wastage; the resultant lack of articulation of the subsector;
- low productivity and low levels of specialization and training of manpower; the lack of an organized system of training or specialized school; low remuneration;
- the lack of up-to-date technology in terms of equipment, plant lay-out and systems of product movement which result in low capacity utilization;
- inadequate quality and lack of emphasis on product development and design;
- high transport costs;
- insufficient investment in the maintenance and renovation of fixed assets;
- lack of well-developed credit facilities; poor financial management;
- inadequate knowledge of world markets and lack of established contacts for the purposes of technology, design and commercialization;

The strengths identified include:

- proximity to the most important world market, that of the USA;

- local production of the main raw material, leather;
- an economic, political and social environment favourable to investment;
- that national production is of a small size, which is manageable at the world market level;
- the facilities given to exporters (100 per cent rental exemption, 100 per cent import tax exemption and 15 per cent C.A.T. export rebate).

The justification for including this subsector in an industrial restructuring programme, despite the identified competitive shortfalls, lies in the fact that in the production of leather footwear, the raw material leather which is locally produced can constitute up to 50 per cent of the total product cost. Additionally, the domestic market is of great importance, production is labour-intensive, export markets are expected to continue expanding and the hurdles faced by the subsector can be overcome in the short- and medium-term so that greater competitive advantage which is acknowledged as dynamic may be acquired over a relatively short period.

In conclusion, a number of recommendations were made for the recovery and development of the subsector covering the following main areas: improved quality; incorporation of new technology; commercialization; productivity; finance; and the formation of associations of small enterprises to produce components. In order to improve quality actions must be undertaken relating to raw materials, production processes, plant lay-out, training and the establishment of quality control laboratories and norms and standards. Greater concertation is required between footwear producers and raw materials suppliers. In order to facilitate the modernization of plant and equipment and the incorporation of new technologies, adequate finance and foreign exchange should be made available. Technical assistance is required for the introduction of new production and management systems and for some aspects of commercialization. Given that the USA is a natural export market due to its proximity and that it is a major consumer of medium and high quality footwear, there is a need to develop and promote products which fill the many niches as well as to strengthen the knowledge of that market and develop better commercialization channels. This, in itself, constitutes both a goal and a justification for the restructuring of the subsector, notwithstanding the immediate requirements of the domestic and Central American markets. Furthermore, Central American countries such as El Salvador and Guatemala also pose a threat to Costa Rican domestic production reinforcing the need to increase competitiveness. In the short-term, actions will have to be oriented to remedying the deficiencies associated with raw materials and plant operation paying particular attention to the potential role of the small workshops. For the medium-term, emphasis will have to be placed on strengthening capacity including the development of complementary activities and improving quality to fill specialized product niches based on in-depth analysis. Finally the subsectoral competitive advantage will have to be developed as a whole, incorporating aspects such as new management and production techniques, design and commercialization facilities and advanced components manufacture.



## 2. THE METALWORKING SUBSECTOR

For the purposes of the analysis of this subsector, metalworking includes those establishments which fall within the bounds of groups 37 and 38 of the ISIC classification system with the qualification that the main activity of the enterprise constitutes the transformation of metallic inputs into an essentially metallic product. Activities which relate to electronic and optical articles as well as those encompassing repair services and/or of an informal nature are excluded. As a result of the use of broader definitions, data on this subsector have tended to overstate the actual situation.

The metalworking subsector experienced growth rates higher than those of the manufacturing sector as a whole during the 1960s and 1970s, mainly as a result of an expansion of the production of light consumer goods and certain standardized products which benefited from economies of scale, most of which were destined for the domestic and subregional markets. The prevailing import substitution model led to a strong bias against the production of more technologically complex goods through high levels of protection on final goods and the favouring of imports of capital goods. The subsector was seriously affected by the crisis of the early eighties with production volumes falling by an annual average of 25 per cent from 1980 to 1983. For the period 1983 to 1988 production grew by an annual average of 7.5 per cent, three points above the rate of growth of industry as a whole. However, total production of the subsector in 1988 was still only 60 per cent of 1980 levels and in fact metalworking's share of manufacturing value added (MVA) declined from 11 per cent to 8 per cent over the same period.

The export performance of the subsector has oscillated, declining from a level of some \$75 million of goods exported in 1980 to \$50 million in 1985 and then increasing to more than \$100 million in 1989. Rapid rates of expansion averaging 25 per cent per annum between 1987 and 1989 have led to an increase in the share of metalworking exports in total exports from 14 per cent in 1986 to 19 per cent in 1989. The destination of metalworking exports has also undergone significant change in the second half of the 1980s with the United States share increasing from some 23 per cent in 1986 to almost 35 per cent in 1989, whilst the share of Central America and Panama decreased from 59 per cent in 1986 to 43 per cent in 1989. Those branches which had a substantial share of total exports in 1989 include basic iron and steel (12.6 per cent), basic non-ferrous metals (11 per cent), metallic furniture and accessories (15.1 per cent), metal products (12.2 per cent), electrical machines and apparatus (11.7 per cent) and electrical supplies (24.1 per cent), which with the exception of metal products (mainly related to the packaging industry) and electrical supplies (mainly electric cable and dry cell batteries), have all maintained or increased their relative share throughout the 1980s.

Export growth, which has primarily been directed to extra-regional markets, has been concentrated in both goods produced in long series intensive in unskilled labour and in short series goods where accumulated technology and skilled labour play an important role. Market conditions have led to the closure of some long series producers and the transformation of others either through developing short series goods for internal and external market niches, or incorporating and developing new lines of production for export utilizing the Temporary Admission Regime. The limitations facing short producers include the saturation of the regional market, technological lags and the growing international competition associated with tariff liberalization.

Those firms which have succeeded in expanding exports to extra-regional markets have in general been (a) recently installed foreign enterprises concentrating on labour-intensive and contamination-intensive processes or (b) companies built up during the import substitution period which, at the same time, developed strong technological capabilities within their area of specialization. In some cases there has also been an overestimation of the ability of firms to enter non-regional markets and problems have been encountered in particular in subcontracting and networking relating to quality and delivery.

The estimates of price competitiveness of the subsector confirm the above-mentioned trends, namely, that long series production in export market-oriented firms and short series production of unsophisticated goods are areas of comparative advantage. Given that for short and long series production the average imported raw materials cost is 50 per cent and 55 per cent respectively, the cost of manpower would appear to be the principal price or cost advantage. However, some other countries in the region benefit from similar or even lower labour cost structures (El Salvador, Dominican Republic, Mexico). Additional factors which positively affect competitiveness include the cost and availability of factory space, energy and export incentives, whilst negative factors include the cost and availability of inputs which are generally purchased in small quantities, sales finance and internal transport.

Non-price factors affecting competitiveness, which were identified include: certain drawbacks of the industrial structure such as the lack of complementary services and subcontracting networks and the sub-optimal size of some firms; the insufficiency of market information, commercial drive and strategies; product design capabilities; the provision of certain specialized inputs; the use of modern systems of production and quality control; shortages of skilled labour; uncertainty regarding exchange rate policy; and protectionist pressures in developing countries.

In conclusion, the process of structural adjustment and tariff reduction of the latter 1980s has revealed competitive weaknesses in those segments of the metalworking subsector with limited technological flexibility and production of standardized goods destined for the domestic and regional market, which can only be remedied through restructuring operations in the framework of a wider export orientation with more aggressive commercialization strategies. On the other hand, incipient competitiveness has been identified in two areas: the production of goods in long series intensive in unskilled labour or facing a growing regulatory environment in developing countries; and the fabrication of goods of limited technological complexity in short series using skilled labour.

In terms of the strategic direction of industrial restructuring policy it was proposed that efforts be concentrated in the short series production segments of the metalwork subsector with emphasis on the domestic and regional markets as opposed to an exclusively extra-regional export-oriented approach. Such a policy coupled with complementary measures would enable the strengthening of technological and competitive advantages. With regard to longer series production, policies should focus on minimizing negative externalities and the promotion of subcontracting networks and the conditions required for their establishment, as well as the incorporation of technological progress.

The following areas of intervention at the subsectoral level were recommended:

- (a) **Tariff policy:** Evaluate the impact of the process of tariff reduction and guarantee favourable conditions for activities with identified and potential competitive advantage.
- (b) **Markets:** Co-ordinate and centralize the identification of markets, export promotion and the development of commercialization networks in the domestic, regional and extra-regional markets.
- (c) **Productive structure:** Establish indispensable complementary activities which will contribute to increasing the competitiveness of the subsector, such as subcontracting networks, company linkages and amalgamation.
- (d) **Inputs:** Establish an import network based on economies of scale.
- (e) **Technology and production processes:** Encourage the circulation of technological information, research and development activities and optimal production systems.
- (f) **Human resources:** Provide specialized training in accordance with the skills requirements of the subsector.
- (g) **Finance and incentives:** Study the present system of incentives and the requirements for sales finance in order to establish a comprehensive system.

### 3. THE TEXTILES SUBSECTOR

The analysis of the textiles subsector covers both textiles and wearing apparel and is limited to the following ISIC branches since they constitute the great majority of textiles output and employment in Costa Rica: 3211-spinning, weaving and finishing textiles; 3213-knitting mills; and 3220-manufacture of wearing apparel, except footwear. The subsector, as a whole, currently accounts for almost 6 per cent of manufacturing value added and is the second most important subsector in terms of labour utilization, employing approximately 35,000 workers, of which almost two thirds (22,000) are involved in maquiladora production. The textiles industry in Costa Rica was built up in the context of the Central American Common Market under high tariff protection focusing on the relatively small domestic market. The general age of machinery, equipment and infrastructure dates from the late 1960s and the 1970s and has received little attention in the way of rehabilitation or modernization. In 1987, the industry was made up of some 550 companies of which 450 were classified as small, i.e. with fewer than 50 employees. Since then, the number of smaller concerns has declined whilst larger companies, many of which operate as assemblers for US garment producers working under US 807 "Duty Break" rules, have tended to increase in number. The contraction of the domestic market as a result of the recession of the early 1980s led to an overall decline in the value of production and its share in total industrial production. However, exports of textiles maintained their share in total industrial exports, with exports to the rest of the world (primarily USA) accounting for a significant portion of export growth as opposed to exports to the Central American region. Although there is some inconsistency

in the statistics on the subsector, it is clear that branch 3220 (wearing apparel, except footwear) is of great importance, accounting for more than 60 per cent of the subsector's employment, 37 per cent of its value added and 50 per cent of its exports.

Within the spinning, weaving and finishing branch (ISIC 3211) which is characteristically capital intensive, much of the machinery is obsolete. There is a lack of automation, buildings are often unsuitable and capacity utilization varies from three shifts in some plants to between 60 and 70 per cent under-utilization in others. For spinning activities, a high proportion of the inputs (both cotton and polyester) is imported and production is mainly destined for the domestic market where there is relatively little competition. Guatemala has proved to be a strong competitor due to its ability to offer a greater selection of products tailored to clients requirements. In weaving, firms have tended to import inputs because of the inadequate quality of domestic products. The share of spinning, weaving and finishing activities (ISIC 3211) in total production has declined since 1983 as has its share in total exports, whilst imports of the same have maintained positive growth. In general, analysis suggests that this branch (ISIC 3211) has been losing competitiveness since 1988. Knitwear production (ISIC 3213), which is less capital-intensive, is characterized by shorter production cycles and shows a high degree of vertical integration. Although inputs are available locally, due to reasons of price, insufficient supply, quality, delivery and dyeing problems, producers prefer to import. Exports of knitwear to Central America are no longer competitive and now more than half the enterprises export, often by means of subcontracting, to extra-regional markets. Producers generally sell from stocks and offer a wide variety of products which are marketed abroad either through foreign distributors, who also provide the designs or through the direct introduction of branches in the world market. Quotas have not been a problem in the United States market since the quantities exported are minimal (less than 1 per cent) of US production. Indicators of competitiveness suggest a recovery as of 1988.

The wearing apparel excluding footwear branch (ISIC 3220) is generally considered competitive because of its export orientation backed up by a favourable system of incentives and its relative insensitivity to import penetration (if contraband and used clothing are not considered). This holds in particular for the maquiladora operations whose materials are supplied directly as cut goods which only require assembly, thereby avoiding reliance on local raw materials. However, the national garment producers usually direct their product lines to the middle to lower income sector of the market where competition is most severe and the first impact of recession is sustained. Here small family operations predominate, speciality products are absent, skilled workers are in short supply, quality control is generally poor and exports are mostly low cost goods not subject to quality considerations. Employment in this branch has expanded notably as a result of maquiladora or temporary admission regime operations, which appear to be the most attractive and successful of the incentive schemes in the eyes of foreign companies. However, labour and social security costs per man-hour in Costa Rica in 1989 were significantly above those of potential competitors in the region (El Salvador, Dominican Republic, Mexico, Honduras and Guatemala) prompting some diversion of foreign investment. Official statistics show a decline in imports of wearing apparel, however, this has been partially offset by contraband and imports of used clothing.

The above analysis indicates that the Costa Rican textile industry, with the exclusion of maquiladoras, does not in general possess the attributes which are required to make it competitive on the international markets, due to the following: the age and general condition of machinery; inadequacy of factory installations; high levels of labour turnover, shortages of technical personnel and absenteeism; lack of effective quality control; a lack of investment and appropriate investment promotion policies; and insufficient knowledge of international markets. Additional problems and weaknesses include contraband, imports of used clothing, administrative and logistical difficulties related to importation, high domestic rates of interest, lack of product specialization, design and complementary production processes and services including dyeing, and tariff liberalization. As a counterweight, the market for textile goods in the United States is expected to continue to grow. It is probable that different forms of partnerships or joint-ventures will be necessary in order to increase participation. In contrast there is little prospect of increasing exports to Europe. It should also be noted that the world textile markets are highly regulated and this reinforces the need to develop international marketing networks and supplier/producer relationships.

In order to improve the competitiveness of the subsector, an industrial strategy which addresses both the problems that are exogenous and endogenous to the enterprises involved is required and this should be supported by the necessary political willpower. The exogenous factors include the economic situation, in particular the high rates of interest and shortage of restructuring capital; transport costs and administrative bottlenecks; and importation problems including the inflows of contraband and used clothing. With regard to the endogenous problems and given the scarcity of financial resources, a selective approach will be required which could be based on company audits covering organization, production, technology, finance and costing, marketing and training. These audits could provide the basis for a targeted modernization of enterprises which have competitive potential that is borne out by domestic and export market analysis. It was suggested that restructuring programmes based on this approach would tend to focus on the "half-modern" enterprises and in all likelihood would lead to a reduction in vertical integration, removing inefficient segments of production (e.g. dyeing) and concentrating them in specialized entities or subcontracting them out. In addition to plant-level modernization and the improvement of the policy and economic environment, two important factors should not be neglected: the development of a domestic knowledge of and capacity to exploit international market opportunities as opposed to relying on external agents or 'travelling salesmen'; and the co-ordinated development of investment and export promotion through greater exposure of personnel and products to external developments in technology and design.

The textiles subsector therefore requires a comprehensive restructuring strategy or programme based on the above-mentioned company audits and market analysis with a differentiated approach for the case of the manufacturing apparel activities which encompass both domestic higher value added production and the export-oriented maquiladora operations.

#### **4. THE PHARMACEUTICALS SUBSECTOR**

This subsector encompasses the manufacture of drugs and medicines (ISIC 3522) and in Costa Rica these activities are mainly confined to the formulation and packaging of imported raw materials. The first plants were

set up from 1960 onwards as part of the import substitution strategy adopted in the context of the Central American Common Market. The subsector is made up of 32 enterprises which employ some 1,187 persons (1987) and has accounted for an average of approximately 2 per cent of manufacturing value added throughout the 1980s. Of these enterprises, only two have more than 100 employees, sixteen between 11 and 100 and the remainder have fewer than ten employees. The average age of equipment is estimated at 10 to 15 years, however, the variation both within and between companies is significant resulting in differing technical levels of production.

A high proportion (some 95 per cent) of the raw materials used in production is imported and these materials are procured through brokers. On the basis of a sample of enterprises visited, it was concluded that, in general, levels of hygiene were good although there were some storage inefficiencies. Goods delivered undergo chemical analysis, but detection of possible impurities is neglected and stability testing is neither required for registration or approval nor practised. Quality control facilities were more uniformly equipped than production lines and the above-mentioned drawbacks are aggravated by the extremely high number of products marketed by all companies and the consequent small batch sizes in production. At the national level no research and development (R&D) activities are being undertaken and the existing R&D and training facilities would require upgrading in order to make any impact on the development of the subsector and the reduction of its import dependence.

Domestic market consumption of pharmaceutical products is estimated at about \$70 million per annum divided evenly between the public sector (the Costa Rican Social Security Fund - CCSS) and the private sector (pharmacies). The CCSS procures 25 per cent of its requirements locally, whereas the great majority of drugs sold in the private sector is imported in the form of finished products. The tender system which is used by the CCSS creates certain difficulties for the national companies in that it does not allow sufficient time to plan production. The result is sporadic production runs with raw material procurement problems and the use of inadequately trained temporary labour, which not only affects quality but also implies low capacity utilization and profitability. In 1986, capacity utilization rates ranged from 45 per cent to 10 per cent for different products and are not believed to have changed significantly since. In terms of drug registration and patenting, Costa Rica is an uncomplicated market since patents were practically abolished by reform of the legislation in the late seventies. International trade pressures may, however, induce further modification in the future.

Costa Rica, as all Latin American countries, has consistently run a trade deficit in pharmaceutical products with exports averaging 2.6 per cent of total manufactured exports and imports 3.8 per cent of total manufactured imports per annum for the period 1982 to 1988. In 1986, exports of pharmaceutical products were valued at \$26.3 million, most of which are attributed to the affiliates of the multinational companies in Costa Rica. In 1989, exports by domestic companies were negligible (less than \$0.5 million). From 1982 to 1988 sales of pharmaceutical products to the CACM declined (62 per cent to 47 per cent of the total), whilst the domestic market and the rest of the world have taken on growing proportions (32 per cent to 40 per cent and 5 per cent to 13 per cent respectively).

It can be concluded that Costa Rica has developed the best pharmaceutical industry in Central America with a very high level of sanitation, drug availability and medical coverage, well-trained personnel, relatively high technical production and quality control levels, and a variety of up-to-date products. Sufficient production capacity exists and with greater market analysis, planning and more aggressive registration and marketing activities, an increase in exports to the CACM could be achieved. This would require the demonstration of product competitiveness which could be facilitated by the introduction of stability and bio-equivalence tests. In addition, storage and labelling should be improved and it was recommended that procurement of imported raw materials be undertaken directly with the producers utilizing specific long-term supply agreements.

The effective level of protection of the national industry is relatively low (around 10 per cent) and the presence of multinational companies with more aggressive promotion and marketing strategies implies that in order to remain competitive, a higher degree of specialization of local companies is imperative. This would permit the elimination of production bottlenecks and together with improved R&D, training and marketing open up possibilities for increasing domestic production levels. This must be undertaken in the context of a clear and coherent policy framework for the subsector and to this end the following technical co-operation opportunities were identified as a result of working group discussions:

- (a) the preparation of a study on industrial policies and strategies for national pharmaceutical manufacturers;
- (b) the preparation of an opportunity study for the local manufacture of essential drugs currently imported in order to improve the productivity of existing firms;
- (c) the preparation of a study on the requirements for improving the quality of generic pharmaceuticals with special reference to stability tests and bio-equivalence studies;
- (d) the training of an industrial pharmacist in the methodology of running accelerated stability tests.

In addition, recommendations were made concerning the promotion of co-ordination between the CCSS, the Ministry of Health and national pharmaceutical enterprises in questions of the assessment of public sector requirements, procurement, the development of activities which complement formulation and the identification of market potential in the subregion.

## 5. THE PROCESSED FRUIT AND VEGETABLES SUBSECTOR

Given the variety of activities that make-up the canning and preserving of fruits and vegetables branch (ISIC 3113) and the fact that no preliminary diagnostic survey of the subsector had been completed at the national level, the following reflects a qualitative assessment of the subsector based on a limited amount of field work undertaken plus the main conclusions and recommendations which arose from the round-table discussions at the Workshop.

The majority of the enterprises in the subsector are small-scale and labour-intensive with limited export potential due to the type of products

produced, deficiencies in quality, presentation and levels of sanitation and the lack of external markets. Medium-sized industries tend to lack mechanization of basic raw material processing operations. At the other extreme there exist a few large-scale plants endowed with modern high-capacity processing equipment.

Food products have played an important part in the expansion of non-traditional exports that has occurred throughout the 1980s. In fact, the dollar value of exports of processed fruits and vegetables increased from \$6.2 million in 1984 to \$9.0 million in 1989. The main products exported are preserved vegetables, frozen yucca and fruit purees and pastes. On the import side, tomato derivatives represent one of the most important products imported (some \$5 million per annum).

Costa Rica has a favourable geographical location and climate, sufficiently qualified human resources, an abundant supply of relatively low-cost labour and good infrastructural and institutional support services, which together with the variety of crops that can be grown provide enormous agro-alimentary processing potential. The primary sector, however, is characterized by low agricultural productivity which is to some extent related to the small size of holdings and the inability to provide produce of the required quality at competitive prices. The food processing subsector is heavily dependent on domestic primary production and there has been a trend towards the vertical integration of raw material production by the larger processing companies. In the case of small-scale industry, financial resources limit the possibility of such development.

In addition, a number of factors adversely affect the competitiveness of processing activities. These include: the lack of diversity of suppliers and relatively high prices of certain inputs such as packaging materials and chemical additives; high shipping costs and inadequate internal transportation infrastructure; quality control and standardization deficiencies; and distribution and marketing problems.

It is clear that in order to gain access to international markets for processed fruit and vegetables, the question of market analysis and the development of associated marketing and distribution networks is of vital importance. Despite the existence of numerous public and private organisms (CITA, CINDE, MAG, INCIENSA and Universities) which make-up an appropriate institutional framework, there appears to be an institutional vacuum with regard to the identification of new market opportunities and the co-ordination of efforts to develop and market products for such niches.

It was concluded that Costa Rica has definite potential in the fruit and vegetable processing subsector and that realization thereof will require a three-pronged strategy, which addresses primary production, food processing activities and the identification and capturing of world market opportunities. This could be undertaken within the context of a Strategic Agro-industrial Development Plan, which would also lay down the institutional framework, take into account the financial, commercial and technological constraints and policy responses, and outline mechanisms for co-ordinating technical assistance. Importance must be attached to providing the information requirements for the development and implementation of such a plan.



## V. CRITICAL POLICY AREAS OF IMPORTANCE TO INDUSTRIAL RESTRUCTURING

The present Chapter reviews three areas of critical importance to industrial restructuring in Costa Rica. The first concerns technology management, which is the focus of a significant UNDP/UNIDO technical assistance project aimed at developing the basic technological infrastructure at the sectoral and enterprise level for the implementation of industrial restructuring in Costa Rica. Second is the issue of financing industrial restructuring which overrides concrete progress in the implementation of industrial restructuring programmes. The last section outlines UNIDO's technical assistance activities in Costa Rica as well the framework for a project proposal directed towards the restructuring of Costa Rican industry, which was presented at the Workshop.

### 1. TECHNOLOGY MANAGEMENT

The accelerated pace of technological change and the transformation of international markets in the past few decades has radically altered the nature of industrial production and resulted in the management of technology springing to the foreground in the design and implementation of industrial restructuring programmes. Industrial competitiveness is closely related to dynamic comparative advantages founded in the incorporation of technological innovation in production, organizational and management systems. Production is increasingly based on flexible manufacturing systems with a high degree of automation and computerization, which are capable of producing a variety of high-quality products in small batches designed to meet clients specifications and to create and exploit market niches. The organization of operations is now subject to continuous adaptation based on the changing requirements of customers and organization of production lines which demand new forms of supplier relationships and accordingly human resources must be versatile and multi-skilled. A growing reliance on computerized information networks has permitted the modification of management structures, eliminating certain intermediate levels and promoting a greater decentralization of responsibility.

Technology management must therefore be a vital part of any programme of industrial restructuring which attempts to improve competitiveness and international market penetration. Moreover, technology management is not limited to the setting up of mechanisms to identify and react to the above described changes, but also comprises the continuous absorption of new information and its application to production and related processes in order to stimulate product innovation. Technology management seeks a response to a series of questions including the following:

- How can technology be utilized to increase profitability?
- How can one best detect and predict technology trends?
- How can technology be used to maintain and strengthen competitive advantage?
- How should enterprises be organized in order to promote technological innovation?

- Which technologies should enterprises command for purposes of competitiveness, growth and profitability and which ones should be monitored because of their potential to out-compete?
- When should an enterprise acquire and discard technologies and how can this be done rapidly and effectively?
- How can technologies be effectively evaluated?
- How can technology best be integrated into the culture, strategy and objectives of the enterprise?
- How can the lead time for the development of new products and services be reduced?
- How can the contribution of technical expertise at the enterprise level be improved?
- How can multi-functional interdisciplinary projects best be managed?
- How can the linkages between all the organizations/agents of the technological development infrastructure and the enterprises be strengthened in order to promote technological innovation and more rapid technology diffusion?

As in the national industrial restructuring programme, technology management must also be conducted at three levels. At the global level a coherent technology policy is required, which ensures an appropriate institutional framework for technological education, research and development and the transfer and incorporation of technology. At the subsectoral level strategies must be developed for selected priority subsectors, which will enable them to upgrade product design, innovation and quality and promote specialization in order to take advantage of market opening. Finally, at the enterprise level and in particular in the more dynamic subsectors, the capacity to generate technological innovation must be created and/or stimulated.

Since the majority of the enterprises in the industrial sector in Costa Rica are small- and medium-sized and lack the financial and technical resources required to design and institute technology management programmes, there is a recognized role which the Government can play in stimulating such development. In this field, an important effort is being undertaken jointly by the Government of Costa Rica, the UNDP and UNIDO through the project "The Management of Technology and Information for Industrial Restructuring in Costa Rica". The project has two main components: the development of technology management nuclei (NGT) at the enterprise level and; the establishment of a technology management and industrial information centre. The former conforms to the third level of action of the National Industrial Restructuring Programme, the enterprise level, whilst the latter covers both global and subsectoral policy actions (levels one and two).

The basic idea of the technology management nucleus is to establish within a selected group of project enterprises a small nucleus of professionals trained in technology management (one of whom in industrial informatics) who will work closely with top management in identifying technology requirements and planning and creating the desired conditions for

successful technological innovation covering evaluation, selection, negotiation, adaptation, incorporation and improvement of exogenous technologies as well as internal innovation capacity development. The existence of such nuclei would improve competitiveness and also facilitate networking and given that initially they would benefit from subsidy in the form of seed capital from the project, the cost to the enterprises would not be beyond reach.

The establishment of a technology management and industrial information centre would complement the enterprise-level activities through the organization and provision of human resources development (in particular on-the-job training), technical assistance, research and promotion in all areas of technology management. The centre would utilize enterprise experience as a tool for the demonstration and transfer of technology and at the same time would serve to restrict unnecessary expansion of enterprise-level nuclei. As well as functioning as a forum for meetings of enterprise nuclei, the centre would also serve as an instrument for linking the technological requirements of enterprise with the science and technology infrastructure of the country.

The combination of the above two project outputs is expected to lead to: a larger pool of human resources trained in technology management; a programme of support for the creation and operation of enterprise level technology management units; a strengthening of the linkages between the productive sector and the scientific and technological infrastructure; the development of technology-based enterprises with export potential; a better formulation of technology development and management policies; and a broader based industrial restructuring programme which directs industrial activity to new and more dynamic subsectors.

## **2. FINANCING INDUSTRIAL RESTRUCTURING**

The financing of economic and industrial development is one of the key variables in promoting economic growth and the experience of development financing in Latin America over the past two decades bears witness to the numerous weaknesses of the national development financing structures, systems of financial intermediation and policies in the region. Leaving aside the question of the sound management of monetary and fiscal policy, this section seeks to concentrate on a brief review of the main issues relating to the role of the financial services sector in channelling finance to the productive sector. Independently of the degree of state participation in the financial sector, the relationship which exists between financial intermediaries and enterprises plays a vital role in determining entrepreneurial behaviour and industrial restructuring programmes must take this into account.

One of the main conclusions which emerges from the analysis of restructuring experience is that the process of industrial restructuring can only be successful if adequate resources are at the disposal of an efficient system of financial intermediation and are made available at reasonable cost. In fact, the restructuring of the financial system and financial intermediaries, including development banks, commercial banks and non-bank institutions, is in many instances a precondition for effective industrial restructuring. This requires a thorough evaluation of structures, supervisory and regulatory policies of the system as a whole. At the level of project credit allocation, whether it be for expanding capacity, technological development, joint ventures or export promotion, the establishment of sound

concepts and practice in project identification, preparation, appraisal and implementation is crucial.

The Costa Rican banking system is made up of the Central Bank, some twenty private banks, four state-owned commercial banks and two state-owned banks specialized in housing and community development. The state-owned commercial banks have wide experience in project financing. The main source of finance for the Costa Rican industrial restructuring programme is a \$39 million tranche of a World Bank structural adjustment credit (PAE II), which is being channelled through the state-owned commercial banks. A further \$34 million from the Inter-American Development Bank has been allocated to the National Science and Technology Council for technological change in priority economic sectors. A variety of other smaller credits and funds are also available, however, there exists a strong consensus that these resources are insufficient to cover the present industrial sector requirements given that the majority of the enterprise involved are already highly indebted and that the potential of domestic savings is extremely limited.

Since the end of the 1970s Costa Rica has implemented a number of financial reforms aimed at: modifying financial protection structures; liberalizing interest rates and stimulating domestic savings; improving the competition between the state and private sector banks; the establishment of new bank supervision norms; and improving the regulatory framework. At the same time a number of studies have been carried out concerning the establishment of efficient capital markets and the development of the national stock market. At present there exist a number of institutional and market rigidities in the financial system, which have resulted in limited investment finance available at higher cost due to a higher degree of financial intermediation.

An examination of the record of the special financial services provided by second-tier financial intermediaries and the technical support and monitoring services offered by first-tier institutions reveals a number of weaknesses. These fall into two categories: one relates to the quality of the services rendered and the other concerns the demarcation of responsibilities in the provision of different types of service and the assignment of a clear overall responsibility backed up by sufficient resources to effectively carry out industrial restructuring.

The following recommendations were made concerning the financing of industrial restructuring in Costa Rica:

- Given the limited resources available for industrial restructuring, there is a need to generate additional domestic savings, identify alternative sources of bilateral and multilateral external finance, and improve the effectiveness of resource allocation;
- The concentration of the available financial resources in a special Industrial Restructuring Fund, which could be placed in the hands of the Central Bank, was proposed;
- The responsibility for the provision of both financial and technical support services for the industrial restructuring programme should be clearly delineated;

- There is a need to upgrade the financial services in support of industrial restructuring including all aspects of project identification, preparation, appraisal and implementation;
- Financial intermediaries require improved information on macroeconomic, subsectoral and product group performance in order to carry out project analysis;
- The success of the Costa Rican industrial restructuring programme depends on a concomitant modernization of the financial services sector, the efficient functioning of capital markets and a reduction in the levels of intermediation in order that a greater element of competitiveness enters into financing industrial projects and that projects with higher, medium- and long-term economic rates of return can be undertaken.

### **3. UNIDO TECHNICAL CO-OPERATION IN SUPPORT OF INDUSTRIAL RESTRUCTURING**

UNIDO's technical co-operation includes both project operations which address specific technical and policy-related issues and promotional activities which cover areas such as investment and technology all of which are implemented at national and regional levels. Leaving aside projects of a regional character, a number of UNIDO-implemented projects have been and are in the process of being undertaken at the national level in Costa Rica. Of significance are the above-described project on the management of technology and information for industrial restructuring (see section V.1) and projects concerning specific issues and subsectors including small-scale industry, leather technology and agro-industrial development.

In the area of industrial restructuring, close collaboration has been established through an initial Special Industrial Services (SIS) project entitled "Assistance in the development of operative instruments for the execution of the Costa Rican Industrial Restructuring Programme" directed primarily at subsectors, information base, technology and investment promotion aspects of the Programme. The joint High-level Workshop, from which the present analysis has resulted, was organized in order to review the progress of the Programme and contribute to its consolidation and continuation. Both of these events are key elements in the proposal of a medium- to long-term industrial restructuring programme which would be jointly implemented by UNIDO and the Government of Costa Rica, the broad outlines of which are presented as follows.

The main objective of the project would be to contribute to increasing the competitiveness of Costa Rican industry through the provision of technical assistance in the formulation and implementation of industrial restructuring strategies simultaneously at the global policy level and at the subsectoral level through specific policies in selected manufacturing activities. The project would have as its counterparts the main actors in the industrial sector, the Ministry of Economy, Industry and Commerce, the Agency responsible for industrial restructuring and the Chamber of Industries and it would play an important role in promoting closer co-ordination and co-operation in industrial policy-making. Similarly, strong links would be developed with relevant ministries, research institutions and private sector entities such as CINDE as well as with the UNIDO/UNDP technology management project.

More specifically, the project proposed envisages assisting in the formulation and implementation of strategies, policies and policy instruments in a range of fields including industrial policy, information and incentives and their co-ordination, the establishment of an industrial restructuring fund, investment promotion, stock market development, tariff structures and policy, and training. In addition it would carry out a number of industrial competitiveness studies in selected branches and product groups which would lead to the development and implementation of action plans for restructuring. A minimum duration of two years is foreseen and the financing of the project would ideally be in the form of a joint agreement between the Government of Costa Rica, the Chamber of Industries, UNDP and UNIDO.

The basic rationale for the project lies in the fact that industrial restructuring to date has been based almost exclusively on the reduction of protective tariffs and a system of export incentives, which independently of the divestment of a number of public sector activities, has not stimulated the required industrial sector policy, institutional and structural changes. The project would then be seen as an essential complement to the process of commercial liberalization in the drive to facilitate economic adjustment and enhance the competitiveness of the Costa Rican industrial sector.

## VI. CONCLUSIONS AND RECOMMENDATIONS

### A. CONCLUSIONS

The following conclusions reflect a number of salient points which arose from the presentations and discussions in both the plenary and subsectoral sessions of the Workshop, from a deeper analysis of the supporting documentation, and from separate meetings and consultations held with a variety of representatives of the public and private sectors. They do not necessarily represent a consensus and should be seen as a guide from which a range of possible actions could ensue, some of which are made more explicit in the recommendations for technical co-operation contained in section B.

1. The process of industrial restructuring has many dimensions spanning institutions and policy-making, technology, marketing, finance and the change of attitudes regarding the organization of the productive sector for the exploitation of international market potential. It is an ongoing process, which requires the continuous reassessment of these dimensions in order that each set of measures and the policy framework as a whole stimulate technological innovation, human resource development, competitive production and marketing networks, a favourable investment climate and financial services support.
2. Industrial development in Latin America throughout the 1980s has been constrained by a number of factors which include: the lack of continuity in government administration and industrial policy; the lack of functional specialization of and within government and the bodies responsible for industry, trade, research and development and education; the inability to identify and grasp opportunities in the regional, subregional and international markets; the lack of networking in domestic production; the lack of decentralized approaches for mobilizing demand and resources; and the shortage of financial resources for carrying out industrial restructuring.
3. The Spanish industrial restructuring experience indicates that even though a subsectoral approach is adopted for industrial restructuring, the main reorganization must be implemented at the enterprise level with the aim of streamlining or creating competitive entities in those subsectors which for reasons of comparative advantage are considered of priority. Such a policy requires pragmatism and the stipulation that enterprises which are not viable will be closed down. The restructuring programmes must also be pragmatic and flexible enough to incorporate continuous reformulation. The programmes should also be seen as exceptional and finite in that their continuity over long periods of time would give rise to serious distortions in markets and in the allocation of resources.
4. There was a general consensus that given the relatively short period since the initiation of the Costa Rican Industrial Restructuring Programme, substantial progress has been achieved in its design and the determination of its scope, the establishment of mechanisms of concertation, and the carrying out of subsectoral analysis in support of the identification of restructuring strategies in selected industrial branches. An important contribution has been made to increasing the

awareness of entrepreneurs, public authorities and the community at large of the need to undertake industrial restructuring. The Programme represents a unique initiative and an invaluable experience in the subregion and in Latin America as a whole and its goals of increasing the competitiveness of Costa Rican industry must be pursued in the context of a greater resource base with due attention being given to the implications for the countries of the Central American subregions.

5. A number of aspects of the programme, however, require specific attention: First, the entity which is to be given the overall responsibility for the implementation of the industrial restructuring programme must be given a clear mandate and should possess both the credibility and sufficient financial and human resources to be able to successfully co-ordinate and implement restructuring programmes which reach down to the enterprise level; such an entity would thus not need to be constricted by unwieldy institutional monitoring machinery.

Second, the efficiency of the mechanisms for concertation, in particular those relating to the subsectoral level (the CES) requires improvement in order that such mechanisms do not function as bottlenecks. There is a tendency to see concertation and its institutionalization as a panacea for the lack of competitiveness, when in fact it is only an initial step in identifying and solving the constraints faced by the productive sector, which in itself will not lead to greater competitiveness and may even retard the process of increasing the efficiency of the industrial apparatus. The government then, must take the initiative in making important decisions in the absence of consensus.

Third, the Costa Rican Industrial Restructuring Programme materialized as a result of the changing international and domestic circumstances of the 1980s. Macroeconomic disequilibria prompted public sector divestment and commercial liberalization, which formed the basis of the industrial restructuring programme and the institutional and policy framework and variables were modified accordingly. At the same time, a technology management programme was set up. The dispersion of efforts to redress the structural adjustment problems has led to the emasculation of the ministry which should play a leading role in directing the industrial restructuring programme and the establishment of a programme linked to events of the past instead of one which adopts a forward-looking approach. A balance must be maintained between the concentration on the penetration of external markets, especially extra-regional markets and the defense of the internal and subregional market which can also contribute to the strengthening of technological capacity and competitive advantage.

Fourth, the subsectors chosen for analysis and incorporation into the programme tend to reflect traditional industrial activities, to the detriment of the search for new technology and information intensive industries which offer greater potential for industrial modernization. The selection of priority subsectors should therefore not exclude the possibility of aggregating new areas of interest.

Fifth, an effective industrial restructuring programme requires a clearly defined set of complementary policy instruments ranging from industrial, financial, fiscal, commercial and technological incentives. Furthermore it should be supported by a comprehensive system of



information which can serve as a tool for policy and programme formulation and monitoring.

6. The question of financing industrial restructuring is recognized as being of crucial importance to the success of programme implementation. In fact, the restructuring of the financial system and financial intermediaries, including development banks, commercial banks and non-bank institutions, is in many instances a precondition for effective industrial restructuring. This requires a thorough evaluation of structures, levels of intermediation, and supervisory and regulatory policies of the system as a whole. In Costa Rica there is currently a relatively high margin of intermediation, which has contributed in part to the prevailing high real rates of interest. Although a number of financial sector reforms have been implemented, it was unanimously agreed that the resources available for industrial restructuring were insufficient and generally of high cost. The banking system has not been able to effectively channel resources to productive investment which lead to industrial modernization. A significant proportion of the resources available stem from technological development projects, which despite being an essential part of industrial restructuring, have their own specific objectives, which need not necessarily result in the promotion of the ideal industrial restructuring policy-making environment. The development of a special industrial restructuring fund or financing programme is called for, which could be directly linked to or located within the banking system or the entity responsible for the industrial restructuring programme. Such a fund must be endowed with adequate financial resources and must possess the expertise to be able to undertake sound project identification, preparation, appraisal and implementation. The issue of whether the financial services and the supporting technical services or real services should be fused in the same entity requires careful scrutiny and ideally should be determined in advance of the implementation of the restructuring programme.
7. At the subsectoral level it can be observed that those branches selected for analysis expanded within the context of the Central American Common Market. They have since contracted due to the economic situation of the early 1980s and are increasingly being subjected to external competition as a result of the commercial liberalization programme. In the absence of the levels of fiscal incentives and export rebates, which currently apply, most of these branches would encounter difficulty in maintaining their shares of domestic and export markets. The majority of the branches analyzed display the following characteristics which negatively affect competitiveness:
  - low productivity;
  - lack of specialization;
  - inadequate quality control systems;
  - outdated technology and insufficient R&D;
  - lack of knowledge of modern techniques for the organization of production, management and marketing;

- limited existence of linkages between small and larger enterprises and between agriculture and industry.

In order to redress this situation, comparative advantages must be built up on the basis of:

- (a) economic and political stability which promote a good investment climate;
- (b) technology management and organization capabilities;
- (c) plant-level restructuring which leads to technical and cost advantages; and
- (d) aggressive marketing strategies.

It is therefore essential that the industrial restructuring programme comprise an integrated system of support, which spans the various policy areas including agriculture, industry, science and technology, trade, finance, human resources and others. Only then can the enterprise level projects based on company audits reap the benefits identified. In this context it was recommended that the industrial restructuring programme of the Government of Costa Rica be broadened to include a wider range of enterprise projects and that the participation of all relevant entities be actively solicited. The latter refers, in particular, to areas of investment and export promotion where, contrary to indications that there exists an institutional vacuum, the activities of the institutions which presently operate need to be strengthened and co-ordinated in support of industrial restructuring.

8. The Workshop was successful in reinforcing the process of concertation between Government, private industry and scientific and technological institutions in the implementation of the Costa Rican industrial restructuring programme. The domestic experience and industrial sector development was closely analyzed and discussed in the light of the international context and the continuity of the national efforts was boosted. Numerous recommendations relating to subsectoral competitiveness, the financing and implementation of industrial restructuring programmes resulted. A formal agreement was signed by the Government of Costa Rica and UNIDO which paves the way for the promotion of new industrial sector support mechanisms for technical assistance in the field of industrial restructuring.

#### **B. RECOMMENDATIONS FOR FUTURE TECHNICAL ASSISTANCE**

Within the context of the above-mentioned agreement signed between the Government of Costa Rica and UNIDO, a number of recommendations for future technical assistance emerge. One in particular concerning technical support for the process of industrial restructuring is the proposal (see Chapter V, section 3) for a jointly implemented UNIDO/Government of Costa Rica medium- to long-term industrial restructuring programme. This programme would provide technical assistance and advisory services in the formulation and implementation of industrial restructuring strategies and policies at the sectoral-, subsectoral- and enterprise-level. The initiation of such a programme is of great importance and could also address a number of the

questions which remain unanswered concerning the institutional framework for industrial restructuring. Similarly, the relationship between such a project and the ongoing project on the management of technology and information for industrial restructuring (see Chapter V, section 1) must be examined. If two projects are to subsist, a clear definition of the scope of each and the linkages will be required.

At the subsectoral-level, a variety of recommendations are made in sections 1 to 5 of Chapter IV which could entail technical co-operation. These range from: further subsectoral analysis (fruit and vegetable processing); industrial policy and strategy advice (pharmaceuticals and others); market-oriented opportunity studies (pharmaceuticals, leather footwear, fruit and vegetable processing, metalworking); enterprise audits (textiles); technology management and quality control; and training (pharmaceuticals).

In the area of finance, technical co-operation activities could be developed in support of the modernization of the banking sector and in the analysis of the feasibility of establishing an industrial restructuring fund. These would extend to areas of investment promotion and project identification, preparation and appraisal.

The undertaking of analysis of industrial subsectoral and policy issues has been a fundamental activity of the project in support of the Workshop which brought together representatives from government, industry, R&D institutions, international organizations and other countries in the subregion. The regional dimensions of the issues presented and discussed cannot be ignored and it is recommended that these activities be extended throughout the subregion in order to create a body of information and channels of communication on industrial restructuring, which could serve as a basis for the development of a comprehensive industrial modernization programme for the Central American subregion.

## ANNEX I. Agenda of the Workshop

High-level Workshop on  
Industrial Restructuring in Costa Rica

San José, 4-6 April 1990

### Wednesday 4 April 1990: Plenary Session

- 08:30 Registration of participants
- 09:00 Opening of the Workshop  
 - President of the Chamber of Industries  
 - Minister of Economy of Industry and Commerce  
 - Director-General of UNIDO  
 - President of the Republic.
- 10:30 **BREAK**
- 11:00 International trends, policies and experiences in industrial restructuring and competitiveness: Implications for Latin America (Head of the Regional and Country Studies Branch, UNIDO)
- 12:00 International experiences in industrial restructuring: The case of Spain (Mr. Mauro Lozano, UNIDO consultant)
- 13:00 **LUNCH**
- 14:30 The Costa Rican Industrial Restructuring Programme experience (Co-ordinator: Mr. Jorge Manuel Dengo, First Vice-President of the Republic)
- (a) Industrial policy and the industrial restructuring programme (Mr. Antonio Burgués, Minister of Economy, Industry and Commerce);
- (b) Science and technology policy (Mr. Rodrigo Zeledón, Minister of Science and Technology);
- (c) The role of the industrial restructuring agency (Mr. José Manuel Salazar, Executive President of the Costa Rican Development Corporation (CODESA));
- (d) The insertion of Costa Rica in third markets (Mr. Luis Diego Escalante, Minister of Foreign Trade);
- (e) The role of the private sector in industrial restructuring (Mr. Samuel Yankelewitz, President of the Costa Rican Chamber of Industries).
- 16:30 **BREAK**
- 17:00 Continuation and debate/questions and comments

Thursday 5 April 1990: Subsectoral working groups (simultaneous sessions) on the following subsectors:

- leather footwear
- metalworking
- textiles
- pharmaceuticals
- processed fruit and vegetables

08:00 Presentation of the international trends in each subsector  
 Leather footwear: Odd Birkhaug, UNIDO consultant  
 Metalworking : Alejandro Ramos, International consultant  
 Textiles : Walter Crowther, UNIDO consultant  
 Pharmaceuticals : UNIDO staff member  
 Processed fruit  
 and vegetables: Fernando Sanchez, UNIDO consultant

09:00 Presentation of subsectoral competitiveness analysis  
 (a) International expert and national counterpart  
 (b) Industrial restructuring agency

10:30 **BREAK**

11:00 Panel discussion on strengths and weaknesses of individual subsectors

13:00 **LUNCH**

14:30 Requirements for subsectoral development and industrial restructuring  
 (a) technical assistance requirements  
 (b) financial requirements  
 (c) the subsectoral industrial policy framework.

16:00 **BREAK**

Thursday 5 April 1990: Plenary session

14:30 The financing of industrial restructuring: sources, conditions and prospects (Mr. José Salaverry, UNIDO consultant)

16:00 **BREAK**

16:30 Presentation of conclusions of the subsectoral working groups and the Workshop

18:00 Signing of a letter of intent on co-operation in industrial development between the Government of Costa Rica and UNIDO

Friday 6 April 1990: Plenary session

08:30 Analysis and discussion of the conclusions of the subsectoral working groups and the Workshop

- 11:00 Technology management and industrial restructuring  
(Mr. Fernando Machado, UNIDO Chief Technical Adviser)
- 12:00 Presentation of an overview of the framework for developing a  
UNIDO medium-term technical co-operation programme in  
industrial restructuring (Mr. Juan Carlos del Bello, UNIDO  
consultant)
- 13:00 Closure of the Workshop.

**ANNEX II. List of documents presented at the Workshop**

Birkhaug, Odd	Informe sobre la rama calzado, ONUDI, marzo 1990.
Corporación Costarricense de Desarrollo	Potencial y aspectos fundamentales de la competitividad de la metalmecánica, abril 1990.
Corporación Costarricense de Desarrollo	Principales características, desempeño reciente y comercio exterior de la industria farmacéutica, abril 1990.
Corporación Costarricense de Desarrollo	Principales características, desempeño reciente y comercio exterior de la industria textil, abril 1990.
Corporación Costarricense de Desarrollo	Principales características, desempeño reciente y comercio exterior de la industria del calzado, abril 1990.
Corporación Costarricense de Desarrollo	Programa de reconversión industrial: Presentación, abril 1989.
Crowther, Walter	Industrial restructuring of the textile industry in Costa Rica, UNIDO, April 1990.
Del Bello, Juan Carlos	Marco general de referencia de un proyecto de asistencia técnica de mediano plazo a la República de Costa Rica en política industrial y programa de reconversión industrial, ONUDI, 1990.
Del Bello, Juan Carlos	Pautas para estudiar la competitividad internacional de actividades industriales seleccionadas, ONUDI/CODESA, marzo 1990.
Doryan, Eduardo y Machado, Fernando	La gestión tecnológica como hilo conductor de la reconversión industrial: conceptos básicos y la experiencia de Costa Rica, MICIT/PNUD/ONUUDI, agosto 1989.
Fekete, György	The pharmaceutical industry of Costa Rica: Recommendations for development and improvement of performance, UNIDO. April 1990.
Jimenez U., Manuel	El sistema de información de la agencia de reconversión industrial, CODESA, abril 1990.
Lozano Belda, Mauro	Experiencias internacionales de reconversión industrial: El caso de España.

- Olaso, Maria Isabel El financiamiento como instrumento de politica para promover la modernizacion industrial en costa Rica. CODESA, abril 1990.
- Salaverry Llosa, José A. Aspectos financieros relevantes al programa de reconversión industrial de Costa Rica, ONUDI, abril 1990.
- Salazar, José Manuel y Doryan Garron, Eduardo La reconversión industrial y el estado concertador en Costa Rica. CODESA, septiembre 1990.
- Sánchez, Fernando Informe sobre el sector de procesamiento de alimentos. ONUDI, abril 1990.
- Sector de Economía y Comercio El programa de reconversión industrial en Costa Rica, abril 1990.
- United Nations Industrial Development Organization (UNIDO) International trends, policies and experiences in industrial restructuring and competitiveness. April 1990.
- Zuñiga Sáenz, Roy Normalización: Definición, importancia y otras notas importantes. CODESA, abril 1990.