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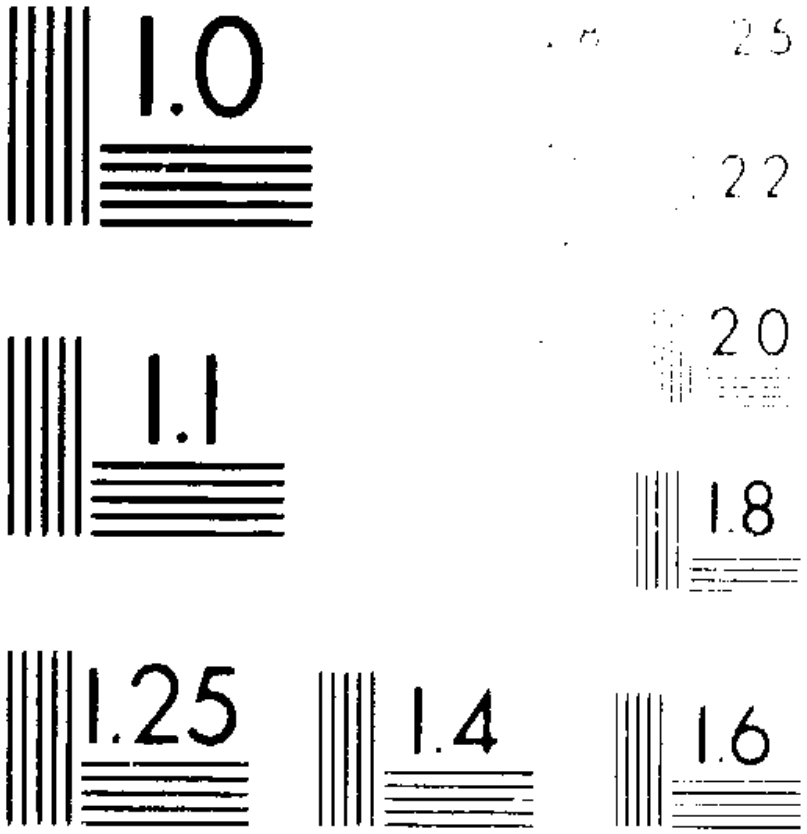
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LATIN AMERICA AND THE CARIBBEAN

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Regional development in selected areas

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I. INTRODUCTION

One way of achieving a major impact of UNIDO in the process of industrial development in Latin America and the Caribbean could be through the operation of projects and programmes executed at regional level. Available national expertise in existing institutions, human resources of the region and similarity of requirements for industrial development call for more co-ordinated action through UNIDO's regional programme.

The Senior Industrial Development Field Advisers (SIDFAs) in the region concerned with the above aspects have prepared the various papers included in this document, which will serve as a basis for discussion at the Second Regional SIDFA Meeting for Latin America and the Caribbean, being held in Mexico City at the invitation of the Mexican Government, between 10 and 14 December 1984.

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II. REGIONAL PROGRAMMING AND INTER-CHANGE OF AVAILABLE EXPERTISE WITHIN PROJECTS AND COUNTRIES

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Colombia

1. Latin America current economic crisis

One of the most important problems faced by Latin America today is the magnitude and structure of its foreign debt. For many years, Latin America maintained foreign debt levels that were apparently adequate to its Gross National Product (GNP) and exports levels. Without a doubt, the foreign debt did not pose a threat to the economic development or stability of the region, but contributed to finance its growth.

By the end of December 1983, the total debt of the region reached $310 billion. This figure is equivalent to 3 1/2 times the value of Latin American regional exports and actually it is the largest foreign debt for any region of the world.

In any event, the magnitude of this debt appears to be disproportionate to these countries' ability to pay. Given Latin America's Gross National Product and export values, the magnitude of the foreign debt has reached dangerously high levels. Moreover, over the last five years this region has been experiencing unfavourable terms of trade and reductions and even outflows of capital which reduce the payment capacity of the region.

1.1 The financial crisis

The conditions referred to above would appear to lead to default by the debtor nations. Indeed, the borrowing countries need to generate substantial net foreign exchange earnings to amortize their debt. Unfortunately, the current unfavourable terms of trade conditions tend to reduce the value of exports, and the outflows of capital further reduce the foreign exchange earnings available to amortize the foreign debt.

1.2 Current remedies to the crisis

Various efforts have been made to find a permanent solution to the crisis. The economic authorities of the Latin American countries, the International Monetary Fund, and the international commercial banking community have tried to co-ordinate efforts in order to find an adequate and permanent solution to the problem.

The criteria that have prevailed at the IMF consist of a set of prescriptions to the debtor countries. They include reductions of imports, reduction of government expenditures, and liberalization of trade.

1.3 Evaluation of current policies

In general, the problem with the application of these policies is that they tend to create a liquidity mirage that is perceived by everyone as beneficial. Nevertheless, the secondary effects of these policies are so disastrous that they actually end up increasing both the default and maturity risk of the lenders. The Latin American countries are being forced one by one to reduce imports and increase exports to generate additional foreign exchange liquidity that would allow them to service their foreign debt.

Nevertheless the production structure of the Latin American countries in the last thirty years has been experiencing substantial transformations that make it dependent on imported resources. Therefore a reduction of imports will cause immediate contraction with a consequent reduction of output and exports due to the close linkages of inter-related industries in their overall production structure. This chain of events has created the most severe recession experienced by the Latin American countries since the 1930s. On the other hand unemployment in the area is very severe and may be reaching the limits of social tolerance.

2. Trade equilibrium in the region

At the Latin American Economic Conference in Quito early this year the countries of the region agreed to establish a number of measures that will increase trade amongst themselves at the expense of countries from outside the region particularly through subregional trade organizations such as the Andean

Pact, ALIDE and others with particular emphasis on agro-industry and capital goods.

In fact several countries have by now gone too far in their reduction of imports and tariff barriers or outright prohibition of imported goods. These measures have been applied indiscriminately to countries from inside and outside of the region alike.

The only way to increase co-operation when there is such strong pressure on the achievement of equilibrium in the balance of payments of individual countries is by establishing a trade matrix between countries in a way that the sum of the value of imports and exports for any given country is close to zero.

Many of the Latin American countries at subregional levels compete between each other and in foreign markets with the same products, while importing capital goods which are mainly manufactured outside the region.

The first step required to increase trade, enlarging the possibility of a balanced trade off between countries, is to obtain homogeneous products regarding quality and price that may compete in equal terms in the international market.

3. Trade equilibrium requirements in industrialized production

Apart from a few countries in the region with up-to-date metrology and quality control establishments, the lack of these facilities in most countries is the most serious factor to obtain manufactures or agro-industrial products of a quality accepted by the international market.

Many of the countries in the region also have to undergo heavy imports of food products which could easily be produced by themselves and exchanged through regional trade. Without quality control and specialization, it will be very difficult for these countries to compete in the capital goods market. Up-to-date technology and an effort to train managers in modern administration of factories and marketing is a necessary complement.

The cost of providing technical assistance across the board for the benefit of all Latin American countries in these areas with the present lack of funds invites the creation of ingenious schemes with great synergy and imagination.

4. Integrated technical assistance at regional level

The present scarce resources for technical assistance could best be deployed if the assignment of funds to projects is suggested both in terms of the country and regional requirements in such a way that a fruitful exchange of expertise within the region could take place which would reduce considerably travel costs and man/months required to achieve the technical assistance objectives.

The reduction in costs may be estimated at anything between 30 and 60 per cent depending on the type of project and the timely programming of available resources. On the other hand, such a system will require the strengthening and some increase in the resources of the SIDFA offices to do the extra planning and programming required, but the additional cost will be small in comparison to the greater number of projects and activities that could be executed by UNIDO in Latin America.

5. The experience in the Pacific Coast

The countries of Bolivia, Chile, Colombia, Ecuador, Peru and Venezuela could very well constitute an excellent area to initiate such a plan of integrated assistance, and indeed in the last three years a certain adaptation of UNIDO projects to the common objectives of these countries has taken place.

Due to the similar development of these countries in certain areas of industrial and agro-industrial production it has been possible to combine synergetically the activities of several experts in different countries and to initiate TCDC activities at the same time.

The following projects could be mentioned in this context as being susceptible to an integrated treatment in the delivery of UNIDO technical assistance:

(i) Capital goods in Venezuela, Colombia, Ecuador and Peru. Currently there are ongoing projects in this area in the first three countries and Peru is expected to start soon.

(ii) Copper bacterial lixiviation in Chile, Peru and Bolivia. There are currently two projects under negotiation in the first two countries.

(iii) Modular timber bridge construction. There are projects now approved in all countries except for Colombia and Venezuela which will be joining the technology later on.

(iv) Wine production is currently being improved in Bolivia, Chile and Peru with possible extension to Ecuador, Colombia and Venezuela.

(v) Technical assistance to agro-industrial production export-oriented activities, in the areas of food and furniture production for export, are taking place in Peru, Ecuador and Bolivia.

6. Administrative procedures

In order to make good use of available expertise, some changes in the administrative procedures of UNIDO will have to take place in order that experts could move from one project to another in different countries and under the same contract as far as the relation UNIDO-Expert is concerned.

The present situation does not allow for this new approach to increase the efficiency of UNIDO technical assistance delivery. In a recent case more than 38 cables were interchanged in order to schedule the activities of an expert under three contracts for projects in Bolivia, Ecuador and Peru and yet a delay of one month was still incurred in the technical assistance schedule.

In order to plan these combinations, it is important that SIDFAs, as is the case in other executing agencies, could engage non-specified experts to prepare an overall plan for similar projects operating in different countries.

Recently a UNDP team has been analyzing the possibility of the national airlines providing free tickets on flights with spare seats in order to reduce the cost of TCDC programmes. This together with the establishment of a

computer roster of available experts in the region could provide the necessary breakthrough for TCDC activities in the region.

Finally, when experts move within a region, the counterparts have to take over the direction of their projects for short periods of one or two months and the evaluation of their capacity and training can be done much more efficiently and at a considerable reduction in the cost and time of the technical assistance required.

III. SMALL-SCALE INDUSTRIAL DEVELOPMENT IN CENTRAL AMERICA

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Guatemala, Nicaragua,
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The Central American countries, though there are differences among them, are mostly rural countries suitable for the agriculture and the great part of their population is concentrated in the rural areas.

The countries make regional joint efforts to achieve their development, however, up to the moment this has not been very successful. There is an intention to industrial development, but only a few countries, in certain branches, have achieved a relative development, though, many times this resulted in protected industries in limited markets and using imported raw materials and other imported inputs. In addition, the world economic situation and internal political situation of the Central American countries (Costa Rica, Nicaragua, El Salvador, Honduras, Guatemala and Panama. Belize escapes the Central American context because of its ethnic and English speaking origin, and is placed within the Caribbean context) have severely affected the entire economic activity and consequently the economic development and growth. The international economic depression has been felt severely in this region affecting particularly the external sector, which has directly affected the productive sectors of the countries.

The socio-political events, on the other hand, have caused a reduction of private investments, massive decapitalization, increase of internal debt and lack of financing capacity, continuing decline of the interregional markets, closing of enterprises and an exodus of qualified personnel.

Within this context, the industrial sector has been one of the most affected, because this sector is highly externally dependent and the decline of international reserves has limited the utilization of foreign currency to

purchase industrial inputs. At the same time some countries have devalued their currencies or created parallel markets in the last years e.g. Costa Rica (8.20 to 48 Colones), El Salvador (2.50 to 3.95 Colones). Nicaragua created a parallel market of 10 to 28 Cordobas. This affected even more the inter-regional market creating many problems within the compensatory Central American banking system.

Actually, this economic and political crisis has emphasized even more the deficient Central American industrialization process, which is sustained by basic goods exports with limited industrialization, industries which inputs depend on external supplies, with protected high prices in a limited market which has been reduced even more.

Furthermore, this economic context has been aggravated by the political situation of the region, which has deteriorated in the last years. Although efforts are being made by governments such as El Salvador's to open a dialogue with the guerilla in order to solve together the problems of the country, this is still an initial effort as the combats are even increasing in some areas of the country. In Costa Rica, the unemployment has increased considerably and even the people of the working class as well as in the rural areas openly show their dissatisfaction. In Nicaragua the attacks of the "contras" have increased in the last months. In Guatemala a violent climate has exploded in the last weeks especially in the capital city. In Panama a positive change is expected with the return to democracy. In Honduras there have been efforts to destabilize the democracy and the main political parties are internally divided.

Within this context we should consider that the technical, economic and social conditions in which the small scale industry has developed in Central American countries, are similar in most aspects, however they differ in the approach and importance that their governments have given to strengthen their development. In the regional context these are also different from other Latin American countries that have reached a higher level of development.

The conditions of the small scale industry in Central America, which represents an appreciable proportion of the total number of manufacturing enterprises, a significant figure of employment, but a small participation in the economy of the countries, have not varied very much in the last years.

They continue to be characterized by a slow growth as a result of the lack of productivity and efficiency, difficulties to have access to financial sources, political and social instability (increased in the last years), marginal participation of most of the population in the economy of the country (especially those from the rural areas), the utilization of rudimentary techniques and the absence of quality control, inadequate marketing systems, lack of managerial capacity, etc. In addition, the rejection of the small industrialists to receive assistance.

In spite of these problems, the small scale industry has acquired economic and social importance in the region, and the countries are giving it, within their national development plans and programmes, the importance it deserves.

Efforts are being made to develop an integrated and well-systematized small industry. One of the efforts to achieve this objective is the creation or strengthening of institutions responsible for the promotion and development of small industries such as the Centro de Desarrollo Industrial (CDI) in Honduras, Dirrección de la Pequeña Industria y Artesanía in Costa Rica, Dirección de la Pequeña Empresa in Panama and the Instituto Tecnico de Capacitación y Productividad (INTECAP) in Guatemala. El Salvador has also organized a special committee to define the country's policy regarding the small industry. Nicaragua is presently analyzing the sector in order to define what actions the government should take. It seems that the government is endeavored to develop the small rural enterprise.

Parallel to these actions and with the support of the international banks, one of the main actions taken was the provision of industrial credit through banking institutions and the creation of guarantee funds. Even though this activity has a promotional and development objective, these have not been achieved because of the existing lack of capacity of the governments to implement adequately the financial system, to improve the credit worthiness of the small-scale entrepreneurs and to provide technical assistance in most of the countries. In Central America there is now a general consciousness that the small industrialist should be given not only financing for the acquisition of machinery and equipment and/or for working capital, but rather permanent technical assistance and monitoring for a better utilization of resources is needed.

All these actions taken by the countries in favour of the small scale industry i.e. legislation, financing, institutions for the development of small and medium industrialists, have not had the expected impact and/or results due to the lack of an implemented system that combines all technical and economic assistance, legislation, promotion, sectorial interrelation and government support factors.

In view of the existing situation, all countries of the region, in a different way, are giving a significant priority to the support of the integral development of the small and medium scale industry, as it is considered in the development plans and in the different programmes under preparation and/or execution. The governments have realized that the small scale industry provides the people opportunity to work, to utilize their own capacity and to produce for its own and others' benefit, that the rural inhabitant needs to increase his production, maximize the utilization of the agricultural products and other local resources, and that he could produce profitable goods for his community and/or communities. At the same time the governments intend to create employment opportunities in the rural and/or marginal areas with the worker's own efforts, a little investment and suitable assistance. It should be considered the existence of a basis in all developing countries for the development of the small industry, whatever their economic system may be.

The role of UNIDO

UNIDO's technical assistance approach to Central American countries should be oriented to develop activities where a good share of the population especially from marginal, rural and depressed areas could participate. This assistance will help them improve their life conditions through the development of productive activities that utilize local and national resources and that can supply them with basic goods as food, cloth and housing. Moreover, activities that can also improve the sectorial development such as health (basic medicaments, medicinal plants, construction of wooden health centres), education (construction of schools, using cement, blocks and wood, and the manufacture of wooden furniture).

Having in mind the above, UNIDO's role in the region could be mainly giving assistance to develop an integrated small scale industry.

There will be no repetition of the reasons why the small scale industry in the region should be supported, as these are obvious, but we are conscious of the important role UNIDO should play supporting the countries to achieve their industrial development.

The approach could be different in each country bearing in mind the priorities given by the governments, some of them might require an integrated general development, for others emphasis should be given to the rural areas, or to the marginal areas. A programme of assistance for the small scale industry must be a long-term programme designed to achieve outputs and to establish an infrastructure within the country that enables the country to carry out these activities.

At present UNIDO's assistance to the region in the field of small scale industry is as follows:

Country	Status	Amount	Additional Funds Required
Honduras	Ongoing	1'3	Yes
Nicaragua	Ongoing (short-term assistance)		Yes
Panama	Completed/New Profile (Prep. Assistance)		Yes
Costa Rica	Profile (Preparatory Assistance)		
Guatemala	Profile (Preparatory Assistanc)		
El Salvador	Profile (Preparatory Assistance)		
Belize	Profile (Preparatory Assistance)		

Although Central American countries are mostly rural based, a wide development of the agroindustrial sector cannot be expected in all of them, however, this is an activity where UNIDO could play a key role, since the countries require to utilize their maximum agricultural capacity in order to supply food and basic goods to their population and to increase their capacity of exports. Some efforts have been made by UNIDO in this field, with successful results, as those of El Salvador where the good design of the prodoc has permitted the identification of agroindustrial opportunities, establishment of pilot plants, training of personnel as well as carrying out support activities as quality control (strengthen by another recently approved

project), policies for agroindustrial development, etc. Proper programmes for UNIDO's assistance in this field are under discussions with the governments. In Honduras a project document is under preparation, in Costa Rica a profile has been submitted for fund raising and in Panama the project is to be discussed with the new government.

Another important area where UNIDO could be very effective is the modular wooden construction such as wooden bridges, which enable the rural population to be integrated into the economic development of the country. Activities in this field are carried out in Honduras (10 bridges have been constructed) and Nicaragua. Requests are being submitted by Costa Rica and Guatemala. Belize was very interested in these activities, but up to the moment no reaction has been received from the government. An activity very related to this one is the production of wooden modules for low-cost houses, health centres, and schools that can be produced locally and constructed by the community. A first experience in this field will start in Honduras with the extension of the wooden bridges project and with British assistance through the Timber Research And Development Association (TRADA).

Among the main fields for UNIDO's activities, we could also mention the pharmaceutical industry, especially oriented to the production of basic medicaments. At present, we are doing efforts with the WHO at a regional level for the supply and production of some products. At the national level, UNIDO is assisting the pharmaceutical industry development in Nicaragua. For Honduras an expert will be requested for a two-months mission in order to make recommendations for the production and rationalization of pharmaceuticals. Within this area medicinal plants should also be considered, where at present some activities are being initiated in Guatemala.

The metal mechanics sector also offers a good field for UNIDO's activities especially for the production of agricultural implements (as proposed for Nicaragua), establishment of a workshop for the production of spare parts and minor metal products utilized by the large industry.

Among the support activities, one of the most importance is the standardization and quality control. Although the countries have realized the importance of this activity, not much effort has been done in favour of them. A regional project was proposed some years ago, which is still valuable for

the region and could be of rather importance for the development of the other above-mentioned activities. Transfer of technology as well as appropriate technology are also interesting for the region.

Many other activities can be subject to UNIDO's assistance, but with very specific or complementary objectives in some countries. Other wooden industries could be of relevant importance for Honduras and Costa Rica. Or textiles as the specific cases of El Salvador and Guatemala. Leather industries in Costa Rica and Honduras and ceramics industry in Costa Rica and Guatemala.

Annex I

Requirements of Technical Assistance for the SSI Development

1. Promotion and Assistance

To stimulate entrepreneurship and attract prospective entrepreneurs to industrial activities, offering technical, economic studies of the small scale industry. The studies could be set up in different parts of the country indicating availability of raw materials, human resources, marketing, etc. The assistance should be given to establish and carry on small plants.

2. Technical and Managerial Assistance - Extension Services

Assistance should be given to small industrialists in the most required aspects such as planning, constructing, operating and managing their enterprises. Guidance should also be provided in the selection of materials, machinery and tools and their efficient utilization in production, operation, maintenance and repair of machinery, techniques of production, testing, quality control procedures, packaging, storing, marketing, and on-the-job training.

A very important aspect is the management development. Guidance and training to conduct a business including organization, production, planning and control, inventory control, cost accounting and marketing techniques.

3. Financing

To be entirely effective, the assistance should be supported by complementary programmes. Since small industries have difficulties in obtaining credit, they require special measures for financial assistance. We must bear in mind that the main feature of financing small-scale industries is the linking of technical to finanancial assistance. Credit supervision therefore is required with technical assistance inputs.

4. Training

Training is an important part of small scale industry programmes, whether it is provided directly to small scale entrepreneurs, in a special institution (national or international) or on-the-job-training. Through this activity the government counterparts will be prepared to assume directly the functions of technical and financial assistance and to create a technical capacity in the country.

5. Other

A programme of development of the small scale industry should include policies such as tax and custom benefits, priority location, furnishing of scarce raw materials, preferential purchase of small industries products by government agencies, export promotion measures.

IV. PRODUCT DEVELOPMENT GUIDELINES (HANDICRAFTS)

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Cayman Islands, Haiti
Turks and Caicos
Dominican Rep.

1. Industrial design for fashion-oriented industries

The following paper is a working guideline for planning development programmes in those sectors of the economy where styling and design are required. These include furniture, home furnishings, upholstery, gifts, fashion accessories and craft products. It is in this last category that guidance is urgently required because it affects the livelihood of a great number of artisans, craftsmen and craftswomen in the urban and rural parts of the country. Handcraft is no longer a social welfare sideline but has become big business. Craft product development can bring immediate remuneration and help to alleviate lower income created by seasonal post-harvest depression in agricultural areas, generating jobs in urban zones and utilizing semi-skilled labour and younger workers.

Countries such as China, India, Indonesia and Japan have learned to merchandise and redirect their traditional crafts for modern marketing outlets in the west. These major craft producing nations are also influenced by style and fashion trends of US market requirements which are themselves directly and indirectly influenced by design trends in Italy and France.

The requirements of "changing fashion" marketing crafts in industrialized nations is something which has been increasing for the last 30 years; these requirements are becoming more sophisticated and demanding as craft products find a permanent place in contemporary interiors.

Many craft products are now found as classics in normal inventories of department stores and sell in a variety of departments such as furniture

accessories, furniture, products for the kitchen and gourmet departments, living and interior departments, serving accessories, fashion accessories, rugs, screens with decorative, semi-utilitarian and utilitarian applications.

In planning multilateral assistance or bilateral assistance for crafts, there are a variety of methods tailored to suit the country, the crafts, and the market concerned.

Craft assistance programme record from 1949-1984 - some highlights

A brief review of successful assistance programmes which have had an impact on the economies of nations through the development and organization of craft industries would be useful.

The Ford Foundation programme in Italy in the 1950s was one of the first pioneers of this type of assistance.

In the late 1950s, the US International Cooperation Administration (ICA) commissioned three major industrial design firms in the US to develop and reorient the traditional craft industries of Iran, Pakistan, Afghanistan, Africa, Israel, Lebanon, Syria, Kampuchea, Laos and Vietnam.

The OECD in Paris pioneered two major projects in craft development, one for the island of Sardinia in Italy and the other for Greece.

In the 1960s, the ICA changed its name to the Agency for International Development (USAID) which spent more than US$ 5 million in a regional multi-country project in South America called "Products for the Allianza" which assisted Ecuador, Colombia, Peru, Bolivia and Chile.

In the late 1960s some nations independently determined priority programmes for the development of crafts and among the first were India, Israel and Jamaica.

By this time, the UNDP began to see that this type of assistance was vital and valuable for employment generation and began programming projects through the ILO. One of their most successful projects was in Indonesia which began in 1969.

Assistance to crafts: Jamaican programmes 1963-1984

In Jamaica in 1965, through the leadership of the Ministry of Development and Welfare, the Government decided to initiate a major craft development programme by requesting UNDP/ILO Special Fund assistance in recruiting top designers to influence and assist the private sector and Jamaican independent craft producers. It also established a parastatal organization called "Things Jamaican" to serve as a research and development unit for product development and production. The diversification of designs evident in Jamaican crafts today, is mostly due to this initial effort. Many Jamaican designers and artists were involved in this effort: the Jamaica School of Art, the Jamaica Fashion Guild contributed ideas which are now incorporated in Jamaican traditional productions. Jamaican designs have been copied all over the Caribbean. Many classical patterns in straw and wood were created by the workshops of "Things Jamaican" and many Jamaican private sector producers later used the designs that were created by this development. Some examples are the onion bottle decanter of Port Royal which is presently being used by the firm of Ian Sangster's Ltd., the Spanish Jar reproductions for selling spices now sold by Tiki-Togs. Leather sandals were first produced by "Things Jamaican" in goatskin and suede leather. Crafted reproductions of exact copies of antique English furniture of Queen Anne, Georgian, William and Mary and Chippingdale styles were pioneered commercially by "Things Jamaican". The Port Royal line of ceramic mugs, Bristol blue and white Delft plates and pewter reproductions were made based on 17th century originals. Pewter was exported to Abercrombie and Fitch on 5th Avenue in New York among others.

During the past three years, the general design level in Jamaican crafts in the country has improved considerably. This can be attributed to the rejuvenation of "Things Jamaican" by UNDP/UNIDO advisers, designers and technicians, its Jamaican design staff which stimulated and advised hundreds of outside independent producers.

How to further assist the private sector in craft development and sales

We began with the premise that a country must compete in the export market and in the top market categories because labour costs are too high in comparison with Asian, South American and African competitors. To compete in "high style" "better priced goods" of the urban markets of the US, Canada and

Europe, requires fresh original designs and co-ordinated lines which can adapt quickly to shifts in styling trends. To obtain the latest guideline we must have the services of original and creative top-drawer designers and senior marketing advisers. The cost of such designers and top marketing advisers is prohibitive for the small individual national craft producer, the merchandiser and even a parastatal craft assistance programme.

The need for prototypes and models in developing new products

Some craft producers are capable of discussing and absorbing ideas by discussions with good designers and in consultations with merchandising experts. Others are capable of interpreting two-dimensional sketches, or even working blueprints but the majority of craftsmen are routine workers and skilled workers who must have a model to copy to achieve and reproduce a new design.

To develop successful models which can be repeated by the craftsman in acceptable finish can be a lengthy and costly process. Further, designers are perfectionists and need three to five model prototypes before they are satisfied. Model makers and specialized craft workers who make these prototypes are specialist craftsmen who are hired expressly for this purpose. Machinery, tools and wastage is expensive. To provide prototypes for a programme of continuous product development for Jamaican crafts requires at least one each of most of the machines and disciplines and skills presently found at "Things Jamaican" and in their Country Crafts. These prototype workshops need to be located in a special Product Development Center and used exclusively to develop new product prototypes.

Product planning and merchandising lines

Industrial design planning of products is different from individual product design. Home furnishing, fashion accessories, gifts, kitchen accessories, serving accessories, bar accessories, etc. are sold in department stores in "Lines". Most new products are requested by retailers to be part of a "Line" and not 'isolated'. Merchandisers, wholesalers and retailers find it easier to sell a new image or new materials or a new Jamaican identity if they are displayed as a "Line". Product planning requires definitions of new products as one of a family of products that can live together. For example

the Lignum Vitae wood of Jamaica - rare and extremely hard, a Jamaican original.

Mortar and pestle, Lignum Vitae chopping boards, Lignum Vitae spice set become a gourmet accessory line with a Jamaican flavour and can be sold with Jamaican pimento (allspice) corns, another rarity and Jamaican original.

Design dissemination among producers

There is natural suspicion on the part of many craftsmen and small producers that there is nothing valuable that comes free. Product-designers working for government agencies are often disappointed that private sector operators mistrusted their motives, disregarded their designs and did not take them into serious consideration. In order to achieve the private sector craftsman or producer must become a partner in the process of development and meet the adviser, marketer or designer halfway. He should be committed from the start to underwrite part of the cost of the design service received. This can be in the form of supplying free his prototypes until they are perfected, plus some extra samples for the record. This type of co-investment and co-operation and cost-sharing should be part of the product design development process.

Product development through merchandising: the Indonesian and Fiji models

An effective way to achieve fast results with minimal costs is to be in the position of a buyer. A buyer who controls the budget of a wholesale or retail shop can require certain major styling changes which he or she usually receives free of charge, and can get results faster than most designers. (The buyer should work in liaison with a designer.) This method was used successfully by the International Labour Organisation (ILO) project in Indonesia with the "Sarinah" Department Store in Djakarta around 1969-71 and in Fiji with the Peace Corps/UNIDO Project Fijian Craft Shop - with the Ministry of Industry.

Without correct marketing information
good designs and new products can fail

Appropriate designs must have multi-level appeal, in addition the price of the finished product must be on level to its class appeal and relevant to

the markets where it is sold. This last aspect of "relevant to the market where it is sold" is the least understood part of NEW PRODUCT-DEVELOPMENT AND MERCHANDISING AND IT IS THE MOST CRUCIAL. Many industrialists, manufacturers as well as craftsmen, public government officials and international agencies seldom understand the importance of this and too often underestimate it. Unless advisers, government officials or international officials have had years in merchandising of gifts and fashion-oriented merchandise, they tend to oversimplify marketing strategies and the necessity of marketing and research.

Many countries and producers have beautiful products with competitive prices but do not know the country, the market level or stores they could sell to. To pinpoint the receptive markets you need the assistance of experienced merchandisers involved in that particular item. These merchandisers know instinctively and intuitively where such items should be tested and promoted. This marketing talent is available by hiring senior marketing specialists. These professionally do not normally work for product development programmes in the Third World. They are workers as highly paid executives in large department stores in New York, Paris, London or Milan.

Correct marketing information of current styles is necessary to avoid being rejected as "déjà vue" (has been seen and sold already). Predetermining these errors in styling can save time and money in testing the markets with an "old hat" "incorrect" new product. Product designers can be talented superstars but can fall flat on their face if they are not aware of seasonal changes in the fashion fluctuations of this business.

Re-orders are proof of success

This truism cannot be repeated enough and is the best proof that a design has caught on beginning to sell on a recurrent basis.

Prizes and competitions as a method to save design cost

Prizes for national or international competitions for new craft products using the local materials can be used as a method to obtain a lot of new ideas and pay relatively little for them; except for the prizes and promotional costs.

2. Requirements for a Product Development Centre

A Product Development Centre for crafts and fashion should have the following senior cadre:

Product Design Co-ordinator
Senior Merchandising Advisory Service (several marketing advisers)
Short-term Contract Deisgners in various specialities.

The Senior Merchandising Service is crucial. It is difficult to staff for long periods so that it may have to be more than one person.

1) Senior Marketing Advisor, short term for two weeks to be available from foreign sources on fashion and fashion accessories and soft goods.

2) A Senior Marketing Advisor for kitchen gourmet and serving accessories for department stores and speciality stores, who knows the market intimately, i.e. for chopping boards, canisters, serving boards and casseroles, etc.

3) Special Marketing for museum reproductions for short periods - someone from Metropolitan Museum of Art Shop, who can advise on marketing strategy for our historic lines.

4) Marketing Advisory Service for decorative fixtures, Christmas ornaments, etc.; these various areas need merchandisers whose main experience lies in specific areas such as gifts and know exactly what will appeal and not appeal to the market.

It is very difficult to pinpoint one single person in USA, UK, or Europe who will incorporate all of these, except for very highly-placed Vice Presidents of Merchandising, of important leading stores such as "Harrods" or "Bloomingdale". Breaking down the different categories of Marketing Advisory Services in short-term inputs from specialized areas of market, would steer the design staff on target and avoid wasting of time designing for imaginary markets or trends already dissipated.

There should also be appropriate model-making rooms and small workshops to experiment with models mock-ups. The equipment list usually incorporates basic machinery used in design offices such as graphic blow-up and shrinkage machines. A photo laboratory, a plaster shop, a small woodwork shop, a metal working unit with lathe, draughting room, work tables, sewing machines for outside short-term designers and in-house staff of young talented creative people in different disciplines; who are hired for short periods on specific projects for specific reasons.

Design staffing of Product Development Bureau

Design Co-ordinator

The Director/Co-ordinator of design must be a good psychologist to keep peace among highly creative and temperamental 'prima donnas'. At the same time, he should have a good idea of when good talent is producing at peak or when bad talent is taking advantage of the situation, and check and evaluate the reference submitted (usually photographic record):

Designers

Determine whether the designer is specialized in one, two or three disciplines and if he/she should be hired on a retainer basis per month or hired for a specific number of acceptable designs on daily fixed fee.

The short/medium/long term designers for the private sector should be creative persons who would cover:

i) Soft goods designer

Fashion accesories, crochet, embroidery and woven items made of soft vegetable fibres or textiles both local and imported.

ii) Leather goods designer

Such as fashion accessories and table-top items. These would require that they also be experts on machinery design and pattern making for leather accessories such as sandals, bags and belts, etc.

iii) Wood products designer

Antique furniture reproductions - table-top items, kitchen gourmet serving accessories. This area would need an expert providing scale working drawings for several styles of historic furniture reproductions. Modern furniture designer designing table-top items, kitchen and gourmet serving accessories.

iv) Graphic designer

Graphic designer for lettering labels, posters and promotional advertisements. Note this is not necessarily a packaging designer.

v) Packaging designer

Packaging design expert. Packaging is such a wide terminology that it would be best liasoning with a local Packaging Institute to define most suitable material or if all packaging material is required for a particular product.

vi) Ceramic designer/expert

A ceramic holloware technician expert. This type of specialist would be more of a technical advisor, all-round trouble shooter, on how to build kilns, how to build kick wheels, how to cut down prices by making glazes or fritts. In addition, this technical expert can advise on ceramic decorative techniques. This kind of person is really called a ceramist.

vii) Jewellery - Designer expert

Metal casting for jewellery, jewellery technology and the utilization of raw materials. A technician designer would be needed. The field of jewellery and jewellery designs is so personalized, and instantaneous that it is better to have an expert/technician who can provide technical answers rather than design slants.

viii) Woven products designer

Braided-ware, woven vegetable fibres and basketry. This type of design assistance may be available from the disciplines defined above, since most basket designs are traditional and changes of style are more often created by non-basket makers.

Library source files

Accessories, findings, buckles, hinges, and other specialized imported items listed in catalogues for use by craftsmen. Raw material sources for dyes, alloys, glazes, special tools and small machinery, the suppliers in Jamaica or abroad which are needed by craft producers, must be kept in a master file. The files should be kept up-to-date by personnel assigned specifically to maintain current information and price ranges and availability of items both locally and abroad.

The Library File would subscribe to trade and fashion magazines for use by visiting craft producers and provide a photocopy machine to make copies. Some of the magazines which would be subscribed are: catalogue of large American mail order firms, "Gift and Art Buyer", "Interior Designs".

Designs and graphic magazines from England, Italy and France such as "Domus", "Casabella", and the Sunday New York Times, Canadian Trade Magazines, "Connaissance des Arts", "Craft Horizons", Caribbean promotional material from tourist agencies, airlines and hotels which give good indications of interior trends of new hotels.

Publications of specialized agencies such as United Nations Industrial Development Organization (UNIDO), on "Rattan", "How to start manufacturing industries", how to design small furniture factories. In addition other important reference books on traditional and modern furniture and crafts should be in the library.

Most important, a file on working blue prints of new designs which have been designed but not put in production and which can be distributed to craftsmen. Special staff would be required to avoid pilferage and destruction of magazines and maintain proper cataloging.

Photographer/technician

A photographer/technician who can photographically document all models as well as photograph, develop and enlarge pictures which would save costs.

Executive secretary

This person would be assigned to work with the Director/Co-ordinator of designs.

Assistant staff - Approx. 10

These would include an office attendant and one motor vehicle driver and craft workers and draughtsmen necessary to provide prototypes and working drawings.

Training fellowships

For a marketing fellowship, a specialized questionnaire should be supplied that the candidate must fill out in detail. The loan of a camera and supply of films is valuable to record styles, machinery and factory layouts. These are not often supplied with a fellowship, but should be supplied by the Product Development Bureau.

Very often training schools overseas are in Institutes or academic atmospheres and one must ensure that the candidate is also exposed to the main marketing centres and given lists of places he/she must visit, stores he or she must canvas. Additional money should be supplied to fellowships to ensure that the candidates can travel to these places since the budgets allocated for the fellowships are often inadequate and out of date.

Well-planned test marketing fellowships lines are valuable on-the-job-training for marketing fellowships. They also provide indirect advertising of products for future buyers.

Technical research fellowships for new and cheaper sources of supply

This type of research fellowship is necessary for national manufacturers. This requires time-consuming but valuable coverages of production sources for raw materials, findings, hinges, tools and a myriad of items necessary to the craft world. It would save time and money by making production units aware of the various access to suppliers (instead of only dealing through Miami middlemen). One of the best guides to such research

technical fellowships would be starting with the Manhattan Yellow Page Telephone Directory and canvassing the Eastern Seacoast production centres.

V. INDUSTRIAL FREE ZONES
Export Processing Zones

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Brit. Virgin Islands
Surinam/Net. Antilles
Trinidad-Tobago
St. Kitts/Nevis,
St. Lucia/St. Vincent
Dominica/Montserrat

1. Introduction

Over the past two decades, there has been a rapidly increasing interest among developing countries in the establishment of industrial free zone areas. This has stemmed largely from the success of certain developing countries, notably in South East Asia, in benefiting from such zones to accelerate overall industrial growth.

The establishment of such zones has not been without criticism. It has been argued that the zones are enclaves for transnational corporations, offer little in value-added advantages for the host country and merely exploit the cheap labour available in developing countries. The last point being particularly controversial in terms of female labour.

Nevertheless, as clearly shown by the examples of Taiwan and South Korea and other Asian Zones, industrial free zone areas do provide a generating force towards industrialization. The zones attract foreign capital, expand export earnings, introduce new technologies and establish a trained nucleus of industrial employees, which then expands to other areas of the industrial sector. Additional benefits can be measured in terms of improved transportation linkages and promoting wholesale and retail activity. The key factor in this debate is the increasing requests from developing countries for assistance in this area.

During the period under consideration, UNIDO (United Nations Industrial Development Organization) has been at the forefront of the movement towards establishing industrial free zones in developing countries. Between 1972 and 1984 the Organization assisted over forty developing countries in this sphere. UNIDO's assistance encompasses the span of activities concerned with the zones - the initial feasibility study, the establishment of the zone and the eventual management and promotion of the zone. Advice has varied and in at least ten cases UNIDO has advised against the establishment of a zone where such factors as labour costs, construction costs and management skills, were adverse.

2. The situation in Central and Latin America

In Central and Latin America the development of industrial free zones can be divided into three categories. Those in:-

a) The Caribbean area.

b) Central America.

c) Latin America.

a) Industrial Free Zone Areas have proved particularly effective in countries, often island countries, with limited natural resources and a restricted domestic market. Not surprisingly therefore, and given the proximity of the market of the United States, countries in this area have tended to introduce free zone legislation.

CARICOM (Caribbean Economic Community) divides countries into LDCs (Lesser Developed Countries) - Antigua, Dominica, Grenada, Montserrat, Saint Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines and MDCs (More Developed Countries) - Guyana, Jamaica and Trinidad and Tobago with Barbados as a special case, and the legislation has been drafted accordingly with the LDCs enjoying longer periods of tax holidays. This legislation also defines "enclave industry", allowing a special regime of incentives. This in effect means that foreign investors who import most of their raw materials, must export them, and these enclave industries although not all located in industrial estates are in fact enjoying a typical "free zone" regime. CARICOM countries therefore have the export-processing type of industry. Barbados has attracted some high-technology investors, and also data-processing industry. (Two EDP companies alone employ over a thousand Barbadians.) During the

Investment Promotion Meeting, organized by UNIDO in October 1984 in Barbados, one aim was to interest more "high tech" companies in investment. Such companies do not need large numbers of unskilled labour and in fact pay good wages.

Elsewhere in the Caribbean EPZs have been less successful, due to the lack of funds to build industrial estates and lack of management. (Advice from consultant companies has not helped.) There is currently a drive to build factory shells to attract investors mainly from the Far East who need second locations as insurance, or who wish to benefit from the CBI (Caribbean Basin Initiative) incentives to export to the U.S.A. or Lome incentives to export to Europe.

In the Dominican Republic and Haiti, there are IFZ/EPZ, some linked to the cottage industry. These zones are controversial because they employ large numbers of unskilled, low-wage labour, and organized labour is not allowed the full freedoms recommended by the ILO (International Labour Organization).

b) In Central America EPZs in Costa Rica and Honduras are now filling up with investors using the CBI incentives. UNIDO in the past provided technical assistance on free zones to every Central American country, since there are IFZ/EPZ also in El Salvador, Guatemala, Nicaragua and Panama, which have met with varied degrees of success and failure.

In Mexico the maquiladora system began in the U.S. border region, and U.S. companies exploited the low cost labour without proper regulations. This has been corrected by enforcing proper standards in the border region, and by construction of industrial estates as development poles throughout Mexico, as part of a federal plan. Of course, in larger economies like Mexico, free zones are only a small part of the total industry.

c) In South America, the zones in Panama, Iquque (Chile) and Barranquilla (Colombia), are engaged largely in importing from the Far East mainly consumer goods which are then sold "duty free". In fact this encourages smuggling across land borders, or by sea, using the commercial advantage obtained by avoiding duties and taxes. Genuine attempts to organize export-oriented, manufacturing free zones have also largely failed in Colombia and Venezuela, mainly because the promotional effort has not been organized correctly. In

Colombia the concept has been misused by provincial authorities, who seek funding to create local employment by establishing a so-called Industrial Free Zone, which in fact, is only a small industrial estate.

3. Recommendations

a/ UNIDO's assistance will vary according to the regions defined above. In the Caribbean, UNIDO should continue to assist with promotion of investment through the Caribbean Investment Promotion Service (CIPS) in UNIDO New York.

UNIDO can also assist with the planning of industrial estates, which tend to be built as "factory shells" only, with no proper estate management or facilities provided on site to service investors.

Training courses in EPZ/Industrial Estate Management would be beneficial, if a donor could be found to finance them.

TCDC could also be arranged by arranging visits from CARICOM LDCs to more advanced EPZ estates in Barbados and Central America, and vice-versa.

b) In Central America, UNIDO can also continue to offer training in investment promotion through the CIPS scheme, and also TCDC as remarked above. (As English is the lingua franca of free zones, language is not a barrier.)

c) UNIDO has outstanding official requests for technical assistance to existing free zones in Colombia (Barranquilla and Cucuta) and in Venezuela. As there are no IPF funds available, Government trust funds are being suggested as the source of finance. Meanwhile, a source of funds is needed to start off these projects.

Here it should be remarked that the use of consultant companies has proved unsuccessful in most regions for the reason that to operate a free zone successfully requires an unusual combination of specialized skills, and such companies do not possess them. They are of course report-oriented, since their contract specifies the writing of reports. But successful free zones depend on good engineering and economic planning, sound long-term strategies and above all well-planned promotion. The promotion involves not just media

selection and advertising, but very careful selection of targets (potential investors), which needs specialized research and analysis. This latter is only learnt by experience and some free zone managements never do learn it, and therefore fail to attract investors. There are other aspects of free zone management which also require experience, so that the ideal expert is one who has managed an EPZ. Unfortunately there are few available, but there are several companies who claim free zone expertise who have no real experience in this field.

With regard to future technical assistance, in addition to Colombia and Venezuela, there are also pipeline projects in the EPZ field in the region such as in Bolivia, at Cartegena, in St. Lucia and in the Dominican Republic. None of these at present receive the assistance they need.

It is recommended that finance should be made available for the above from UNIDO sources where Government funds are not available.

VI. POTENTIAL OF THE CAPITAL GOODS INDUSTRY IN LATIN AMERICA

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The asymmetry of capital goods in the international trade of Latinamerican countries, reflects to a large extent, the structure and development of this country. Although imports in the largest countries of the region represent a share between twenty and fifty per cent of international demand, exports in most of the countries are very low as a proportion of production, as low as ten per cent or less, except in Brazil where this proportion of exports has grown to a figure of around twenty per cent of production in the last years.

Brazil is the main exporter of capital goods in the region with total exports of about 2.2 billion dollars in 1980, which represented about sixty four per cent of all capital goods exports of the Latinamerican and Caribbean region. Mexico, the next exporting country, managed to export about four hundred million dollars, which represented about thirteen per cent of the total regional exports.

Exports of capital goods were for a long time mainly directed to the Latinamerican region itself since that destiny represented between fifty five and more than eighty per cent of total exports up to about 1980. After this date the effect of recession has been that the regional exports decreased to a smaller share of total exports, while at the same time the total figures of capital goods exports also decreased.

Most of the trade between Latinamerican and Caribbean countries has grown under the beneficial effects of regional integration schemes which follow the norms of the General Agreement on Tariffs and Trade (GATT). A very important interregional trade developed during the Second World War, based on the difficulty of obtaining imports from industrialized countries, but this trade was mainly of a bilateral nature and to some extent the initial purpose for

creating the integration schemes was to preserve this regional trade. However, due to the rather liberalizing norms of GATT, this philosophy that differed from previous efforts, prevailed after the Second World War and although after a while regional trade decreased in importance, it has finally recovered and grown recently to about twenty per cent of total trade. Nevertheless overall rates of growth in regional trade have been sluggish.

Brazil which is the country that benefited perhaps most from these integration schemes and that exports now close to one billion dollars of capital goods to the region, developed this industry mainly after the Second World War and was originally based on an import-substituting strategy that later on developed complementarily into an export-oriented one. Brazil was able to take advantage of the integration schemes and thereby developed its industry by exporting to the region and creating a platform for later exports to developed and developing countries in other regions of the world.

Magnitude of the Latinamerican markets

The insufficient development of capital goods industry in Latinamerican countries implied that up to about the middle of the sixties, the Latinamerican market had far more importance for European and Japanese exports than the North American market.

Mexico or Brazil alone, represent markets of greater importance for electrical equipment than many European countries. The growth of installed electrical power usually implies that these markets as well as the Latinamerican market are far more important than those of many developed countries, and thereby can sustain large scale industry. However, the production of turbines and turbogenerators took a very long time to develop and only recently has been able to grow vigorously, mainly in Brazil and lately in Mexico.

The regional market for machine tools, even under the present circumstances, exceeds one billion dollars per year. Only Mexico in 1981 had a demand of about six hundred million dollars that have decreased in 1983 to about two hundred and fifty million. Mexico still is one of the first clients for North American exports of machine tools. Brazil has some of the largest factories of machine tools by world standards. However, besides Brazil and to

some extent Argentina, the development of the machine tool industry is still insufficient.

Brazil has been purchasing about eighty locomotives per year and on that basis has been able to install two factories. Mexico usually has been importing about one hundred locomotives per year and this industry is being considered for new and important projects. In order to show the importance of these demands, Mexico practically absorbs the whole production of the General Electric Factory for locomotives in the United States, which is the second of the two producers of this equipment in that country.

In the case of gas turbines, Mexico alone during part of 1980 acquired about thirty per cent of all the world demand of industrial gas turbines and even during the present circumstances, industry sources indicate that Mexico will continue purchasing about ten per cent of the total world production of industrial gas turbines. However there is no production of gas turbines in Mexico up to now.

Many other examples of similar importance could be provided. The important thing is that some of the largest countries in the region by themselves and the region as a whole represent a very important market even by world standards and a market that could sustain large scale and efficient production. Precisely, the main contrast is between the size and potentiality of the market and the rather small use and insufficient development that has taken place.

Potential for growth

In terms of growth potential, capital goods industry is one of the most dynamical possibilities for industrial development. Under normal circumstances, growth in these industries usually exceeds ten per cent per year and exports, at least those coming from Brazil, have exceeded a rate of growth of twenty per cent per year for a long period. A large share of the growth potential comes from import substitution. For example, if the machine tool industry in a country provides only five percent of its demand, it can be easily understood that by increasing the share of local supply, rates of growth can and have surpassed about forty per cent per year during several years.

On the other hand, if the industry does not develop, this potentiality is transferred to imports that in some countries have attained recent rates of growth of more than forty per cent per year.

This industry has potential for growth not only in terms of rates and in terms of shares in total industrial production, but also in terms of its occupational potential. Since capital goods imports may represent between thirty and fifty per cent of total imports, while exports are a rather negligible share of total exports, the potential for increasing or arriving to a more symmetrical trade structure is enormous. The share of the mechanical industries in industrial production, which is between twenty and about twenty five per cent in the largest countries of the region, may increase up to the figures of more than forty per cent which are usual in developing countries. All these figures provide orders of magnitude for the potential of growth that is available in these areas.

The case of Brazil in the region and, to some extent, the case of South Korea provide also examples of how this potential can be actually accomplished.

This industry has shown its vulnerability to economic cycles and international recession. These cycles can be turned to the advantage of local industry through planning. Some efforts in the area of investment planning could lead to the reduction of the worst effects of these cycles on demand and investment and its effects on the capital goods industry.

With very few exceptions, the rather liberalizing conception that has predominated in the integration movements has been detrimental to a real development of the capital goods industry in the region.

Under the present recession some new cooperation schemes and ideas are developing, which seem to be more realistic and will probably offer a larger growth potential.

Among them is the creation of joint ventures among Latinamerican countries to promote trade and to carry out joint investments. The possibility of taking advantage of the very large Latinamerican market may sustain some very ambitious projects and of course will have to be based on some degree of specialization and a strategy on technological development and

certainly on a clear conception about equilibrium in trade among the participating countries.

In the design of these new schemes, in providing new and ambitious but realistic ideas for these purposes, there might be a distinct role for UNIDO. Normally some of the countries in the region have been conceiving and maturing development strategies, some of them with very deep insights in their industrial implications. However, many of these strategies still require considerable polishing and refinement and most of them do not yet entail a satisfactory conception regarding economic cooperation or integration among countries in the region.

This is a field of ideas which is not only very complex and with scant experiences, but also one that defies current schools of thought both in the area of economics and industrial policy and in the area of industrial technology. This seems to be an adequate area for UNIDO's activities and cooperation. Most of the regional studies which have been undertaken for the capital goods industry have not yet touched upon these more complex but substantive topics.

A working in depth knowledge of industrial possibilities, effects of scale economics in capital goods industries, technological trends and new development as well as possibilities in international trade and an up-to-date information on the structure of some of its industries, might be very useful for the developing countries and UNIDO could also be actively engaged in this area. However, there are very few studies of a practical and realistic nature that at the same time provide synthetic ideas and orientations in the above mentioned fields.

It is also necessary that any integration agreement includes some embodied measures to ensure a long term tendency towards equilibrium in trade. Otherwise, any practical suggestions, investments or negotiations could not be accepted by some countries in the long run and the whole scheme might not be practical.

To provide some ideas on how to achieve equilibrium in trade in the long run, which of course implies some basic equilibrium in regard to access to fundamental technologies in this industry, is something on which experience is very scarce.

The development of new high technology industries of rapid growth, and the way in which these new industries are intertwined with the previous industrial activities, constitutes another area where practical and in depth studies should be carried out.

VI. DESARROLLO DE LA INDUSTRIA METAL-MECANICA EN AMERICA LATINA

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El presente trabajo pretende ofrecer una visión general de la situación de los países en vías de desarrollo de América Latina, especialmente de Sudamérica, en cuanto a su capacidad para producir parcial o totalmente ciertos bienes producto de la actividad metal-mecánica y cuya demanda se origina principalmente en el esfuerzo que desarrolla cada país por establecer lo que podría denominarse infraestructura industrial básica y/o en aquellos que han logrado superar esta etapa, el esfuerzo que éstos realizan para autoabastecerse y eventualmente exportar parte de su producción.

Es necesario aclarar previamente que, en la mayoría de los países denominados en vías de desarrollo, hay una marcada tendencia a denominar toda la producción metal-macánica como bienes de capital, incluyéndose en esta denominación el equipo requerido para actividades de servicios.

Definición básica:

Por industrias metal-mecánicas, o simplemente mecánicas, se entiende las comprendidas en las siguientes categorías de acuerdo a la "Clasificación Industrial Internacional Uniforme (CIUU)" de todas las actividades económicas:

35: Fabricación de productos metálicos, exceptuando maquinaria y equipo de transporte;
36: Construcción de maquinaria, exceptuando la maquinaria eléctrica;
37: Construcción de maquinaria, aparatos, accesorios y artículos eléctricos; y
38: Construcción de material de transporte.

Esta clasificación pretende abarcar toda la producción de bienes relacionados con el amplio campo de metal-mecánica; consecuentemente, su evolución constituye la clave para el desarrollo económico de los países, ya que actúan como catalizadores del proceso, tanto en su aspecto material como en lo social.

En lo material se podría estimar que representa alrededor de un tercio de la formación bruta de capital, en forma de productos metálicos, maquinaria y material de transporte y la contribución al crecimiento del producto nacional bruto, es aún mayor en los países en los que se desarrolla - en forma sostenida - la generación y distribución de electricidad, la explotación de petróleo y/o la extracción minera con sus diversas etapas de producción de metales. Se destaca que uno o más de estos procesos actualmente son comunes en los países de Latinoamérica.

Desde el punto de vista socio-económico las industrias metal-mecánicas constituyen un permanente centro de mejoramiento tecnológico y, consecuentemente, un foco de evolución cultural. Probablemente contribuyen, más que cualquier otro sector de la industria, a la formación de trabajadores calificados y a la especialización de personal técnico de alto nivel.

En los países en vías de desarrollo se puede asegurar que las industrias metal-mecánicas, por mucho tiempo, constituyen la punta de lanza para alcanzar un dinámico proceso de desarrollo socio-económico. En consecuencia, no sería permisible que por ningún concepto este proceso sea descuidado a ningún nivel.

Para poder definir las distintas capacidades de producción de las industrias metal-mecánicas en los diversos países de América Latina, la CEPAL, en su documento "Notas sobre la Capacidad de Producción de Bienes de Capital en algunos Países Latinoamericanos", las agrupa de acuerdo al tipo de productos en dos grupos:

a) las que producen "a pedido" y
b) las que producen "según catálogo".

El primer grupo estaría constituido por las industrias de calderería, denominada también - según la nomenclatura utilizada por el país - maestranzas o pailerías.

Este tipo de instalaciones industriales existe en cada uno de los países y la capacidad de sus talleres depende de las exigencias de cada uno en particular. En todo caso, responde a la demanda generada por el grado de desarrollo o a la presencia de actividades resultantes de programas nacionales de electrificación, aprovechamiento de recursos naturales y/o de desarrollo intensivo de obras básicas para establecer una infraestructura industrial.

En todo caso, el grado de desarrollo y la capacidad operativa de los talleres de calderería está definida por las características de los equipos que disponen.

Dentro de la categoría de bienes, que producen estas industrias, están incluidas las estructuras metálicas, las compuertas, los recipientes y depósitos a presión, los grandes estanques de almacenamiento, los conductos de diversas dimensiones, los intercambiadores de vapor, etc., equipos y/o instalaciones que por las caracerísticas técnicas particulares de cada proyecto, en la mayoría de los casos, supone la fabricación individual o de pocas unidades.

El otro grupo que comprende a otra categoría de instalaciones para producir "bienes según catálogo" se podría decir que son selectivas y ha alcanzado un grado de desarrollo acorde con los avances tecnológicos logrados por los países. En todo caso, la varieded de equipos e instalaciones metal-mecánicas instaladas en los países, van desde los que se requieren para producir objetos que podrían denominarse primarios hasta la conformación y transformación de metales, sea en caliente o en frío, debiendo incluirse las diferentes fases que se requieren para la fabricación de partes y piezas en las cuales se utilizaron los diversos procesos básicos y procesos de acabado hasta obtener los diversos productos metálicos que se ofrece al mercado y/o maquinaria y equipo, incluyendo material de transporte, máquinas herramientas y en general toda la gama de los denominados bienes de capital.

El grado de desarrollo de esta segunda categoría, se podría asegurar, corresponde al nivel de desarrollo socio-económico de cada país. En la práctica se identifican más bien, por la oferta de equipos tales como bombas centrífugas, motores, válvulas, tuberías, bridas y accessorios, compresores, instrumentos de medidas, etc. Por lo general estos bienes son producidos en serie y su oferta se regristra en catálogos.

En términos generales se podría asegurar que entre los países de la América Latina existen diferencias muy marcadas en materia de instalaciones metal-mecánicas. Así, mientras en países como Argentina, Brasil y México se ha logrado un desarrollo industrial que permite producir la mayor parte de los bienes que requieren sus actividades productivas y de servicios y que - en varios casos - aún se llegó a la exportación, en el resto de los países de la región las instalaciones metal-mecánicas tienen menor importancia.

Por otra parte, aún en los países en los cuales se ha logrado un relativo desarrollo, la capacidad instalada de las industrias metal-mecánicas continúa siendo parcialmente utilizada, lo cual constituye una pesada carga para la economía del respectivo país.

Conclusiones:

No siendo el propósito de este documento establecer - y menos aún cuantificar - el grado de desarrollo relativo alcanzado en este campo por cada país de América Latina y su actual nivel de aprovechamiento, considero necesario plantear algunas reflexiones con el ánimo de coadyuvar a una eventual coordinación en los programas de cooperación técnica que se ejecutan en los países con respaldo de la ONUDI, con miras a lograr una gradual autosuficiencia:

1. La evolución del proceso de desarrollo socio-económico de la América Latina, pese a la confrontación con los reales problemas económicos, es una necesidad ya que se pretende reactivar el aparato productivo de cada país sobre la base de utilizar mejor sus propios recursos y, consecuentemente, utilizar al máximo su capacidad instalada.

2. Conviene destacar que, en los países de menor grado relativo de desarrollo, resulta paradójico el hecho de que existe una apreciable capacidad instalada para producir bienes de la metal-mecánica y, sin embargo, continúa siendo elevado el volumen de importaciones en estos rubros. (Se estima que en algunos casos llega hasta a un 20% del total de la importaciones.) La justificación más frecuente es que el país necesita, con carácter de urgencia, reforzar su estructura productiva para respaldar el crecimiento económico y que, al no contar con las suficientes garantías de experiencia y respaldo tecnológico, prefiere la ejecución de proyectos por el denominado sistema llave en mano, dejando fuera cualquier posibilidad de participación nacional.

3. La asistencia entre países y el intercambio de experiencias que se podría lograr sobre la base de mas frecuentes contactos entre los asesores de la región podría constituir un importante medio catalizador para lograr efectos dinamizadores en los países de sus respectivas responsabilidades.

VIII. ADVANCED TECHNOLOGIES AND POSSIBILITIES FOR CO-OPERATION IN LATIN AMERICA AND THE CARIBBEAN

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This contribution will be issued separately.