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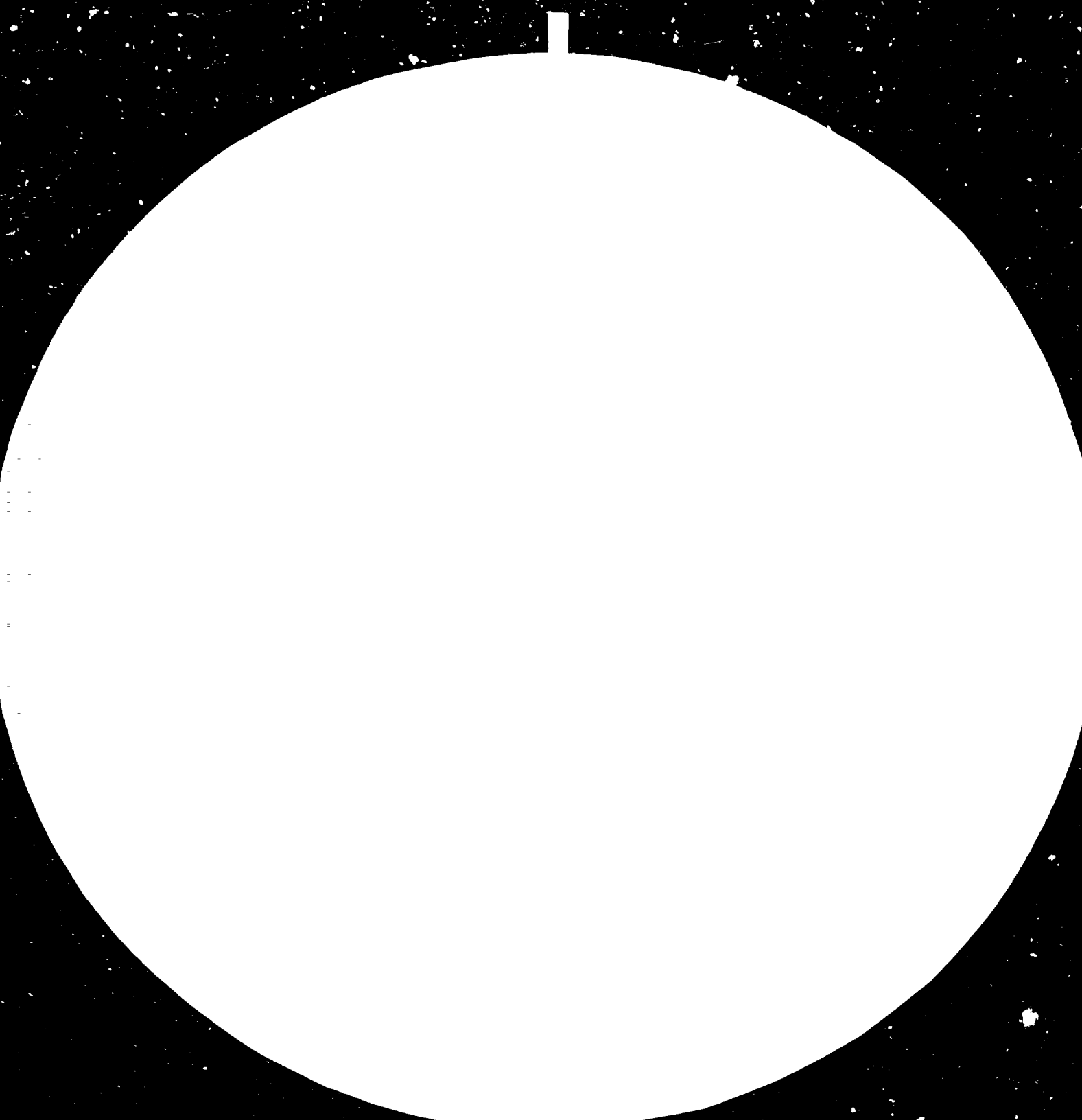
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TIES NEWSLETTER

TECHNOLOGICAL INFORMATION EXCHANGE SYSTEM

Issue Number 5

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Dear Reader,

This issue of the TIES Newsletter contains reports on two recent important meetings directly related to the activities of the TIES Group. One was a joint UNIDO/LES (Licensing Executives Society) meeting held in Helsinki, Finland to discuss various items relating to licensing and technology transfer. This was the second such meeting held by UNIDO and LES with the participation of Heads of Technology Transfer Registries.

The other meeting held in Buenos Aires, Argentina, under the sponsorship of the Argentinian Government and UNIDO, was the annual meeting of Heads of Technology Transfer Registries. At this meeting, co-operation among Registry offices was cemented and various enhancements to the TIES system suggested.

Both meetings emphasized the importance of the TIES Newsletter as a vehicle for exchange of information on Registry activities and transfer of technology in general.

G.S. Gouri

Registry activities

ARGENTINA

From 15-19 September 1980, the Registro Nacional de Contratos de Licencia y Transferencia de Tecnologia of Argentina hosted, in conjunction with UNIDO, the Fifth Meeting of Heads of Technology Transfer Registries in Buenos Aires. The meeting was attended by some 14 active participants in the TIES system including registry heads from Argentina, Colombia, People's Republic of China, Egypt, Guatemala, India, Malaysia, Mexico, Nigeria, Peru, Philippines, Portugal, Spain and Venezuela. Additionally, representatives from the United Republic of Cameroon, Indonesia, Jamaica, Pakistan, Togo and Yugoslavia who are interested in possibly participating in TIES attended the meeting. A representative from each of the following organizations was also present: United Nations Information Centre, ECLA/UNIDO Unit on Technology, Andean Group and the United Nations Centre on Transnational Corporations.

The agenda of the meeting included items on National Experiences in Technology Transfer; the Cases of Argentina, Mexico and the Republic of Korea, Progress and Status Report of the TIES System, Promotion of Co-operation among Technology Transfer Registries and Future Orientation of the Work of the Technology Transfer Registries.

The meeting strongly endorsed the TIES system and suggested that the scope of the system be widened beyond the exchange of information so that it could become an instrument aiding policy makers in developing countries in the field of technology transfer. Moreover, participants explored ways and means of financing various TIES activities in the future and made a series of recommendations to do so.

EGYPT

The following is excerpted from the July 1980 issue of "Investment Review" a quarterly journal published by Egypt's Foreign Investment Authority.

FORMATION OF AN INVESTMENT INFORMATION CENTER WITHIN THE INVESTMENT AUTHORITY

In May 1980 a draft report was submitted to the General Authority for Investment and Free Zones (Investment Authority) proposing two alternative designs for establishing an Investment Information Center (IIC) within the Investment Authority. The recommendations of that report are currently being reviewed and considered by the Government of Egypt and a decision as to which design to adopt and how to proceed with development of the ICC may be expected shortly. Depending on how quickly decisions can be reached and funding arranged (GOE and US AID), the new Center could be partially operational in early 1981 and fully operational by the fall of 1981. An Investment Information Center (ICC) may be thought of as a unit within the Investment Authority which will provide information-related services both to the rest of the Authority, other government institutions and to would-be investors. In performing this supportive role the IIC will not only help strengthen the effectiveness of the Authority in carrying out its mission to stimulate and guide private sector investment, but also assist other government agencies and the private sector to stay better informed about economic conditions in Egypt and the rest of the world. Specifically, if properly organized, funded and staffed, the ICC should help to:

- * Increase domestic and international investor interest;
- * Raise the ratio of acceptable to unacceptable applications;
- * Broaden the basis on which applications are reviewed;
- * Shorten the average period of time elapsed between project approval and operations;

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- * Improve investor attitude about doing business in Egypt;
 - * Facilitate greater coordination of data, policies, plans and activities among government agencies;
 - * Expand the planning and policy-related functions of the Authority; and
 - * Enhance the efficiency of the Authority's operations.
- * These and other contributions the IIC would translate into total national benefits (i.e. jobs, foreign exchange, income, regional distribution) that far exceed the costs of establishing the IIC.

After investigating the approach taken by other countries in which government institutions take an active role in stimulating and guiding private investment, we concluded that the most successful approach to an IIC was to keep it free of regulatory and policy-related functions and to provide it as generously as possible with the necessary resources and autonomy. Acting as a spokesman (not formulator) for government policy, salesman for Egypt and advocate for the investor, the IIC must be staffed with well-informed and articulate personnel. It must maintain an up-to-date and efficient information network and be able to operate effectively with both the public and private sectors.

With regulatory and policy-related functions excluded from eligible activities for the IIC, the Center could be assigned any or all of the following responsibilities:

- * Compile and make available information on policy decisions;
- * Maintain an information base;
- * Package information;
- * Disseminate information;
- * Respond to inquiries;
- * Persuade prospective investors;
- * Guide investors in procedures;
- * Act as interagency liaison;
- * Act as troubleshooter;
- * Service special needs of investors.

The designs for the IIC presented to the Investment Authority represent two logical alternatives - a Basic Design, which is a modest approach, focusing only on information services; and a Comprehensive Design, addressing itself to all the areas typically covered by IIC including information services, promotion and investor services.

Under the Comprehensive Design the IIC's responsibilities encompass:

- * Collection, storage and dissemination of information pertaining to investment;
- * Response to and channeling of inquiries pertaining to investment;
- * Active promotion of Egypt as a desirable location for investment; and
- * Facilitation of prospective investors.

The organization of the IIC under this design alternative would consist of five departments:

- * Information Services, comprised of three units: Inquiry Services, Library Services and Data Services;
- * Promotion, comprised of two units: Marketing and Promotional Materials;
- * Investor Services, performed by account executives assigned to each investor as his liaison with the Authority and other government agencies;

- * Regional Offices, which represent the IIC outside Cairo (principally for maintaining contact with the Governorates and local business); and
- * Foreign Offices, which represent the IIC abroad (principally for maintaining contact with business internationally).

The staff of the IIC will consist of approximately 75 people (in Cairo, by the third year of operation and 85 people by the fifth year. In order to be able to attract the high quality personnel required for this Center it will have to be developed in such a way as to provide a stimulating and prestigious working environment. It should be largely staffed by talented young people who view this organization as an opportunity to acquire unique experiences in the development of their own careers. The staff should be provided with a great deal of training and travel opportunity which will serve not only to develop their skills and horizons but also offer them the incentives to work for the Center and do their jobs well. They should not be expected to remain with the IIC for more than five or six years after which they may choose to move on to the private sector or another career path in Egypt. While this may appear to be a costly way to handle personnel development it actually would be highly cost-effective. To begin with it would enable the IIC to attract talented people within the somewhat restricted government salary structure. Second, the training (both formal and on-the-job) and exposure of the staff to both government and private sector operations would serve to create a cadre of experienced people available for meeting Egypt's pressing needs for management and entrepreneurial talent in both the private and public sectors.

The cost for creating and operating the IIC under this design is estimated at approximately \$25 million over the first years of operations. Approximately 70 per cent of this estimate is for foreign exchange and 30 per cent for local currency.

In summary, a promising opportunity exists in the establishment of an Investment Information Center to assist the Investment Authority in carrying out its responsibility to stimulate and guide private investment.

Recent legislation

EGYPT

The following is an article excerpted from the July 1980 issue of the "Investment Review" a quarterly journal published by Egypt's Foreign Investment Authority on Investment Conditions in Egypt. The article deals with policy developments regarding Investment Law 43 in Egypt.

Law 43 and the Open-Door Policy

The design and evolution of the rules and policies governing Law 43 projects must be guided by its medium and long-term objectives and strategic role in the economy. These objectives should not be sacrificed, substituted for or confused with the short-term requirements of this sector.

The Law's main objectives are not merely the encouragement of foreign direct investment but, more importantly, the creation of a new dynamic and modern sector in the economy, unshackled from ad hoc Central Government administration rules and allowed to operate according to economic efficiency criteria. This new sector is to become - gradually - a model to be emulated by the sectors as well as integrated and competitive in international markets.

If the above visualization is accepted, then we can move from the general to the specific. The price policies of both inputs and outputs of Law 43 projects must be in line with true economic scarcities and opportunity costs. In the case of tradeable commodities, this means international prices; commodities should not adhere to the administered domestic price system based on heavy subsidization.

The above principle applies, in particular, to prices of such important inputs as energy and other primary and secondary inputs the domestic prices of which are kept artificially below their opportunity costs.

However, it must be pointed out here that the price policies of the other sectors - private and public - should also gradually move in the same direction. Ultimately, all domestic sectors must be integrated and subjected to the same set of rules and policies including price policies. In this context, the relation between income and prices and the detrimental effect of multiple tier prices should not be forgotten. This is the first golden rule.

Other golden rules are related to floating exchange and security markets. These will be discussed in subsequent issues.

PHILIPPINES

The following is excerpted from the July 1980 issue of the "Industrial Development Digest" published by the Ministry of Industry of the Philippines.

Guidelines for Heavy Engineering Industries

The rules and regulations to implement the development strategy for the heavy engineering industries have been released by the Commission for Heavy Engineering Industries headed by Industry Minister Roberto V. Ongpin. The rules, which took effect on June 24 this year, provide for the immediate implementation of a local content program for the industry to enable it to produce an average of 50 per cent of the equipment and machinery requirements of large scale industrial plants, within a prescribed development period. They also empower the Commission to undertake the necessary steps for the immediate establishment in the country of large heavy engineering complexes and improvement of the downstream fabrication capability of the private sector. These

rules take off from LOI No. 950 establishing the Commission for Heavy Engineering Industries, signed on October 25, 1979.

Listing of Large Scale Industrial Plants

Large scale industrial plants refer to those projects with heavy or large scale components and machinery the installed cost of which is no less than \$20 million. Under the rules and regulations, all such plants, whether public or privately owned, are required within 90 days after June 24, 1980 to submit to the Commission a report including technical information on the products, raw materials, processes, plant construction data, layout, equipment and others. This requirement will help the Commission to prepare a comprehensive listing of large scale industrial plants, which will serve as the basis, among others, for the formulation and adoption of a development strategy for the heavy engineering industries.

Enforcement of Local Content Program

The development strategy for the heavy engineering industries under LOI 950 calls for the immediate implementation of a local content program, starting with a 15 per cent local content percentage target in 1980, increasing to 20 per cent in 1981, 25 per cent in 1982, 30 per cent in 1983, 40 per cent in 1984 and to 50 per cent by 1985.

All enterprises having large scale industrial plants to be constructed, expanded, or modernized at cost of no less than P20 million starting in 1980 and so on, will be required to achieve the prescribed local content; for this purpose, the Commission will issue the proper Certificate of Compliance. At the same time, the Commission will require these plants to submit an annual report to the Commission for purposes of evaluating the overall quality and performance of locally-made equipment parts and components.

The local content percentage will be computed as follows: total price of locally produced components/equipment/machinery (or the sum of import prices, FOB, of their spare parts equivalent, whichever is lower in value) during the period; divided by the total prices, imported and domestic, of the entire machinery and equipment of the industrial plant.

"Construction" refers to either (a) the acquisition of land site, ground breaking and ground levelling, or (b) the date of placement of orders for plant equipment and machinery as may be determined by the Commission.

Meanwhile, the Board of Investment (BOI) which will implement the local content program for the heavy engineering industries has recommended the manufacture of certain replaceable parts of heavy construction or earthmoving equipment such as shovels and scraper blades. It has deferred the local content program for heavy construction equipment until such time that the market has sufficiently expanded to permit economic scale manufacture of such equipment.

Other Development Strategies

To advance the establishment of "one or more heavy casting and forging plants, heavy machinery, fabrication and large scale equipment assembly complexes, intermediate size

equipment components and sub-assembly manufacturing complexes as well as the improvement of the "downstream" capability of the sector," the Commission may, aside from enforcing the local content program, undertake the following:

- a) Recommend to the BCI the grant of fiscal and tax incentives for the establishment of new or additional needed capacities or for modernization of heavy equipment manufacturing plants;
- b) Divide implementation of the projects into phases to obtain immediate results;
- c) Encourage mergers or consolidation of existing facilities in the heavy engineering industry whenever essential for attaining technological proficiency and efficiency;
- d) Recommend to the Technology Transfer Board the adoption of measures to facilitate the acquisition of technical licensing and engineering know-how for the heavy engineering industry;
- e) Recommend measures to the appropriate government agencies for the limitation of importation of heavy engineering machinery and equipment or their components to the minimum in accordance with LOI 950.
- f) Assist the heavy engineering industry in the identification of appropriate sources of financing to carry the industry's development plans.
- g) Establish through MIRDC and other training institutions training programs for the purpose of developing an adequate reserve of highly trained technical manpower for the heavy engineering industry.
- h) Avail itself of advisory services and technical assistance from government, industrial estates, research, and regulatory power and public works agencies, such as but not limited to MIRDC, National Science Development Board (NSDB), Marine Industry Development Authority (MARINA) and the National Power Corporation (NPC).
- i) Implement through the MIRDC a research and development program to avail itself of the best design and material technology for the heavy engineering industry; and
- j) Designate the MIRDC to conduct rigorous quality control and inspection for the products of the heavy engineering industry to ensure that these meet internationally accepted standards.

The Role of MIRDC

The Metals Industry Research and Development Center (MIRDC) will serve as the national center to transfer or develop the latest and most appropriate technology in the heavy engineering industries; thus, it will have to be strengthened. Together with the Philippine Bureau of Product Standards, the MIRDC will assist the Commission in the formulation and implementation of standards for the manufacture of heavy machinery and equipment. It will also assist the Commission in the development and maintenance of a pool of trained technical manpower to manage and operate the heavy engineering plants to ensure the good quality of locally manufactured parts, components and finished machinery.

Last but not least, the MIRDC will also assist the Commission in setting up an inspection system of large scale industrial plants to determine compliance with rules and regulations.

Registry news

REGISTRY NEWS

COLOMBIA

Mr. Juan Pizarro, formerly the Head of the Royalties and Technology Department of the Superintendency of Industry and Commerce has returned to the private sector. The new Head of the Royalties and Technology Department is Ms. Miriam Zarate, staff member in the same department. Ms. Zarate represented Colombia at the Fifth Meeting of Heads of Technology Transfer Registries in September 1980.

MALAYSIA

Mr. Kamaruddin Nordin, formerly the Director of the Industries Division in the Ministry of Trade and Industry has assumed new duties as the Deputy Secretary General for Development and Finance in the Ministry of Public Works and Utilities. The new director of the Industries Division is Mr. Burkhan Abdullah, formerly with the Malaysian Mission to the EEC in Brussels. Mr. Burkhan assumed his duties in mid-June 1980.

PERU

With the change of government, Mr. Julio Appliqueta of the Department of Planning in the Ministry of Industry has been replaced by Dr. Jorge Gonzalez. Dr. Gonzalez, an economist, was formerly a university professor in Lima. Dr. Gonzalez represented Peru at the Fifth Meeting of Heads of Technology Transfer Registries.

UNIDO activities

Second Joint UNIDO/LES Meeting

UNIDO together with the Licensing Executives Society (LES) organized a second meeting of Heads of Technology Transfer Registries and members of LES which took place in Helsinki, Finland on 11 and 12 September 1980. The meeting was attended by some 13 participants.

The meeting devoted itself to discussion of two papers presented by LES members on "Evaluation and Selection of Technology" and "Alternative Mechanisms for Transferring Technology".

The meeting emphasized the need for close co-operation among UNIDO, the Technology Transfer Registries and LES in the field of exchange of information for the promotion of technology transfer from developed to developing countries.

Technical Congress

UNIDO in conjunction with the Geneva-based non-profit organization "Technology for the People" (TFP) organized a Technical Congress from 15-19 September 1980 in Geneva. The congress, held concurrently with the Technology for the People Fair, was held to take advantage of the presence of international experts and practitioners from industrialized and developing countries who were attending the Fair so that they might exchange information and experiences in the field of development, transfer and application of appropriate industrial technologies. The meeting was attended by some 150 participants from 41 countries representing government, public and private sector corporations and R + D institutes.

The meeting, inter alia, considered the following topics: Technology Policies and Plans, Licensing Techniques Applicable to Developing Countries, Decision-making Processes in Selecting Appropriate Technology, Commercializing Prototype Technology among the Developing Countries, New Approaches to Sub-contracting, Joint Ventures and Industrial Co-operation among Business Firms, Role of Finance Institutions in assisting small and medium-scale enterprises in the Developing Countries, Equipment Procurement and Future Framework of Co-operation among Developing Countries.

Case Study on Technology Transfer

The case study presented below is published in the TIES Newsletter as a trial exercise. We would welcome the receipt of analyses and comments on this sample contract from the various registry offices. Any such analyses received before 31 December 1980 will be published together with the analysis of the author, Mr. Gustavo Flores in the January 1981 edition of the TIES Newsletter. (Mr. Flores is a staff member of the Junta del Acuerdo de Cartagena. The views expressed in the study do not necessarily reflect those of the Junta.)

If the response is sufficient, we will consider publishing such case studies for comment two or three times per year.

1.1 Introduction

The following hypothetical case of a technology transfer contract between International Corporation, domiciled in a developed country grants a license to manufacture and sell apparatus for washing and drying bottles to the local Peruvian Company National Manufacturers.

The contract, signed in 1965, obliges International Corporation to provide to National Manufacturers its patents, plans and manufacturing processes for the specific models to be produced.

As payment, a 5 per cent royalty on sales of products manufactured was agreed upon. For the contract to enter into effect, a payment of \$US 10,000 towards future royalties was required.

The contract was initially signed with a duration of 5 years (until 31 December 1971) but includes an automatic renewal clause of indefinite duration.

Later the National Manufacturers Company asked that the license be extended so that it could sell its products to all of the countries of the Andean Group. The International Corporation agreed to grant this change if the local company accepted an increase in the royalty to 7 per cent citing the reason that they would be giving up a market they had developed. This agreement was accepted by the local company and approved via an exchange of letters.

1.2 Contract Text

Developed Country, 26 May 1965

We the undersigned:

- International Corporation domiciled in a developed country (hereinafter referred to as International) represented by its President Mr. Frank Gill;
- National Manufacturing, Inc. domiciled in Peru (hereinafter referred to as National) represented by its manager Mr. Juan Pérez have agreed and concluded the following:

Clause I

International grants to National, under the conditions enumerated below, its manufacturing and sales license in Peru for apparatus to clean and dry bottles and accessories manufactured in the developed country under the trademark International.

Clause II

International will provide National with its patents, plans and manufacturing systems for all models that National is considering or could consider for future manufacture in Peru including existing models or those that might be developed by International in the future.

Clause III

- a) The present agreement is of an exclusive reciprocal nature concerning manufacture and sales.
- b) International will not grant its license to nor have any agent other than National in Peru.
- c) National will not enter into, directly or indirectly any agreement with any intermediary or company to manufacture, sell or represent in Peru, apparatus for the cleaning and drying of bottles other than that manufactured by International. Similarly National is prohibited from having interests, direct or indirect in any of International's competitor companies.

Clause IV

The trademark International registered in Peru will be utilized and will appear in all sales and prospectus documents. The note "International License" will be placed on apparatus manufactured by National under the present contract. National is authorized to use its own name, trademark or symbol in conjunction with the term "International License".

Clause V

National is prohibited from sublicensing even partially or to hand over to third parties all that is granted via the present agreement, and especially:

- the Trademark International;
- the licenses, patents or know-how involved in the manufacturing processes of International apparatus;
- devices related to whole or parts of International apparatus.

Clause VI

- a) International and National agree to make known to each other the results of their respective technical studies and research.
- b) International agrees to give to National the total assistance of its studies department both for the establishment of projects for cleaning and drying bottles which could not be carried out in Peru as well as for the manufacture of International equipment in Peru.
- c) The offices and workshops of International and National as well as those of sub-contractors are accessible on a reciprocal basis and without restriction to either party as long as the visits are conducted jointly.

Clause VII

International agrees during the primary phase of production to provide National with all apparatus/parts whose manufacture is not technically possible in Peru. These deliveries will be billed by International to National at the most favourable prices.

Clause VIII

National is independent and free to decide on local manufacture of any item or its purchase from International if local manufacture does not seem to be favourable.

Clause IX

- a) International's remuneration will be a royalty of 5 per cent (five per cent). Taxes will be handled independently by each of the parties in accordance with the laws in force in Peru.
- b) Royalties will be calculated using current number of bottle cleaning and drying apparatus and those to be fabricated by National under this contract as a base. Any changes to apparatus or manufacture of new apparatus will be submitted to International. Nevertheless, apparatus already manufactured by National will not be considered part of the royalty base. As such National should deliver

a list with numbers and photographs of such apparatus.

c) National will credit to International the sum total of royalties on a trimestral basis according to the invoice base of the previous trimester.

d) The royalties credited to International will be transferred when requested. In the case that Peruvian laws and regulations prohibit the transfer of royalties, these will be maintained by National in Peru for the use of International.

e) Royalties not transferred and maintained on account for more than 6 months will accumulate interest equivalent to the rate authorized by officials of the Savings Bank in Peru.

f) National will make available all facilities to International or its representatives to verify the form of calculation and royalty base.

g) International will deliver according to National's choice and request special sample apparatus at 40 per cent and 10 per cent discounts of current prices or if prices are modified, at the maximum discount envisaged in the new pricing scheme.

Clause X

This contract will enter into effect subject to the payment by National to International of the sum of \$US 10,000 (ten thousand US dollars) as an advance payment of royalties.

Clause XI

National is obligated to assure, during the 24 months following the date that the contract becomes effective, a minimum level of manufacture and sales of \$US 100,000 (one hundred thousand US dollars).

Clause XII

The present contract will become effective upon its signature by both parties and the payment by National to International of the sum of \$US 10,000 (ten thousand US dollars) as specified in Clause X of this contract. The failure by National to observe the conditions specified in Clause X within 3 months after the signature of this contract will void, ipso facto, the signatures and as a consequence the contract.

Clause XIII

The validity of the present contract will terminate on 31 December 1971 and will be immediately renewed by tacit agreement for an indefinite period except by renunciation by certified letter by either of the parties 18 months prior to expiry.

In case of cancellation, if the cause is imputable, National will turn over to International all documentation relating to manufacture of the washing and drying apparatus for bottles. For a period of five years all manufacture of equipment which partially or totally reproduces the characteristics of International equipment which has been the object of the present contract is prohibited.

This contract can be officially rescinded by International in the case of National's bankruptcy or for failure to pay interest on back payments as envisaged in Clause IX.

Clause XIV

All litigation related to the present contract, will be subject to arbitration by the following procedure:

- Each party will designate an arbitrator in the developed country.
- Before deliberations, the arbitrators will select a third arbitrator charged with final decision powers in the case of non-agreement between the two arbitrators; in the case of non-agreement on the designation of a third arbitrator, the third arbitrator will be designated by the President of the International Chamber of Commerce.
- The parties agree in advance to accept the judgement of the arbitrators designated by them or of the third arbitrator.
- The judgement of the arbitrators should indicate who will pay the arbitration costs and the eventual registration costs of this contract.

Technology acquisition and TAS

PHILIPPINES

The following is excerpted from the July 1980 issue of the Industrial Development Digest published by the Ministry of Industry of the Philippines.

Focus on the 11 Industrial Projects

The Philippines' full scale industrialization will be spearheaded by 11 major industrial projects by which a strong productive capacity shall be built to meet the country's own industrialization requirements of self-sufficiency and at the same time increase its capacity to join the export market. Costing an estimated \$6.0 billion and timed to take off within the next 5 years, these projects are projected to result in foreign exchange earnings of \$14.5 billion over the 18-year period, 1982-1999, excluding additional foreign exchange benefits through integration with other industries. To be established in different parts of the country, they will offer an invaluable opportunity to employ as many people as possible in the countryside.

*Copper smelter project - Designed to process locally-produced copper concentrates into refined copper, the copper smelter project has an annual capacity of 138,000 metric tons of copper cathodes, and 40,000 metric tons of sulfuric acid by-product. The contracts to build and supply the copper smelter facilities on a turnkey basis were awarded in November last year to a three-firm Japanese consortium led by Marubeni Corporation. Construction started in January this year and this project is well on its way to achieving its planned timetable start-up of early 1983. The project is estimated to cost \$350 million and is being

implemented by the Philippine Associated Smelter and Refining Company (PASAR).

*Phosphate fertilizer - This project involves the establishment of a new fertilizer manufacturing plant utilizing the 440,000 MTPY sulfuric acid output of the copper smelter plus sulphuric acid from pyrites. The project is estimated to cost \$400 million and will be located adjacent to the copper smelter project in Isabel, Leyte. Negotiations for the joint venture agreements as well as for the long-term supply of phosphate rock are now in the final stages. Detailed engineering will commence in June, and the scheduled start-up for commercial operations of this project is mid-1983.

*Aluminium smelter project - The aluminium smelter project involves the establishment of facilities with a design capacity to produce 140,000 MTPY of foundry ingots, rolling slabs and extrusion billets. The project is estimated to cost \$450 million and will be implemented jointly by the National Development Company (NDC) and Reynolds Aluminium of USA which signed their joint venture agreement in February. The project will be located in Tagoloan, Misamis Oriental. Commercial operations are due to start up by early 1984.

*Diesel engine manufacturing - This project entails the manufacture of 50-150 horsepower diesel engines by ISUZU of Japan and 90-300 horsepower diesel engines by MAN of the Federal Republic of Germany. The total cost of the two projects is of \$122.3 million, 100 per cent foreign participation being allowed for the first 5 years. Commercial operations are scheduled in 1982.

*Cement industry expansion project - In March this year, the Philippine Cement Industry Authority (PCIA) finalized the rehabilitation program for the domestic cement industry, a major component of which is the provision for expansion of domestic capacity through the establishment of 6 new 1-million ton cement plants between 1982 and 1987. The PCIA recently awarded the first 1 million ton plant to Negros Cement Corporation, a joint venture between CDCP, Philipp Bros. and Lone Star Cement.

*Coconut industry rationalization project - The joint venture agreement between Henkel of the Federal Republic of Germany and the United Coconut Planters Bank was signed in February for the establishment of a biochemical plant with a design capacity to provide 50,000 MTPY of coconut fatty alcohols during the first phase (1981-1983) and an additional 50,000 MTPY during the second phase (1984-1985). Coco fatty alcohol is expected to replace imported petrochemicals as feedstock for soaps and detergents. Estimated cost of the project is \$150 million.

*Integrated pulp and paper project - In their April meeting this year in Singapore, the ASEAN Economic Ministers approved the integrated pulp and paper project as the ASEAN industrial project for the Philippines. Based on a FAO study completed in 1979, identifying Northern Mindanao as a likely project site, the project involves the production of bleached pulp, coated paper and printing and writing paper at a capacity which is still the subject of a detailed feasibility study. The study will take into account the optimum utilization of existing plant capacity. The project is expected to be operational by 1984.

*Petrochemicals complex project - The Board of Investment approved in November 1979 the establishment of 2 downstream petrochemical plants, namely: a 50,000 MTPY low-density polypropylene plant to U.S.I. Far East and a 60,000 MTPY polypropylene plant to Hercules, Inc. Detailed engineering is currently being undertaken and the plants, costing some \$186.6 million, are expected to be operational by 1983. An upstream plant (Naphtha cracker) is also being actively pursued and will proceed as soon as a secure source of raw materials is identified.

*Heavy engineering industries project - This project involves the implementation of a local content program applicable to the machinery and equipment requirement for major industrial projects, starting with a 15 per cent target in 1980, increasing by 5 per cent annually, to 50 per cent by 1985. The project also calls for the establishment of a heavy casting and forging complex, a heavy machinery fabrication and equipment/machinery complex, and improvement of the downstream fabrication capability of the private sector. At present, negotiations are in progress with 2 companies from the Federal Republic of Germany with regard to the establishment of the heavy engineering complex. Facilities are expected to be operational by 1984. The total cost of the project is estimated at \$100 million.

*Integrated steel project - This project involves the establishment of an integrated steelworks with a projected capacity of 1.2 million MTPY of slabs and .3 million MTPY of bloom during the first stage (1985-1989), and 2.0 million MTPY of slabs and 1.0 million MTPY of bloom in the second stage (1990-1995). To be located in Tagoloan, Misamis Oriental, the project is estimated to cost \$1.5 billion. Discussions are now in progress with prospective partners for both the technical and engineering aspects, the equipment supply and joint venture agreements. At the same time, detailed studies are being undertaken to identify domestic source of iron ore and other raw materials.

*Alcogas program - The Philippine Alcohol Commission has been established in February to implement the nationwide alcogas program involving a targeted aggregate distillery capacity of 925 million litres of alcohol by 1988 from 47 distilleries. This project is expected to reduce the country's dependence on imported crude oil by displacing 20 per cent of the projected demand for gasoline.

Recent publications

ID/232/10. Appropriate Industrial Technology for Drugs and Pharmaceuticals No. 10 - Monographs on Appropriate Industrial Technology.

ID/250. Fertilizer Manual No. 13 - Development and Transfer of Technology Series.

UNIDO/ICIS/161. Picture for 1985 of the World Iron and Steel Industry.

CALENDAR OF MEETINGS

1. Joint UNIDO/WAITRO Seminar-Workshop on Improving the Performance of Industrial Research Institutions through Co-operative Arrangements, Colombo, Sri Lanka, 13-16 October 1980.
2. Workshop on Preparation and Negotiation of Technology Transfer Agreements for Public Enterprises in Developing Countries, Ljubljana, Yugoslavia, 27-31 October 1980.
3. Joint UNIDO/CAU Seminar-Workshop on Transfer of Industrial Technology, Khartoum, Sudan, 5-11 November 1980.
4. National Workshop on Technology Transfer to be organized by UNIDO and the Foreign Investment Institute, Lisbon, Portugal, May/June 1981.

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