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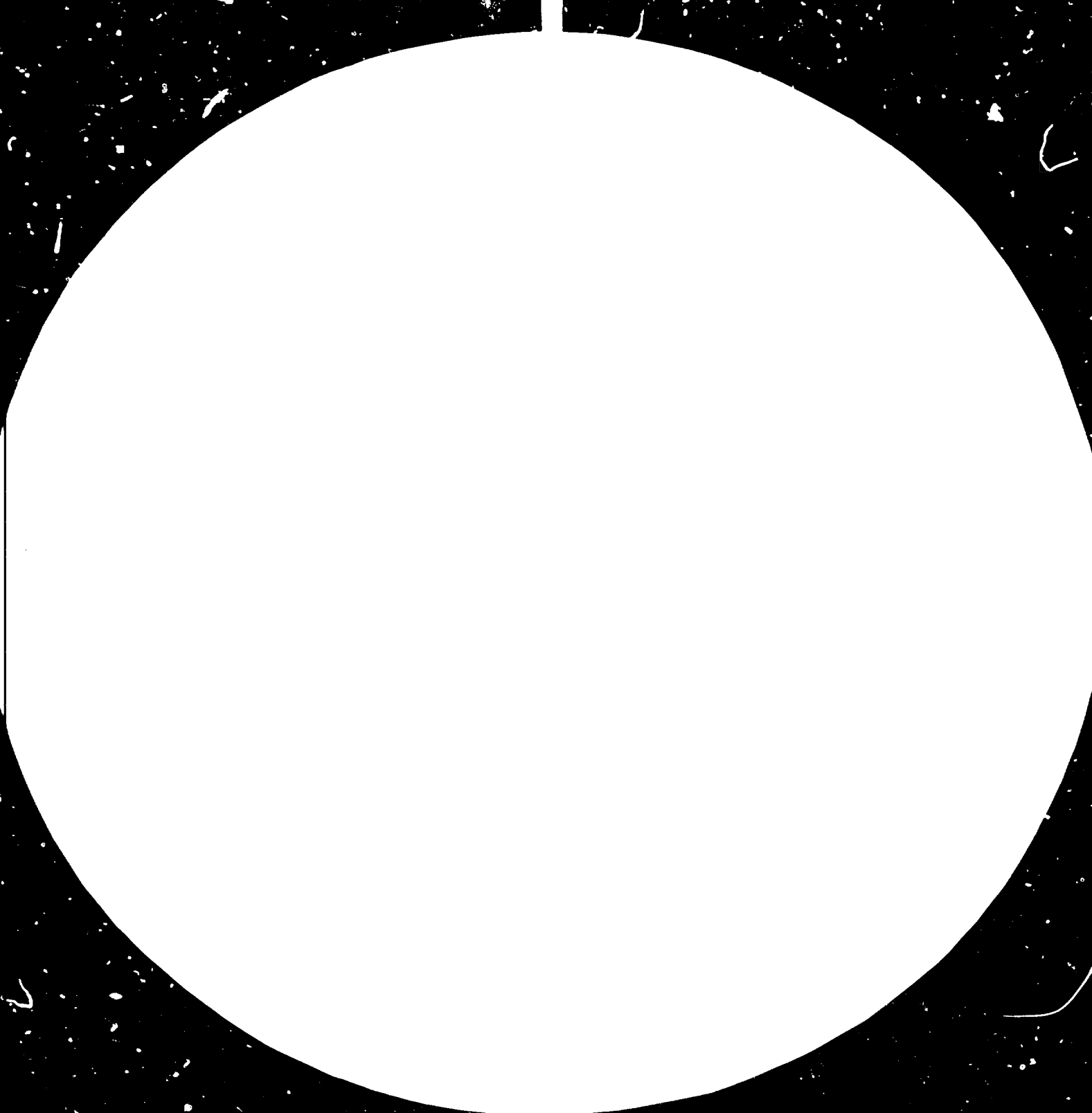

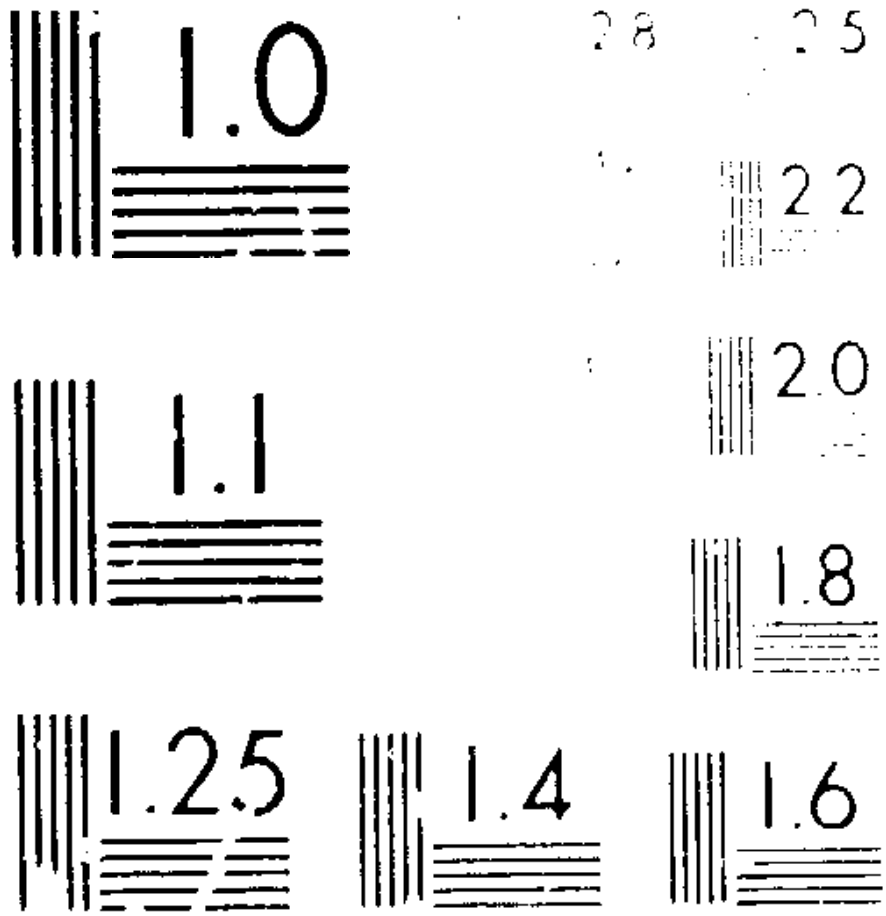
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Exchange Network (TIEN)

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COUNTRY BRIEF: KENYA*

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* The views expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO. This document has been reproduced without formal editing.

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I INTRODUCTION

In its philosophy of development, the Kenya Government elects to pursue among other things a high and growing per capita income, equitably distributed. The Government recognises its central role and the complementality of the private sector in investment resources mobilisation, and induces the inflow of foreign private and public capital in the form of financing plant and equipment and knowhow.

Besides the domestic resources contraint, the lopsided labour-capital national endowment and limited market, influence the pattern and the scale of resource deployment in pursuit of the development objectives. Various private, Government and quasi-government organisations have been created to direct the available investment resources towards desired goals. The Industrial Development Bank is one of such organisations.

II IDB'S FINANCING ACTIVITIES

The Industrial Development Bank (IDB) is a Government financial institution created in 1973, for the purpose of furthering the economic development of the country by assisting in the promotion, establishment, and expansion of medium and large scale industrial enterprises including mining, agro-industrial, engineering, tourism, transport, shipping and such other enterprises as the board may approve. In pursuing this objective, the Bank endeavours to achieve and maintain a satisfactory and acceptable return on shareholders capital compatible with the maintenance of a sound financial position.

Within the broad industrial sectors of mining, agro-industry, engineering, tourism, transport and shipping, IDB is normally willing to finance or otherwise assist in enterprises where new productive assets are to be created. The Bank will not usually engage in refinancing operations or transfers of existing assets; or assist enterprises in exclusively commercial, real estate or farming activities.

The Bank promotes the Industrial Development of Kenya through one or a combination of the following methods:

(a) Provision of medium and long term loan financing;
(b) Direct equity investment;
(c) Provision of guarantees for loans from other sources;
(d) Underwriting of security issues, share stocks, bills of exchange, promisory notes and similar obligations.

The Bank shall as part of its portfolio management and in order to maximise the use of its temporarily idle resources, purchase or acquire shares of profitable companies and revolve its funds by selling its equity investments.

IDB also undertakes the management of loans as agent of and for account of the Government or any other reputable institution on terms and conditions to be agreed between the parties and IDB. Such an agreement always includes a management fee sufficient to cover IDB costs in connection with the management services offered and to yield a satisfactory return to IDB.

The Bank does not normally participate in any enterprise whose total capital cost, including the permanent working capital is less than Kenya Shillings (KShs) 1 million (US$100,000). The Bank's investment in such an enterprise should not be less than KShs 400,000 (US$40,000) or exceed KShs 40 million (US$4 million) and its commitment in any one enterprise should not exceed 50% of the project's total capital cost, including permanent working capital. Special consideration is however, given to the financial requirements of expansion programme for existing industries. IDB does not seek to acquire a controlling interest in its equity investments and may not acquire an interest of more than 49% in the share capital of any one enterprise. The Bank usually does not manage enterprises, although it does its best to ensure that an enterprise is managed competently.

In its efforts to assist indigenous Kenyans enter the manufacturing sector IDB has continued to mobilise local resources through borrowings from commecial banks and insurance institutions. Under its Medium Scale Enterprise Scheme, the bank can finance upto 75% of the total cost of a project whose total project cost is between KShs 1 million and KShs 10 million(US$1 million).

In its operation, the Bank is guided by sound banking principles. Investment decisions are based on established appraisal methods, and take into account particularly the scale of operations, total financial requirements of a project and the stability of the resulting financial structure. Only eccnomically sound, financially viable and technically feasible projects are funded.

Imbeded in this investment analysis is an evaluation and selection of technology.

III CURRENT EXPERIENCE AND METHODOLOGY OF EVALUATION OF THE TECHNOLOGICAL CONTENTS OF THE INDUSTRIAL PROJECTS.

Technology selection pressupposes:

i) the existence of more than one technological approach towards a desired goal.

ii) the user's awareness of the existence of the different technologies.

iii) user's knowledge on the differences between the technologies.

iv) user's capacity to select the best suited technology.

The suitability of a technology is contingent upon the country's socio-economic environment and set goals. A country that is more relatively labour endowed, and seeking to maximise employment and social welfare should discourage capital intensive methods. A technology that utilises locally available raw materials will also be preferred. Since basis project attributes are determined at the project formulation

stage, it is imperative that to be effective, technology selection be integrated at the earliest stage in project conception. It could also be recommended that to be in line with the national plan and Government development priorities, project generation, formulation and technology selection should receive direction from the Government or a Government agent.

Choice of an appropriate technology is crucial to the project's adaptation in the economy and its ability to generate backward and forward linkages. The experience in IDB is that not enough consideration is given to technology selection in project evaluation. This arises from a number of situational facts.

(1) Private Sector Dominance in Project Generation

Though the Government participates in projects of national significance or demanding huge infrastructural expanditure, the private institutions including private individuals, local firms and local branches of transnational corporations occupy a major role in the creation of productive capacities in Kenya. This means that most project generation and formulation falls outside the realms of Government influence and could even be inconsistent with Government intentions and development priorities. As the private sponsors are primarily guided by the profit factor in project conception and formulation, the logical choice of a technology that is relatively labour intensive, suitably scaled and seeking to optimise total resource utilization and industry linkages cannot be guaranteed.

(2) Lack of Adequate Knowledge on Available Technology

The main technology flow into the country is in form of skills and equipment from some major developed countries. Information available to the users does not cover the whole range of existing technology, and the difference between possible choices could be blurred by aggressive salesmanship, advertisement and promotion by the plant suppliers. The equipment buyers may not therefore be able to order the best available equipment or skills.

Technology developed in the developed countries will essentially be gared towards the economic conditions in those countries. The technology will therefore be capital intensive, requiring high technical skills and seeking to utilise local resources and benefits from scales of production. This technology may therefore not be suitable for a developing country without some modification. Even with such modification the equipment may not fully fit with the environment in a developing country.

Besides the technology and skills obtained from the developed countries, there is technology developed in other developing countries and inside Kenya itself. The developing countries share certain basic characteristics in labour/capital endowment, shortage of technical skills, unemployment and populations' low purchasing power. The technology developed in other developing countries may therefore be more relevant in the Kenya context in terms of factor intensity, sophistication and scale of production and the overall resources utilisation and industrial linkages.

However not enough attention has been given to these latter two sources of technology. IDB has detected a local bias against technology developed in other developing countries, which could be partly due to lack of information and inexperience with such equipment and lack of promotion on the part of the sellers. Firms in developing countries do not have the resource ability to publicise and create an appeal for their equipment as firms in developed countries do. Besides a majority of firms in developing countries are part of multinational conglomerates with branches in many other developing countries. The local branches of the transnational corporations will normally receive technology transfer direct form the parent company, irrespective of the suitability of such technology to the recipient country's requirements.

(3) IDB's Role

The role of the Bank as a financing institution also limits its ability to participate in effective technology selection.

Hitherto the Bank's role in the generation and formulation of projects has been somewhat limited. The Bank has normally been brought in to the projects at the appraisal stage where its role is primarily to determine whether a project will succeed in generating and adequate return on capital invested.

In a recent publication entitled 'Guidelines for the Acquisition of Foreign Technology in Developing Countries', UNIDO recommends the following steps in technology selection:

i) It should be determined that the technology has been commercially proved, yet not obsolete.

ii) Alternative technologies that may be available should be evaluated comparatively on the following points:
   (a) Cost of obtaining such technologies
   (b) Principal inputs required and their local availability.
   (c) Estimated manufacturing costs and profitability.

iii) Where technology has to be obtained from a particular country because of foreign exchange limitation or other constraints, a comparative evaluation should still be made, to the extent possible, as in (b) above, for purposes of negotiation.

In evaluating the technology selected by the sponsor for a project the Bank will compare the equipment and any technical back up offers with quotations for similar machinery from other suppliers.

As the Bank does not have personnel competent to evauate detailed technological differences between equipment, plant comparisons will primarily be centred on price with the Bank normally recommending the lowest priced. On qualitative grounds, the sponsor may still be able to justify the selection of more expensive plant so long as it gives the project an acceptable rate of return.

In some instances when wide differences do exist between offered technologies, the Bank is able to make a technology selection, but indirectly by considering the project's financial viability A good example is the decision not to approve financing a mini sugar project because one of the proposed technologies, the open pan is too wasteful and inefficient while the alternative diffusion technology is efficient but too expensive to render the project financially viable.

(4) Tied Credit

Most of IDB financial resources are loans from various foreign lenders. A number of such lines of credit available to the Bank are tied to procurement of plant and equipment from the lending country. This further limits the Bank's ability to acquiring technology from outside the lending country. Fortunately there are lines of credit which are not tied to procurement of machinery from any particular country and these credits are increasingly being used to reduce the effects of the above mentioned limitations.

IV INFORMATION REQUIRED FOR TECHNOLOGICAL EVALUATION OF THE PROJECTS SUBMITTED FOR FINANCING AND THE EXISTING GAPS FOR OBTAINING SUCH INFORMATION

As the appropriateness of a technology will depend on the local socio-economic setting, a country's resource endowment and development goals and the technical requirements of a project, data to facilitate technology selection should include:

1. Projects technical requirements
2. Details on offered equipment
   (a) employment creation
   (b) level of co-operant technical skills
   (c) quality and volume of raw material needed, including

ability to use locally available materials.

(d) Production capacity

(e) Quality of output

(f) Supporting infrastructural needs.

Existing Gaps of obtaining the Information

Project initiators usually do not have the technical ability to specify the project's requirements. Most of the existing consultancy organisations to whom the project sponsors turn do not have personnel competent to advise on technical details. As a result, in the preparation of a feasibility study those consultants can only recommend technology and source of equipment in line with the client's choice. There is therefore a need to create a consultancy organisation or organisations competent to advise project initiators on the projects technical requirements.

Details on supplied technology along the lines suggested above are normally provided by the machinery suppliers. The idea is to widen the coverage by obtaining data on technologies available in more countries, including technologies from the developing countries including Kenya.

V TECHNOLOGICAL INFORMATION EXCHANGE NETWORK

At present, no systematic search is conducted in the process of technology selection. Project initiators have normally stumbled on contacts of possible machinery suppliers or picked them from thier business colleagues.

IDB usually identifies possible machinery suppliers through past dealings or with the aid of the various foreign embassies in the country. This does not ensure the consideration of the whole range of existing different technologies.

To facilitate easy access to information on the range of internationally available technology, a technological information exchange network has been proposed. Such a system would operate within an already existing institutional framework, or

a purposely set up system. The Vienna Programme of Action recommends the promotion of universal access to bibliographical information sources through an international linkage of national libraries. The National Libraries would be responsible for the collection and dissemination of bibliographical information as well as the development of existing international standard methods of describing or retrieving documents for innternational co-operation.

Other national institutions that could be linked into such a network include the national universities or organisations dealing with science and technology.

A second approach may be to systemise the current adhoc usage of embassies as centres for technological data collection and dissemination. The information documentation would then be current and more comprehensive and retrieval less time consuming.

Though the use of already existing institutional framework may be less costly, the volume of data to be handled may warrant the establishment of independent internationally linked scientific and technological data collection centres. The advantage here would be the ability to man the centres with technically qualified personnel, who could double as consultants for project sponsors on technology selection. Such centres would be more user-oriented and would be able to gather and document information on locally available technology.

A good example is the Lucknon Centre of appropriate technology in India. The Centre works on development of local techniques and modification of imported technology to suit local needs.

The central feature of the data collection centres is the comprehensiveness and computer application. A more selective and geographically limited approach to technology selection and transfer has been along the lines of the Intermediate Technology Industrial Services (IT-IS) of Britain, Accords Inter-Enterprises de Transfert et d'adaption de technologies in France and the F-Ide Company of SIDA in Sweden. Basically

what these bodies do is identify small scale technologies in their respective countries that can suitably be transplanted into the participating developing countries. Missions to the participating developing countries, identify partners with whom the technology transferring firms will collaborate. This more flexible adhoc approach has been hailed as gaining a better response than attempts to impose rigid systems with computerised information services.

VI IDB'S ROLE IN IMPROVING PROJECT EVALUATION TECHNOLOGY SELECTION

The two aspects in technology selection is the technological information acquisition and utilisation. The selection is from locally developed and imported foreign technologies. If the technological information is available through an established information network system, project initiators can only benefit from the information by obtaining competent advice on the technical requirements of their projects. IDB would have to support the development of an official consultancy organisation to provide this service. This will ensure that technology selection is given appropriate consideration at the project generation stage and that it is consistent with the National Plan and Government's development priorities.

The Bank's current projects financing pattern is biased towards imported technology. As this arises partly from the tied international credit finances, consideration for flexibility, more financing for locally acquired resources and the un-packaging of imported plant deals will have to be negotiated for with the lenders and plant suppliers.

IDB policy should be to support the growth of an indigenous technological base, which objective will be pursued by getting the Bank's Research and Promotion Division to work more nascently with the project sponsors in liaison with various Government scientific and research organisations such as Kenya Industrial Research Institute (KIRDI), the National Council for Science and Technology (NCST) and the Industrial Promotion Department (IPD) of the Ministry of Industry in technology identification, evaluation and selection.