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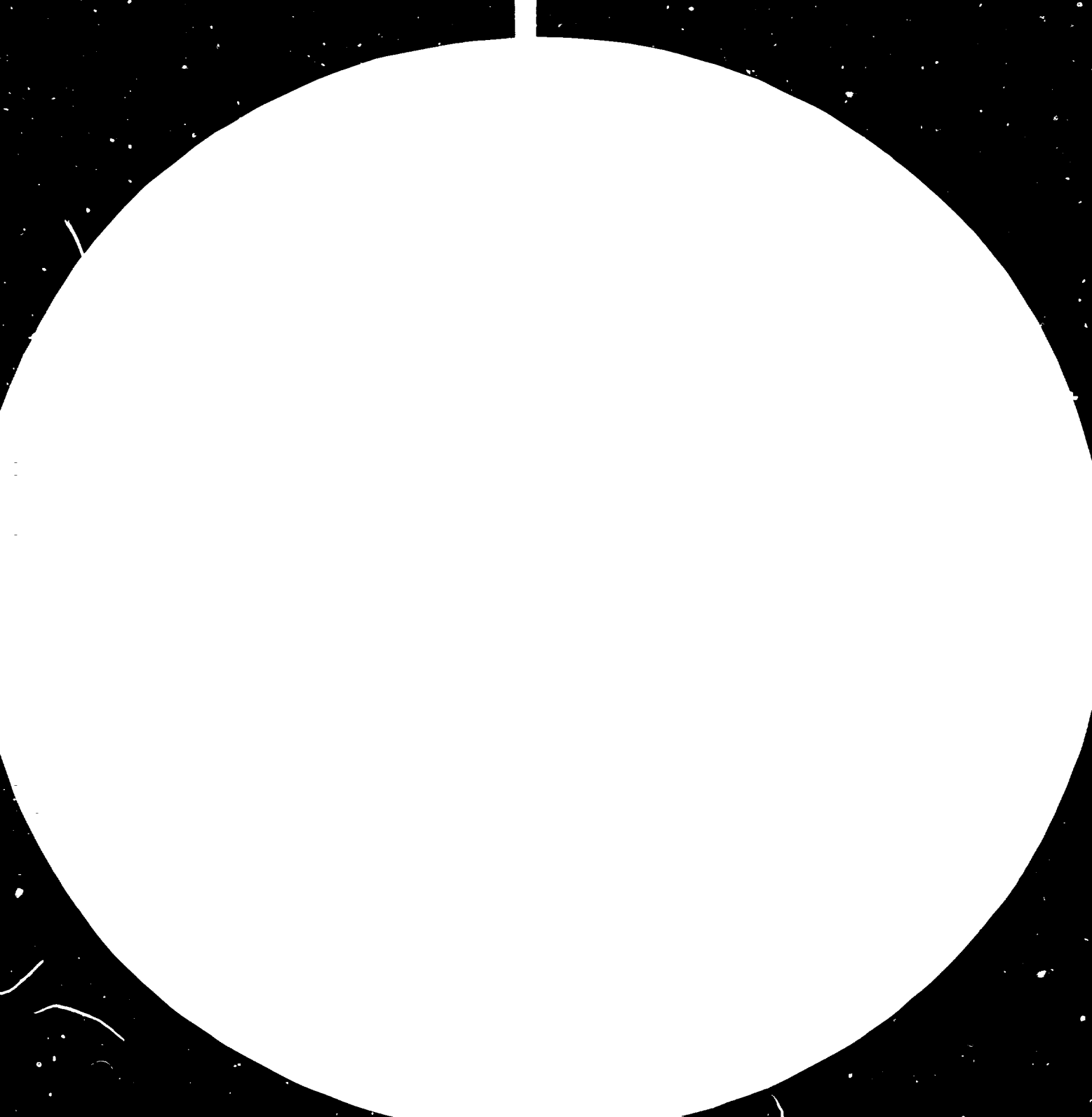
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Expert Group Meeting on Institutional  
Infrastructure for Industrial Develop-  
ment in the Least Developed Countries  
of Africa

Arusha, Tanzania, 13-18 November 1978

FOLLOW-UP TO A STUDY PREVIOUSLY UNDERTAKEN BY UNIDO  
ENTITLED INSTITUTIONAL INFRASTRUCTURE  
FOR INDUSTRIAL DEVELOPMENT \*

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INTRODUCTION

The Expert Group Meeting on Institutional Infrastructure for Industrial Development in the Least Developed Countries of Africa organized by UNIDO was held at Arusha, the United Republic of Tanzania, from 13 to 18 November 1978.

The objectives of the Meeting were to review and exchange experience on the obstacles to the establishment and management of an institutional infrastructure that would be conducive to industrial development in the least developed countries of Africa.

The Meeting was a follow-up to a study previously undertaken by UNIDO entitled Institutional Infrastructure for Industrial Development UNIDO/ICIS.36.

ALLOCATION OF KEY FUNCTIONS TO INDUSTRIAL INSTITUTIONS

The phenomenal expansion during the last ten years of institutions dealing with industrialization in developing countries received an inquiry into the causes leading to their creation, the procedures by which they were given their specific responsibilities and the nature of the operations performed by those organizations.

The question remains whether the scarce manpower and financial resources of those developing countries that have set up institutions to facilitate and promote industrial development have been wisely invested because their establishment has not always been the result of mature consideration of well planned industrial or national plans directed towards self-sufficiency. In many instances, institutes have been created to carry out promotional or support functions before any clear national industrial policy has been set. Reasons for that include lack of clear thinking, the ambitions of certain officials and misguided advice and technical assistance from outside. Most developing countries should, therefore, examine their institutional infrastructures and revise them continually to ensure that they are really designed to operate in the context of current industrial plans.

Cases are all too numerous of institutions that have been created in an attempt to rectify a problem that another has failed to solve in the hope that the latter would not make the same mistake or at least would be more efficient.

It is paradoxical that organization created to institutionalize change in their immediate environment frequently become the most conservative elements. The recognition of the need for change owes its origins to governmental policies and yet when new priorities are set and policies alter, the existing institutions remain more or less intact while new ones are spawned to reflect current desires



for change. The repetition of this process can culminate in a state of unco-ordinated institutional chaos where yesterday's agents of change are today's immutable traditionalists.

When establishing or revising the institutional superstructure, care must be taken to ensure that each institution is part of a total and coherent system. None of them should be treated as isolated units. The functions and activities of each either effects, or is effected by other institutions, for example, consultancy and extension services interact with financing or better training of employees; or export promotion is dependent on standardization and quality control.

In reviewing the list of the most common functions conferred upon industrial institutions one can see many areas which may give rise to duplication of services and consequent competition which is underlined as one of the factors inhibiting their success.

These functions are summarized as:

1. Industrial Planning,
2. Investment Promotion and Financing,
3. Research,
4. Standards and Quality Control,
5. Transfer of Technology,
6. Consultancy and Extension Services,
7. Manpower Training,
8. Export Promotion,
9. Technology Information Services.

These are the most generic activities which are designed to assist industry in general. There are, however, subdivisions of responsibilities which further relate to: the size of industry, i.e., small, medium or large; the spatial emphasis, i.e., urban or rural; the sector of industry, i.e. textiles, metals, chemicals, etc. The tendency is towards more and more specificity and isolation.

Although it may seem basic, an industrial function or institution does not exist for itself, its value lies only in its impact on industrialization. It is, however, in the numerous independently operating institutions, all too easy to lose sight of this basic idea and to concentrate upon a function or an institution as having a life and importance of its own and divorced from its raison d'être. <sup>1/</sup>

The staff of such institutions are frequently ignorant of the existence of viable industries both large and small which flourish without the slightest official encouragement or assistance from them. The performance of industrial institution should therefore be rated against the background of their potential clientele or market and on all possible occasions institutional staff should be encouraged to work in and with industry itself, and likewise those from industry should work in promotional institutions on an exchange basis.

#### Co-ordination

One of the most common pitfalls experienced by African LDCs has been the creation of too many institutions. The number must be kept to a manageable size in order to ensure consistent planning and effective inter-institutional co-ordination. Proposals for the establishment of new institutions must be viewed with great suspicion and much of the imagination which is now devoted to "institution building" may be more creatively employed in elaborating plans for the destruction of institutions which have outlined their usefulness, or at least to devising methods to enhance the operation and efficiency of existing ones. <sup>2/</sup>

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<sup>1/</sup> Major Conceptual Issues in the Analysis of Key Functions Assigned to Industrial Institutions, L.L. Barber

<sup>2/</sup> Improving the Output of Industrial Institutions, G.R. Latortue

The more complex the institutional base, the more necessary and the more difficult it becomes to co-ordinate programmes. Harmony between institutions is unfortunately not always possible and it is frequently difficult to avoid overlapping because of different ministerial obligations and responsibilities or because of conflicting interests characterized by struggles for prestige between the directors of the various institutions. To avoid such duplications or friction, it is essential that the tasks which are to be performed by each institution is clearly defined. Furthermore, appropriate institutional structures must be employed for this purpose regardless of whether the number of institutions is large or small. There are several options relating to the size and number of institutions such as Upper Volta which has many, Puerto Rico which has a few and Togo which lies somewhere in the middle. It is not possible to comment on the appropriateness of any one system over the other or on how a country divides the functions among its institutions; decisions on these issues must be taken in the light of every country's own experience and circumstances. It is, however, important to emphasize that this division of responsibility must be done unambiguously.

Especially in newly emerging countries where officials may be inexperienced and precedents have not yet been set, it is a safer course of the government to make the distinctions between institutions well defined. It can be argued that those African countries which have followed the French code system of administration are usually in a more favourable position in this respect than are those which have followed the more flexible and sometimes vague British administrative practices.<sup>3/</sup> Even where the original duties and responsibilities have been specified, whether by law or ministerial

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<sup>3/</sup> Major Conceptual Issues in the Analysis of Key Functions Assigned to Industrial Institutions, L.L. Barber

regulation, reallocation should be expected as times and conditions change. The central planning authorities have a responsibility to monitor this and to keep definitions up to date and the duties assigned or reassigned to the proper institutions. Institutions are commonly overloaded with excessive work which stretches their human and physical resources to the extreme; the tasks imposed on such institutions, particularly when they are newly established, must be in line with their ability and they must receive consistent support not only at the time of their establishment but also throughout their existence. What frequently happens is that in the matter of issuing a decree or passing a law creating a new institution Governments are particularly "generous" in assigning tasks, but when it comes to discussing allocations of the national budget the same governments are notoriously "parsimonious" in granting funds to perform the work.

Effective co-ordination at all levels is vital to the success of industrial development. The ideal situation would be to have all industrial institutions jointly prepare their working programmes which they could then present as a single entity to the planning and budgeting authorities. The case of Guinea's Interministerial Development Council may serve as an example of how such work could be done.

More effort needs to be placed on exploring the possibilities of linkages and joint field projects to cement practical and mutually advantageous relationships. This is particularly apt between financial institutions and industrial promotion bodies where co-ordination is possible in almost all stages of a project's development:<sup>4/</sup>

- a) project preparation and identification;
- b) project analysis and financial viability;
- c) investment guarantees;
- d) training;

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<sup>4/</sup> Improving the Output of Industrial Institutions, G.R. Latortue

- e) marketing;
- f) on the spot extension advice.

Co-operation in these areas develops greater objectivity in the choice and evaluation of projects, reduces the effectiveness of intervening pressure groups, lessens the time spent on studying and evaluating requests for financing, and facilitates the task of monitoring the use of loans. Finally and perhaps more relevant to an institution's survival, it gives greater credibility to the institutions concerned in the eyes of both the country's industrialists and international institutions which can be instrumental in providing timely assistance.

The foremost guiding principle in establishing institutional structures is "simplicity".<sup>5/</sup> In the early stages of industrialization, there is no need for a complex institutional infrastructure. This concept of simplicity should be applied at two levels:

- a) the number of institutions and
- b) the number of individuals in institutions.

In the average and least developed country the supply of managerial skills, industrial specialists, technicians, not to mention public budgetary resources, is so limited, that the number of individuals, departments or divisions of institutions needs to be restricted. Programme co-ordination can, therefore, be improved by organizational simplification.

Such simplicity is also necessary within institutions in order to fit in and utilize the limited number of qualified officials available. In many countries one finds in institutions numerous sections composed solely of a section head with little or no secretarial support. This is a frequently used device to confer prestige or a higher salary on that person. Other ways need to be explored in this regard and training is perhaps the most meaningful way to up-grade and promote staff. In any case, the proliferation

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<sup>5/</sup> Major conceptual Issues in the Analysis of Key Functions Assigned to Industrial Institution, L.L. Barber

of these "phantom" sections creates a cumbersome bureaucracy. It makes supervision and co-ordination difficult and loads scarce technical specialists with unnecessary administrative duties and paper work thus diverting their time from the job for which they have qualified - servicing industry.

There is a certain amount of justification for making many of the industrial institutions into semi-autonomous bodies responsible for meeting at least some if not most of their budgetary requirements. Such action would certainly make these institutions more sensitive to the needs of their market namely the existing and potential industries in their host countries. In addition, there would be less likelihood of breeding complacency on the part of the staff. These institutions could perhaps then develop greater flexibility in staff recruitment and remunerations thereby encouraging more advancement through achievement.

At the same time, while it may be feasible for larger industry to pay institutions for their services, this is not the case for smaller enterprises who are in greater need of free services and whose small overheads do not allow for consultants to be hired at commercial rates. For the smaller industries, whether the country has opted to establish a specialized institute or prefers to co-ordinate the work completely within the ministry of industry's regular service to industry, specialized terms and assistance are required. The motivation to assist this group does not arise necessarily from altruism but from a justification based on many economic considerations. Moreover, it should be remembered that industrial service institutes are part of a system for the development of the nation as a whole. The rising expectations of the New Economic Order are intended for the entire population, not merely for one group, class, tribe or region. Factors such as post-independence nationalism and indigenous socialism contribute to this feeling that all have a right to share in the expected economic and social improvements. This concept of "equality" needs to be embodied in the programme targets of the institutional system.

### Multi-functionals

There are many who feel that the best way to ensure simplicity and as a result co-ordination of functions is through an emphasis on multi-functional institutions. These are single organizations which combine several related functions including promotion, research, finance, technical and managerial assistance and external linkages. This can generate three important results :

- a) It can enable the organization to adequately serve its clientele both in the capital and in the regions at a more satisfactory level of technical performance. Favourable decisions at the political level regarding policies and resources needed to support and sustain industrial development can also be obtained more easily when convincing arguments are brought forward in an integrated manner.
- b) It can facilitate co-ordination among various specialized functions that are important to launching and supporting specific projects. Red tape can be cut or eliminated by entrusting the responsibility to one director who has the authority to simultaneously develop all the necessary components of a project without having to solicit approval from a lengthy chain of institutions outside his control.
- c) It can greatly simplify the problems encountered by the general public or clients of the institutions who more often than not require more than one type of assistance. This is particularly appropriate when dealing with small and medium industries which can not afford the time to establish simultaneous links with the several institutions requested for a project's progress<sup>7</sup>.

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<sup>7</sup> Institutional Requirements for the Industrialization of Rural Areas, C.T. Thomas.

Promotional work devoid of influence or control over the recommended inputs destroys clientel credence in the organization. A certain amount of caution, however, should be exercised in combining promotional functions with finance. This can frequently end in a situation where it becomes politically embarrassing to foreclose a loan which has been granted on the intelligence prepared by the promotional department. The Tanzanian Small-Scale Industry Institute (SIDO) combines promotional and input assistance on machinery and training in a complete way, partial assistance with marketing and provides no finance. In Botswana, BEDU offers a complete package in its nursey industrial estates. Whatever the institutions are uni- or multi-functional, it is clear that the needs of industry must adequately be attained. The problem with numerous institutions is co-ordination and whatever combination of functions are selected for an institution the leading principles should be simplicity in structure and satisfaction from those being served.

Even though many related functions may be combined in a single organization, not all functions related to industrial development can be combined under one roof. The Central Bank for example will continue to allocate foreign exchange, the Electricity Supply Corporation will continue with its programme which relates to many other national objectives outside of industry. In addition to serving its clients, industrial development institutions will have to work with other agencies whose main concerns are not with industrial development. Attempting to persuade these organizations to attach high priority to overall industrial needs and specific cases which come up from time to time is not an easy task. Unless the institution has sufficient standing in the competition structure of government it will be unable to gain the necessary access to high level decision-makers in order to exercise an effective lobby on behalf of industrial development. The real priority that governments attach to industrial development can often be gauged both by the resources they allot to such activities and by the level at which they locate its functions in the bureaucratic hierarchy<sup>8</sup>.

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Major Conceptual Issues in the Analysis of Key Functions  
Assigned to Industrial Institution, L.L. Barber.



## INSTITUTION BUILDING

In establishing institutional infrastructure governments have two simultaneous tasks:

- 1) to build and guide an organization or network of organizations committed to a common purpose and
- 2) to manage its linkages with other organizations, groups and individuals which are important to the successful accomplishment of its mission.

The purpose of institution building is not merely to establish viable and self-sustaining organizations. This, of course, is essential but it is not a sufficiently valid criteria for pursuing institution building. The broader purpose is to ensure that the innovations for which the new organization was founded become accepted (institutionalized) and valued elements of the environment in which it operates<sup>9</sup>.

The new institute must take into account and adapt to the realities of the society in which it operates, but its primary role is as an agent of change. Therefore when viable or successful institutions predominate, society adapts and changes in response to the innovations introduced by these organizations. In the case of a successful institution committed to industrial development, this would mean that other agencies of government change or shift their priorities in full or partial recognition of the need for industrialization and that they incorporate this priority into their own operations. The Ministry of Education for example, might be persuaded by a promotional institute to adjust its curriculum to include the training of skills required in manufacturing. When these changes have been brought about, they can be said to be institutionalized within the environment.

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<sup>9</sup> Developing and Managing Institutions for Industrial Development, Milton J. Essman

There are six main elements which need to be considered in order for an institution to succeed:

- a) Leadership: The leadership must be technically, managerially and politically competent. It must be fully committed to the purposes for which the organization stands and prepared to work hard in the face of limited resources, skepticism and disinterest from the institutional environment it is trying to change.
- b) Doctrine: Doctrine which is a statement of the organization's purposes and priorities and the methods by which it will carry out these functions serves two main purposes: it helps to establish cohesiveness and a common purpose within the organization and it projects an authoritative image externally of what the organization stands for and how they can expect to relate to it; as such it represents an important element of the organization's stability.
- c) Programme: This is represented by the translation of doctrine into daily operation and how it would allocate its resources among competing activities, for example, what kinds of services will it offer? and what kind of clients will it serve? While the emphasis may shift over time the programme components of an industrial development organization are likely to be: 1) public information (publicity) and self-promotion; 2) managerial and technical training; 3) research on industrial opportunities; 4) technical extension and consultancy; and 5) fire-fighting or helping to solve specific problems as and when they arise.
- d) Resources: These are required to implement an organization's programme. The effective use of resources sets the standards of the institutions. There are three major types of resources: 1) personnel, which must be enticed with job satisfaction; 2) information, which

provides the intelligence for determining the programme and

3) funds which are necessary to pay for the information and personnel.

One of the main tasks of the leadership is to ensure a continuous supply of resources. Continuity is very much dependent upon an institution's past record and the image it portrays to those responsible for budgetary allocations.

- e) Internal Structure: Every complex organization must have an internal structure which determines the division of labour among departments and individuals performing certain tasks. Whether the main breakdown should be by function i.e. (research, technical assistance, manpower development, financial assistance, public information, etc.) or by geographic area (urban, rural, or regional) or by type of clientele (small, medium, large) or by a combination of these principles depends upon specific factors in each country's situation. Within the structure there must be sufficient room for decentralization of decision-making. Control from the top should be exercised by clear policy direction, reporting arrangements and mediation of conflicts, while encouraging staff to take initiative in day to day operations. This is an important element in maintaining staff morale. In this regard, institutions must be encouraged to extend their services to the field, otherwise, the geographic pattern of industrial development will inevitably be skewed in favour of the immediate locale of the headquarters.
- f) External Linkages: No organization is self-sufficient nor does it exist in a social and political vacuum. One of the tests of successful institution building is the degree to which related organizations and groups have been persuaded to accept and adopt the values and priorities of the organization as their own. These linkages are vital to the

ability of the organization to carry out its functions and are therefore a major claimant on the time and energy of the leadership. The most important linkages are with 1) clients who whether they are in the public, private or co-operative sector, provide the organization with requests that determine the workload, 2) government agencies, who inevitably represent the institutions financial power base, 3) non-governmental organizations, who can assist in financing, marketing, importing of scarce materials, etc. and 4) foreign organizations, who provide information and technical assistance.

#### Elements of Institutional Success or Viability

One possible approach to the question of viability is to isolate the main variables involved in successful institutions and then to concentrate analysis on the ways and means of improving their values. The following three properties are considered essential for success<sup>10</sup>:

- a) Image is the knowledge that people have both within and without the organization as to its function and raison d'être. If the knowledge of the institute's doctrine or programme is poor then the image is low, if it is good then the image is high.
- b) Connotation is the attitude that people hold about the organization and whether they regard the work being performed as important or insignificant. If people view the work as important then connotation is high if they regard the work insignificant then it is low.
- c) Purchasables is money, people's time, equipment, etc. These are used as resources for implementing the programme and effecting change.

An organization which has these three variables exists and the extent to which an industrial institution can generate: the continuation of its good image, a positive connotation, and the replenishment of its purchasables, it can be said to be viable. The degree will naturally be reflected by the sum total of the values for the three variable.

Table I outlines what data is necessary both internally and externally to attribute values to image, connotation and purchasables.

### The Service Delivery Process

Having decided upon a "doctrine" and having prepared a "programme" the next stage involved is implementation. This is the process of transforming industrial institutional service delivery policies and plans into the desired result i.e. national industrial development. There are four distinct phases in the process<sup>11</sup>:

- a) Implementation Analysis and Planning: Once the services are tentatively agreed upon the management of an institution needs to determine its suitability or feasibility with regard to the national objectives. Key features of this stage include: detailed scheduling, assignment of responsibility, and contingency planning which may indicate second best alternatives. Instead of sophisticated and lengthy cost/benefit analysis for selecting projects, simple rapid techniques which take account of social and political objectives should be used.
- b) Organization and Start-Up Activity: Following a final decision within the institution to deliver the service, the initiation stage begins. This is a period of high and innovative activity. The staff verify (and alter if required) implementation plans, recruit other support staff and establish appropriate service procedures.
- c) Operations and Monitoring: At this point the service delivery activity can be said to be fully operational and the service benefactors (normally industries) should be using the service in the expected manner. This is the stage at which support is expected from the external environment. Such a support is often dependent on meeting stipulated service objectives within time and cost constraints. Table IV is an illustrative list of activities and institutions with whom co-ordination is essential to implementation.

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<sup>11</sup> Viable Institutional Delivery Mechanisms for Industrial Development: An Implementation Perspective, Marcus Ingles

d) Impact Assessment and Institutionalization: This is the final stage of implementation where the institution reviews the impact of its service delivery experience on its clients and on industrial development and then makes any changes which are necessary to improve the quantity and quality in the future. Table 2 provides a very good check list for evaluating service to particular industries and their contribution to national industrial objectives<sup>12</sup>. The "Leaky Pipe" model in figure I shows how the stages are inter-related and also indicates where service delivery weaknesses and leaks are likely to occur. A list of generic institutional causes for service delivery impediments at each stage of the implementation cycle is given in Table 3. One of the major factors producing the leaks and contributing to a lack of industrial development is that usually the immediate rewards which institutions receive for delivering services to industry are not linked to industrial development objectives, but rather to bureaucratic survival or generation of funds. This gradually contributes to a situation where the institutions image becomes unclear and its connotation or reputation suffers. This culminates and reaches crisis point when the purchasables are eventually cut back and the institution is forced to re-evaluate its doctrine, programme and service delivery.

#### Manpower Development

Almost without question, the most important component of any institution is personnel. Without dynamic leadership to set policies, establish external contracts, and lobby for resources and without adequately trained and qualified staff to deliver the services, the discussion of all other aspects of institution building become academic.

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<sup>12</sup> Emerging the Operational Industrialization System: Project Development and Implementation, W. Millager

TABLE 1: VIABILITY

	PURCHASABLES
INTERNAL	<ul style="list-style-type: none"><li>• Cash on Hand</li><li>• Plant, Consumables, Materials, etc.</li></ul>
EXTERNAL	<ul style="list-style-type: none"><li>• Receivables</li><li>• Firm Backlog</li><li>• Monthly Expenses for supplies, rent, other bills</li></ul>
ORGANIZATION'S SENSITIVITY TO ITS OWN I.C.P.	<ul style="list-style-type: none"><li>• Endurance: the length of time the institution could exist without Purchasables from external sources</li></ul>

BALANCE SHEET

CONNOTATION	IMAGE
<p>Image value for the industrial institution's members</p>	<p>Amount of consensus among leaders, members, etc. on what the institution is and does, etc.</p>
<p>Value associated with image by those external to the institution</p>	<p>Amount of consensus among clients, among sponsors, etc. on what the institution is and does</p>
<ul style="list-style-type: none"> <li>• Do leaders and members feel their efforts are appreciated by industry?</li> <li>• Is their perception accurate?</li> </ul>	<ul style="list-style-type: none"> <li>• Amount of Internal/External agreement on what the institution is and does, etc.</li> <li>• Internal accuracy at predicting what industry sponsors, etc. think the institution is and does, etc.</li> </ul>



TABLE 2: INDUSTRIAL PROJECTS

IDENTIFICATION MATRIX

Projects and Eval. Sectors	Existing Industry		Evaluation criteria								Pipeline of new investment projects			Apparent opportunity for further effort				
	Principal Enterprises	Appropriate Volume	Import Volume	Market/Financial				"External benefits"				Under construction or committed	Active in negot./under consideration		Prel. studies but inactive			
				Demand Growth	Avail. Mkt. (Dom.)	Export Potential	Fin. prospects	Local Inputs	Linkage	Labour Intensity	Foreign Exchange Gain							
Food and Beverages Tobacco Textiles and Clothing Leather and Footwear	Name, products, size indication			Relative values indicated by "High", "Medium", or "Low"														
Wood Products Paper and A.P. Printing and Publication				Name, Products, Size indication														
Chemicals Pharmaceuticals Petroleum and A.P. Rubber and Plastic Prod.				identification of document														
Non-metallic Minerals Basic Metals Metal Products																		
Machinery non-elect. Machinery elect. Transport equipt. Other																		
TOTAL																Intuitive or other judgment		

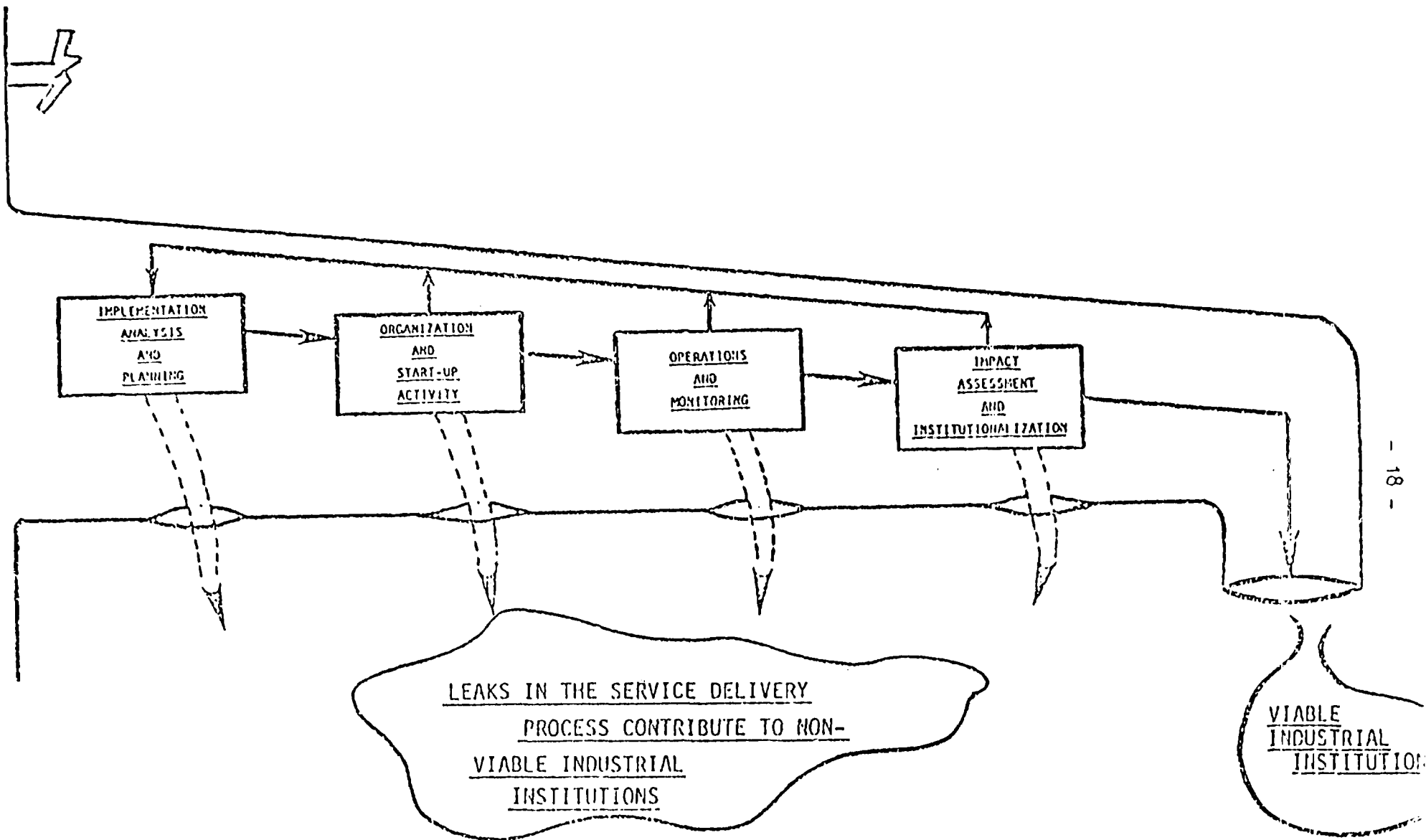


FIGURE I: "LEAKY-PIPE" MODEL OF THE INDUSTRIAL INSTITUTION SERVICE DELIVERY PROCESS .

TABLE 3

SERVICE DELIVERY IMPEDIMENTS IN INDUSTRIAL INSTITUTIONS:  
ILLUSTRATIVE IMPLEMENTATION LEAKAGES AND THEIR CAUSES

CATEGORY		STAGE IN THE SERVICE DELIVERY IMPLEMENTATION PROCESS			
		IMPLEMENTATION ANALYSIS & PLANNING	ORGANIZATION AND START-UP	OPERATIONS AND MONITORING	EVALUATION & INSTITUTIONALIZATION
INDUSTRIAL INSTITUTIONS IN THE LEAST DEVELOPED COUNTRIES	REPRESENTATIVE TYPES OF SERVICE DELIVERY "LEAKAGES"	<ol style="list-style-type: none"> <li>1. Long-range industrial development objectives often overlooked.</li> <li>2. Implementation feasibility weak or completely overlooked.</li> <li>3. Little attention given to scheduling and responsibility assignment.</li> <li>4. No formal mechanism established for monitoring and responding to change.</li> </ol>	<ol style="list-style-type: none"> <li>1. Initial delays in initiating service delivery.</li> <li>2. Qualified staff to operate service program unavailable.</li> <li>3. Delays in getting essential policies enunciated, legislation enacted, and formal operating procedures developed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Established service delivery targets (in quantity and quality terms) are not met.</li> <li>2. Services which are delivered are perceived as inappropriate.</li> <li>3. Lack of flexible response to changes in industrial environment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Failure to assess long-run impact of industrial services on industrial development and make required changes based on changes in industrial needs.</li> <li>2. Continuation of non-viable service institutions.</li> </ol>
	GENERIC CAUSES OF "LEAKAGES"	<ol style="list-style-type: none"> <li>1. Concern over bureaucratic survival focuses attention on short-run activities.</li> <li>2. Promotion of individual "pet service programs" rather than those justified on basis of industry need and existing setting.</li> <li>3. Planning rigid; tendency to continue same procedure b/c of fixed annual budget.</li> </ol>	<ol style="list-style-type: none"> <li>1. Monitoring of changes is not effective because procedure is highly structured and not altered for new or evolving services.</li> <li>2. Unexpected bureaucratic delays in obtaining approvals for staff and adequate salaries.</li> <li>3. Policy-makers and industry representatives do not perceive the service as a high priority endeavor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Services unsatisfactory due to:               <ol style="list-style-type: none"> <li>a. Extensive political interference in planned activity.</li> <li>b. High staff turnover due to inadequate incentives.</li> <li>c. Difficulties in obtaining required bureaucratic support.</li> </ol> </li> <li>2. Industries are not actively involved in continuing needs assessment.</li> <li>3. Programming decisions are taken only at fixed time and are not based on relevant information.</li> </ol>	<ol style="list-style-type: none"> <li>1. Failure to evaluate due to:               <ol style="list-style-type: none"> <li>a. Lack of institutional reward structure to allocate resources based on long-range goal impact.</li> <li>b. Lack of clearly specified objectives and information to determine whether, and why, they are accomplished.</li> </ol> </li> <li>2. Government support for industrial institutions based on previous resource levels, not on assessment of institutional viability.</li> </ol>

In the past and even currently to some extent African LDCs have had very limited facilities for the training of the institutional staff they require. As a result they have had to rely heavily on external facilities in many specialized technical and managerial fields for developing their own national manpower. This has been a root cause of most of the ineffectiveness in industrial institutions<sup>13</sup>.

Internal manpower planning and staff development at all levels through on-the-job training, exchange programmes with industry, orientation courses and the delegation of responsibilities are essential for the effective operation of institutions promoting industrial development. After having defined in clear terms the specific programmes which the institution wishes to accomplish, it should be easy to establish job descriptions and to determine the type and level of personnel required to implement the programme. Recruitment and training require careful programming over a given time span and it is a frequent temptation of institutions to modify their original doctrine to suit the staff immediately available rather than to actively search for new personnel or to up-grade the training of their own staff to meet the needs of innovative programmes.

Personnel resources are often under-utilized when institutions are newly established because clear details of exactly what is expected from them are not forthcoming from the management. One reason for this is that all too often the top level of the management is made up of generalists and civil servants who are unsympathetic with the professional aspirations of the institute. The practice of making the administrative class dominate the upper echelons in policy making and executive direction has not contributed to the growth of professionalism within the rank and file of many organizations. This situation contributes

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<sup>13</sup> Manpower Aspects of Institutional Infrastructure for Industrial Development with special reference to African Least Developed Countries, S.I. Edokpayi

to a reduction in job satisfaction and morale. This is extremely critical to industrial development institutions which by and large operate as statal or para-statal bodies; because if job satisfaction is reduced, the salary scales which are offered as the only remuneration, will certainly not be sufficiently inticive to maintain existing staff or to attract new ones. Highly motivated and satisfied staff will push vigorously to serve the institution and industry, and will usually achieve significant results, whereas staff with low morale will act sluggishly and carelessly and achieve little or nothing. There is abundant evidence to suggest that the main determinant of this factor is leadership and a management which is sympathetic to the changing needs of its personnel.

One method which could be further explored is to use existing training institutions such as universities, technical training, vocational or management institutes for upgrading the quality of national personnel. Achievement in such courses could be used as a means to advancement within the organizations.

## PRINCIPAL FUNCTIONS

With regard to institutional tasks to be performed there are four main divisions under which most industrial service organizations can be grouped. These are: consultancy and extension, technology development and research, finance, and training. Although they are naturally interconnected they are each worthy of individual inspection and analysis.

### Consultancy and Extension

More than any of the other three functions, the object of consultancy and extension is catalytic. Its role is to identify the weaknesses in industry and then to mobilize whatever supplementary services or resources are necessary to rectify the problem. In its broadest sense extension is used to describe any form of training or advisory service which takes place outside the initiating central institute. It includes classroom training, courses run in field locations, mass media broadcasts, cultural manifestations, demonstrations, village meetings as well as individual advisers who assist business enterprises on their own premises.<sup>14/</sup>

As shown in Table IV, a list of most tasks to be performed by the consulting and extension institutions is given and an example of how many other organizations need to be consulted in the process.<sup>15/</sup> It is the special role of the extension organization to be able to institutionalize a certain degree of change in each one of the organizations with which it deals (its environment). Without achieving this change the extension institute suffers from a lack of credibility and its image is lost. On the other hand, should it be successful in influencing its institutional environment,

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<sup>14/</sup> Industrial Consultancy - The Institutional Problem, M. Harper

<sup>15/</sup> Emerging the Operational Industrialization System: Project Development and Implementation, W. Millager

several vital elements which lead to more rapid industrializations can be stimulated: the educational institutes will become more sensitive to industrial needs, the Ministry of Health can assist on quality control, the Department of Trade can help with marketing, the State Bank with financing, the Ministry of Works for infrastructure, etc.

Research among large numbers of different types of enterprises in many different countries both rich and poor suggests that most people who are in business believe that their main need is for additional finance to procure extra equipment or stocks. Closer analysis normally reveals, however, and this is particularly the case with smaller enterprises, that these companies are not making the best use of the capital they already have. <sup>16/</sup>

Secondly, even if training, which companies feel is their next largest obstacle, is identified as the critical impediment, classroom training seldom contributes to improved industrial management. The realities of business are different from the classroom and it is necessary to provide specific tailor-made advice to the enterprises on-the-spot.

Consultants must not only diagnose the problem, suggest solutions and assist in their implementation, but they must pass on their own skills so that entrepreneurs can, in the future, carry out the same services for themselves without outside assistance. Many enterprises may not be aware of their need for consultancy, and therefore, consultants must actively promote their services and not wait to be asked. Such an active role requires a large staff and experience; in Kenya and elsewhere has suggested that a measurable cost effective and equitable spread services can be provided by a consultancy group amounting to approximately 25 field officer per 1,000,000 of the total population. When dealing with such high numbers, it is essential

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<sup>16/</sup> Industrial Consultancy - The Institutional Problem, M. Harper

TABLE 4

Activities Making Up the Project Life Cycle

Typical Institutions Involved in Establishing and Managing Industrial Production Units

a) Preparing sector plans and policies, branch analyses, etc.	- Planning Ministry
b) Identifying projects, setting priorities	- New Project Committee (Interministerial)
c) Pre-feasibility studies **)	- Ministry of Industry
d) Feasibility studies	- Planning Directorate
e) Approval of project	- Licensing Bureau
f) Implementation Planning	- Industrial Development Centre
g) Foreign Exchange Approvals	- Investment Promotion Office
h) Awarding incentives	- Office of Project Implementation
i) Organizing legal entity	- Industrial Operations Division
j) Putting together package incl. finance, tech., mgt., etc.	- Other Technical Ministries
k) Detailed design	- Industrial Development Corporation
l) Acquisition of equipment, technology, management	- Industrial Finance Institution
m) Construction	- Follow-up Department
n) Installation and Start-up	- Projects Department
o) Training	- Central Bank
p) Operation	- Customs Service
q) Expansion	- Ministry of Finance
r) Liquidation	- Individual Enterprise
	- Project Sponsor
	- Foreign Partner(s)
	- Suppliers
	- Industrial Consultancy Service
	- Construction Firm
	- Industrial Research and Dev. Centre
	- Industrial Standards Institutions
	- Bureau of Statistics
	- Free Trade Zone
	- Universities
	- Industrial Estate
	- Management Institute
	- Export Promotion Office

\*) These do not necessarily take place in strict sequential order

\*\*\*) These lines illustrate the system's complexity by indicating institutions playing strong roles in only one task: that of project identification.



to utilize whatever skilled manpower is available to the maximum benefit of industry.

One of the most efficient methods of organizing such a service is to train what might be called "barefoot" consultants. These people could be generalists who provide access to more specialized consultancy services when it is necessary. Particularly in the case of small and medium scale enterprises, it is both possible and economical for a generalist to give useful advice on his own. This implies a hierarchical pyramid-type organization with large numbers of relatively inexperienced and less qualified consultants with a small apex of professionals with far greater expertise.

Once again the question of financial support for such an organization arises. Should a charge be made or should the service be free? Certainly a portion of the clients will initially need some persuasion to accept the service and some may even be suspicious or hostile. If even a small charge is levied from the beginning they and others for whom a small charge is a significant sacrifice and in their eyes a risk, will decline. This may lead to the all too common situation where only those least in need will actually be helped while those who can benefit the most fall even further behind. Perhaps one solution lies in providing initial services free and then making a subsequent charge based on the capital of the enterprise and the services rendered.

It has proved extremely difficult to select an appropriate institutional base for a national large scale, economic and comprehensive consultancy service with the relevant back-up support in specialized fields. Attempts have been made to provide all the services necessary in a package but the results have rarely come up to expectation and it seems more rational for consultancy organizations to only assume those functions which are immediately

essential to give extension advice in order to guide the industrialist through the maze of permits, controls, standards and incentives which may be designed to help but more frequently only confuse.

#### Technology Development

In general there are three types of institutions in developing countries as indicated in table V which deal on a day to day basis with the application of industrial technology. The first type is called the "Technology Selector". The function of the selector may be likened to that of a filter through which all technology entering a country or region must pass. These institutions are frequently State Banks which may control foreign exchange and hence de facto, control the importation of industrial products and processes; Ministries of Industry which grant trade licences and import licences; or even in some cases there exists already a specialized agency or council created in order to monitor the selection and acquisition of technology. In performing their duties these institutions are continually evaluating applications for the importation of products and processes. In the majority of cases the technology selector is not aware of the full range of choices available to him. The selector only sees the alternatives which cross his desk, and on the basis of these makes whatever decision he feels is in keeping with the national policies. Such indiscriminate selection is plainly inadequate if governments genuinely desire to promote appropriate technology. Often the acceptance of a foreign or imported technology pre-empts any future decisions which may be made on the choice of subsequent technologies and frequently the full implications of selection are only realized when it is too late to make significant changes.

Two forms of assistance can be rendered to institution involved in the screening process to ensure that conscious, thorough and effective decisions are made on the kinds of technology to be chosen.

Initially the selectors need to be provided with the correct information and supplied with, if not the full range, at least with a greater number of options from which to choose. Such information networks are extremely valuable in identifying technologies that can be immediately transferred, or ones that, with some adaptation, may have widespread potential in the country. These networks need not be large or expensive but must be quick and responsive to the needs of the selector. In many cases it is just a question of being hooked-up or connected with the industrial information banks that currently exist.

Secondly, as a direct consequence of increasing the number of alternatives for selection it is necessary for the selection process to become more stream-lined to handle the expanded work load. Greater numbers of technically competent experts will be required to make correct evaluations, for if this institution does not operate efficiently the consequences will be dire: valuable foreign exchange may be wasted; technologies may be chosen which irreversibly damage the environment; local technological developments may be stifled; or industrial progress may even be slowed down to a halt. This type of institution is the focal point of the whole technological transformation process.

The second most important type of institution that has a vital role to play as far as stimulating indigenous technological capabilities is the research institute or what might be called the "Technology Developer".

The role of the developer is to correctly analyse the technological requirements of industry (urban and rural/large and small) and then perform applied research in order to satisfy industrial needs. In many cases this work takes the form of adapting to the local conditions of manpower, materials and machines, various products and processes which have been successfully developed in other countries.

Research is required in every country to develop a strong local industrial base. Two dangers however are to be encountered in promoting such institutes. The first is that their communication with industry is generally poor or even non-existent. These institutions are frequently inward-looking and very reluctant to maintain a genuine and continuous dialogue with industry and they are frequently out of touch with the daily problems and requirements of industrialists. Preference of the staff is generally for academic research which in the short term is seldom applicable to the real situations being experienced in industry.

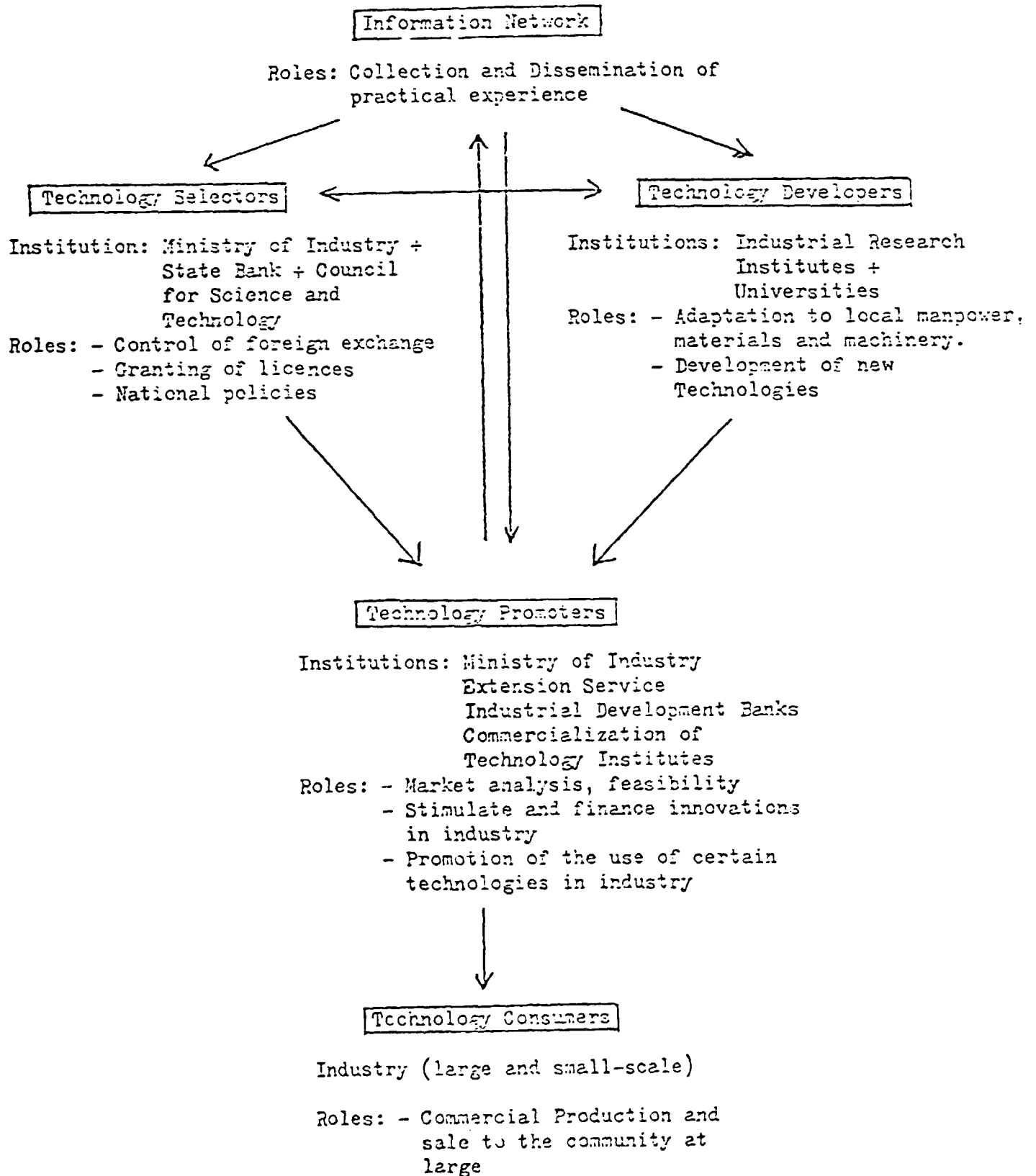
Secondly, without proper governmental support in filtering imported technology industrial research institutes frequently spend large portions of their time in developing technologies which have already been imported and for which the demand has already been satisfied. Consequently, much time and energy is lost in competing with, rather than substituting for, imported technologies.

To guard against these two factors every research institute should incorporate within its operations an extension network co-ordinated with the promoter which can a) effectively judge the needs of industry and b) offer a consultancy service to industry drawing on its own human technical resources and knowledge at its disposal. Moreover, governmental support is required to ensure that all technologies imported are not ones that are in the process of being developed by the institutes. Without these safeguards, research in appropriate industrial technology can be a fruitless exercise fraught with frustrations on all fronts.

The third type of institution, critical to technological growth is the "Technology Promoter". The promoter has the very special task of putting to use the technologies which have been previously selected, developed and adapted by the former institutes. Within this group of promoters come: the Development Banks, the Ministry

TABLE 5

PROCESS OF TECHNOLOGICAL GROWTH



of Industry's extension services, and commercialization of technology institutes or corporations. At this stage the technologies are analyzed from the point of view of commercial viability and ease of manufacture by private and public industry. A great deal of extension work has to be done by the promoters to ensure that the appropriate technologies actually become used. Greater efforts in emphasizing this crucial aspect of promotion have to be supported with consultancy services and strengthened extension networks particularly if the technologies are to be adopted in the rural area. One way of ensuring dissemination of appropriate technologies in rural areas is through the small-scale industry departments and organizations which exist in by far the majority of Ministries in developing countries. The specific objectives of support to the small-scale industries institution can be summarized as the promotion, through proper extension and consultancy services, of first the manufacture by small-scale industries of appropriate technological devices or machinery, i.e. windmills, pumps, brick machinery, etc. and second the use of appropriate technological process which lend themselves to small-scale manufacturing, i.e. foundries, sugar and oil processing, recycling of waste materials, etc.

This form of promotion and extension needs not, however, be limited to small-scale industries institutes, although they have a special role to play in rural industrialization, but similar functions could be added to existing Ministries or institutions which deal with the medium and large-scale sector.

There needs to be a good deal of exchange of information between these three basic types of institutions to ensure that maximum use is made of the human physical resources with which the country is endowed. Priorities need to be established on a national basis so that work undertaken in various industrial sectors is well co-ordinated and yields positive results.

### Financing

Development finance institutions play a particularly important role in the industrialization of the LDCs of Africa. First they are an effective instrument for mobilizing public, private and external financial resources and channelling them into industry as medium and long-term investments. Second, they provide industrial promotional services to help identify profitable projects and third, they sometimes provide follow-up assistance during the initial period of a project's life.<sup>17/</sup>

These financial institutions must of necessity have commercial motivations and hence their doctrine will be slanted in that direction. In many of the African LDCs, these organizations are responsible to governments and therefore must select and evaluate projects according to national priorities. Balancing commercial viability with governmental priorities is an unenviable task and one in which many fail. Much like all other institutions in developing countries manpower is particularly limiting, and it is most tempting for financial organizations to concentrate on a few secure projects within easy reach of its headquarters, rather than on a number of less well documented projects which may be scattered throughout the whole countryside.

The pattern of the institutions which supply these financial services differs completely from country to country. The one common and surprising feature seems to be that in most cases there is little shortage of investible funds, either from domestic savings or from foreign resources. The problem however is to channel those resources through effective institutions to the projects which will best improve the country's industrial performance. In many countries, it is not unusual to find large resources specifically set aside, for example, for small industries, which have not been utilized for want of bankable projects, and yet in

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<sup>17/</sup> Some Reflections about Financing Industrial Development in Africa, P. Nouvel

all African LDCs opportunities exist in almost every conceivable area. The bankers complain of poor project preparation by the promotion institutes and the promoters in their turn criticize the banks for their stringent and often complicated procedures which eliminate all but the wealthiest of entrepreneurs.

The power of selection and approval of proposed industrial projects for financing differs between the public and private sectors. Ideally both could be contained in the national development plan but in practice the private projects are less likely to be listed than the public ones. Inclusion of a public industrial project in the plan is in effect a form of preliminary approval and the arrangements for its financing are frequently already well advanced. For private projects the decision-making powers of the financial institutions are much greater.

On the whole several common problems can be seen for financial institutions in developing countries:<sup>18/</sup>

- a) There is a need for more and better feasibility studies. In the majority of cases these need not be complicated as in the initial stages, many of the investments will be related to import substitution leaving the marketing aspect, one of the major shortcomings of feasibility study preparation, more or less solved.
- b) In many of the African LDCs it is not yet certain whether industrial development will be handled by existing financial organizations or given specifically to a new one. The uncertainty has caused hesitation on the part of those currently involved in moving forward with dynamic programmes.
- c) They have not been able to effectively monitor their ongoing investments and have concentrated too heavily on new projects, mostly to satisfy their political power base.

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<sup>18/</sup> Major Conceptual Issues in the Analysis of Key Functions Assigned to Industrial Institutions, L.L. Baber



- d) In many countries, they have concentrated on a number of public investments in corporations which due to lack of trained manpower are not capable of making repayments.

In addition to remedying the above problem, three considerations need to be taken into account: first, these institutions have to be very close to the customer in order to be able to meet his needs efficiently, adequately and quickly; second, the procedures of these institutions have to be very simple; third, the clients need access to the consulting institutions for advise on the whole range service inputs necessary.<sup>19/</sup>

Whether promotion and financing should be handled by the same institutions is an open debate. Providing technical and financial assistance through the same institutions has its merits in terms of facilitating both the co-ordination of the various services and a speedy reaction on the part of those required to provide the inputs. There are however drawbacks, the main ones being that the institutions may tend to become dominate internally by one or othe of the main departments, thereby defeating the purpose of providing a balanced service to industry.

### Training

One need hardly emphasize the importance of training for industrial development particularly in African LDCs where evidence shows both shortages and mismatches between available skills and the requirements of industry. Many countries for example bear testimony to the old practice regarding university trained manpower as more important than the production of skilled manpower for executive functions at the grass-roots level.

Initiatives to create, operate or reorganize training to meet real needs is essential at all levels and must be developed in the context of a national framework providing a co-ordinated training policy which is aimed at the priority distribution of the resources

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<sup>19/</sup> Some Reflections about Financing Industrial Development in Africa, P. Nouvel.

needed to produce industrial growth. Training is essentially a supportive function which is incorporated into almost all forms of industrial development. The tendency therefore is for it to fragment, resulting in unco-ordinated and ragged progress. In order to begin the process of developing nation strategies for training institutions the following are necessary:<sup>20/</sup>

a) Assessing Training Needs:

In the LDCs of Africa, it is not an easy task to identify and quantify needs for skills. Traditional methods of assessing skills are unwieldy and the past trends cannot provide accurate guidances for the future. Several attempts are being made to solve this problem but so far no really satisfactory mechanism has been developed. Further studies have been proposed to provide policy makers with guidelines for interpreting labour market signals as indicators of employment perspectives and training needs in specific skills.

b) Developing and Designing Appropriate Programmes:

The main problem in designing programmes centres around the difficulties in establishing the linkages between the learning situation and industry itself. Because training institutions are already overburdened, the tendency is for instructors to use ready-made course material which may have been appropriate in one country but more often than not is inappropriate to the industrial milieu in which the courses are currently given.

c) Training of Indigenous Staff:

Qualified instructors are required to have comprehensive and theoretical knowledge and proficiency in particular skills as well as substantial work experience. It is conservatively estimated that upon completion of eight to ten years at school a further six to nine years is required for a person to become a fully qualified instructor. With those kinds of stipulations it is easy to see why the problem may continue for generations before it is solved. The

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<sup>20/</sup> Vocational Training and Industrial Development, Training Policies Branch, ILO

qualified trainer however does provide a vital multiplier effect which contributes significantly to productivity.

d) The Establishment of Physical Training Facilities:

Here there is great scope for moving training courses out of the formal classroom into other existing plants and institutions building into the programme dynamic features of co-operation which will inevitably yield their rewards.

All of this understandably requires the mobilization of massive resources which are not at the disposal of the African LDCs of today. Imaginative solutions need to be explored to utilize existing talent, institutions and funds before appreciable in-roads are to be made in this area.

### THE SPECIAL CASE OF RURAL INDUSTRIALIZATION

Perhaps no other area of industrialization generates so much debate and yet suffers from such a lack of understanding as does rural industrialization. It is a consequence of the persistent urban bias which most African countries have not been able to shed since independence, that so little is really known about the rural areas. Although the common catch phrases of "utilization of untapped resources, developing local skills, and generating greater participation in development", have all come to be unavoidable ingredients of industrial plans, few governments can boast of having achieved startling success.

Most have exhibited the political will in varying degrees for such a programme however this has not been widely reflected in the structuring of their institutions even though these bodies are recognized as the only means of ensuring its implementation. Because the basic strategies and programme framework are ill-conceived schemes for rural industrialization and are often relegated to series of good intentions unsupported by policies and strong institutions, the effect has been to reduce the issue to little more than a slogan.<sup>21/</sup>

In an effort to give more weight to the political dogma of redistribution of incomes through generating more industries in the rural areas most governments have given their greatest attention to establishing institutions specifically to deal with the "rural problem" and the mushrooming of small-scale industry institutes has been seen as the most effective way of remedying the imbalance which characterizes most African countries.

In general the services provided by such organizations include:

- 1) planning and programming of small and rural industrial development which may or may not relate to the overall industrial strategy of the country;
- 2) economic services to both government and entrepreneurs including area development studies, sectoral surveying and feasibility studies on specific projects;

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<sup>21/</sup> Institutional Requirements for the Industrialization of Rural Areas, C.T. Thomas

- 3) consultancy services in the form of providing know-how, designs, drawings lay-outs, machinery details, raw material uses, market research and on occasion standards and quality control;
- 4) training courses which may take the form of collective seminars, management courses, technical training, the organization of fellowship programmes overseas and infrequently on-the-job training;
- 5) providing machinery and equipment on hire-purchase terms, in conjunction with feasibility studies;
- 6) construction of industrial estates and rural workshops with common facilities and then leasing out the sheds mostly at subsidized rates;
- 7) organizing credit guarantee schemes to make available additional capital and working capital from the financial institutions.

Various other services are rendered by such institutions for instance organizing co-operatives, stimulating handicraft production and developing prototypes; the list is not intended to be exhaustive but merely to illustrate the nature of the organization.

The major objective of these institutions is to mobilize the human and physical resources of the traditional sector and to create employment by means of scaled-down technologies more relevant to whatever market is being sought. Small-scale industries can thus be seen as contributing to an expansion of production and above all considerably increasing the employment/product ratio thereby reducing income disparities.

Let us for a moment analyze the process which has brought so many countries to this conclusion. The whole idea is small-scale industries sprang from a critical assessment of the negative effects which "accelerated modernization" (a theory which for a long time was at the forefront of development thought) was having on society.

These critics who soon became the adherents of a new school realized that the process of accelerated growth from a low income starting point was not merely a question of increasing the rate of savings or investment or for that matter raising the average per capita income. Increasing capital intensity and likewise labour productivity seemed to be accompanied by completely unexpected negative phenomena. First many of the small traditional production units disappeared, then under-employment rose sharply and the income disparities became even more exaggerated. This tendency was particularly felt in developing countries where their economies were wide open to international markets with their inherent fluctuations and to foreign investment and technology. The solution proposed entailed intervention by governments with incentives and a whole range of promotional measures in order to "breath life" back into the traditional sector and establish it once again as a source of employment generation and stabilization. 22/

It was imagined at that time (15 or so years ago) that small industries would create the conditions necessary for a balanced transition from a sector characterized by low productivity, low incomes and disguised unemployment, to a modern dynamic sector which would create internal markets and ensure a constant supply of skilled manpower.

This encouraged widespread optimism in such interventions as industrial estates and rural workshops programmes implicitly aimed at stimulating employment with large amounts of capital concentrated under one roof. Such packages have widespread appeal both among donors, whether they be banks, multi-lateral technical assistance agencies, or bilateral organizations, who can dispose of large chunks of their budgets with the minimum of overhead costs, and among recipients who quickly identify such

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22/ The General Problems of Small-Scale and Rural Industrialization in the light of the Present Agricultural Crisis, South of the Sahara, J.P.H. Peemans

projects with the embryonic stages of modernizations and advanced technology. In all, the temptation is too great to resist.<sup>23/</sup>

It is not therefore surprising that after fifteen years of pursuing such a course, the results have not matched even the poorest of expectations. Some of the reasons for the lack of success in this regard have been:

1. Few of the African countries could start from zero in choosing either their output structure or in the specifications of goods to be produced; standards associated with European markets determined the technology which inevitably created fewer jobs and gave rise to less training than was originally anticipated.
2. The policies of many governments have not been sensitive to the real needs of small enterprises and many interventions in the market structure have implicitly favoured largeness. Examples include the credit market, tax structures, subsidization of large public corporations, etc.
3. The institutions involved have been ineffective in determining appropriate programmes for the achievement of all but the most immediate and short term objectives. They have frequently capitulated on their original ideals in the face of pressure to deliver within limited times. Results therefore bear little relation to original goals established.
4. Much of the illusory success of small industries is due to the increasing minimum profitable size of production equipment in the industrialized countries. Smaller production units with more labour intensive equipment and workers which do not make excessive wage demands are therefore able for the time being to profitably compete.

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<sup>23/</sup> Selection by Institutions of Rural Industrial Projects, J. Tomecko

This trend will probably be short lived.

5. Virtually every kind of small industry has been promoted almost irrespective of the origin of its raw materials or the destination of its products. Many such industries only survive on the profits they derive from cheap labour.
6. In addition to the monumental difficulties in establishing rural industries because of infrastructural constraints, established leadership in the villages has discouraged in many instances the emergence or elevation of industrialists who pose a potential threat to usurping their dominant position.

It is not true to say that all has been in vain, there has been some increase in income and employment leading to a very limited "trickle down" to the lower levels of the rural populace. At the same time, however, it is just as valid to claim that the type of small-scale industry emerging throughout Africa hardly measures up to the objectives of meeting local basic needs or to mobilizing the human and physical resources of the country with a view to progressive transformation of backward regions. Wedded to the idea that commercial viability is the sole criterion for an industry's promotion, many developing countries have overlooked the long range effects that such a policy would have on the distribution of income and the shift of political power within their own countries. Seen in this context small-scale industries are merely "scaled down" versions of their larger counterparts filling in the gaps left in the wake created by the rapid increase in size of production equipment. The results of the proliferation of such enterprises cannot really be said to be much different from what was generated by the misguided "rapid modernization" movement twenty years ago.<sup>24/</sup>

It could therefore be concluded that if this is the case then there is no need for specialized institutions to deal with

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<sup>24/</sup> The General Problems of Small-Scale and Rural Industrialization in the light of the Present Agricultural Crisis, South of the Sahara, J.P.H. Peemans



small industries, and that as all industry has but one common objective ultimately, there is no need to spend vast resources on promoting industries which, if the present market structure and profitability regimes persist, will emerge in any case. After all, the example of Japan is striking where the large scale sector has actively promoted with little direct government intervention, the establishment of many small units for sub-contracting purposes. Their motivations for such action is clear. Most African countries on the other hand, are not encouraging an industrial sector dominated by foreign exports but a system based as much as possible on self-reliance - the convergence of domestic needs.

Although governments and their responsible institutions have not been particularly effective in producing the expected results, it should be remembered that for any change to be institutionalized it needs, at least in the beginning, a focal point, an organization to take up the challenge. These agencies could therefore in the future direct themselves more and more to concentrating their attention solely on the type of small-scale industry which helps to achieve the socio-political objectives that are not being achieved by the small industries linked to the international system of capital accumulation. This implies a re-orientation towards a more introspective approach to rural and small-scale industrialization that takes into account the needs and untapped potential of non-metropolitan areas and the unsatisfied demand of existing local markets.

Since most of the population of African countries are engaged in agriculture in the rural areas, it is worth exploring the possibilities of linking rural industry to a greater degree with the production of food, the primary basic need. Most of Africa today is experiencing a "food crisis"; some have given the reasons to be poor weather, bad infrastructure or transport or

marketing and storage but the causes may lie deeper.

One factor often conveniently overlooked is pricing policy. Many urban based governments have been predisposed to favour a "cheap-food" policy in order to contain urban industrial wage claims and it should be remembered that cheap labour is after all the primary advantage which industry in developing countries has in the export market. With the relative decline in the price of local food, production concentration in agriculture shifts to export crops and slowly the production of local food drops off. The risky nature of increasing local food production and the inadequate returns as a result of the price structure hardly encourages the rural population to engage themselves in this activity. The efforts of the capital intensive "Green Revolution" to solve this problem have more than anything else exaggerated and accelerated income disparities with concomitant uncontrollable migration of agricultural labour from the rural to urban areas in search of their share of proceeds of modernization.

Fortunately, many African Governments are aware of the vastness of the transformation necessary to reverse this trend and small-scale or rural industries must be conceived in the framework of an integrated development policy to satisfy the needs of the bulk of the rural population. In this regard small-scale industries need to be orientated first and foremost towards increasing food production; such inputs as small tools and agricultural implements suitable for increasing the attractiveness of small-scale food production need to be encouraged. Fertilizers, insecticides and other essentials should be manufactured on a decentralized basis using as much local materials as possible. This may require more resources being given to prototype development and new forms of extension but these are small prices to pay for a more stable growth and equitable distribution of income.

Based on this analysis, certain guidelines emerge for those institutions charged with the task of uplifting, through industry,

the general welfare of rural population. Initially, it should be realized that capital is not the most critical variable in the equation. More often than not, capital has been used to actually stifle genuine initiative on the part of small-scale rural production.

As previously mentioned, capital intensive solutions such as rural workshops only exacerbate the situation by further concentrating production in those areas already endowed with the benefits of suitably developed infrastructures thus contributing to a persistent neglect of those in the more "backward" regions of Africa. This is not to say that finance is not required, it is, but more careful scrutiny needs to be exercised over its deployment in relation to a long term strategy based on encouraging self-sustaining growth. Physical infrastructure can be positively used as a "yard-stick" in determining the degree of "ruralness", however, if insistence by Governments on high levels of physical infrastructure for projects is maintained, then, only insignificant

in the disbursement of rural industries will take place. Indeed, it is one of the more attractive features of small scale industry programmes that they are much less reliant on this type of infrastructure than are medium or large scale ones. Therefore the development of appropriately designed industrial institutional infrastructure should be considered the key tool for Governments because the emphasis is squarely placed on software rather than capital. This kind of institutional service needs to go beyond the physical infrastructure promotes and impacts industrial technology at a level compatible with the existing social infrastructure generating investments which concentrate on self-sufficiency which can be defined as the convergence of local demands and local resources. For change to take place on any scale a reorientation of priorities in determining projects is essential. In selecting and locating rural and small scale industrial projects attention must therefore be given first to unleashing the energy of the local social infrastructure

using correctly guided institution for generating projects which do not rely on physical infrastructure.

Secondly, the most critical input into programme of rural industrialization is software trained to consolidate and build on existing socio-economic potentialities. Projects should be based on a careful assessment of the community needs, resources, skills and markets. This calls for a re-evaluation of the methods used for identifying and selecting appropriate projects for continued support by rurally oriented institutions. Aside from changing the numerous regulations governing industrial co-operatives and small producers, which have frequently been designed principally for urban business and are not necessarily appropriate for rural small enterprises, there is an urgent need to change investment appraisal methodologies. <sup>25/</sup>

Thirdly, existing techniques of cost-benefit or even social cost benefit analysis are not sufficiently sensitive to make financial institutions accord rural industries with sufficiently high priority in the portfolio of their projects. Simple tests of commercial viability should be followed by subjective ranking of projects on an uncomplicated scale related to socio-political goals.

All of this suggests that rural and small industry promotion must have more extensive and effective field contacts at the village level. This may require the recruitment of staff with far lower than normally accepted qualifications and the tactful development of effective links with political and administrative leaders at the village level.

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<sup>25/</sup> Selected by Institutions of Rural Industrial Projects, J. Tomecko

CONCLUSIONS AND RECOMMENDATIONS

Rather than trying to sum up the major conclusions of this study of institutions for industrial development which are in any case embodied in the main text, it should be noted in closing that all the elements of success already exist in most if not all African developing countries. They have untold natural and human resources which when put to use have indeed yielded some impressive results. While the simplest of solutions to remedy the slow rate of progress towards the goals to which they all expose, would be the establishment of more and better institutions, this is not being recommended. Such a course can only add to a greater confusion of the issues which need immediate attention within all the existing industrial organizations. Whether these institutions should initiate or continue a policy of whole or partial remuneration from their clients is still an open question and one that needs careful and sensitive investigation in every instance.

Further progress will probably come from giving added attention and authority at the highest level to existing institutions charged with the function of co-ordinating and harmonising the activities of the myriad of organizations whether they be local, bilateral, or multi-lateral, which are involved in process of industrial development.

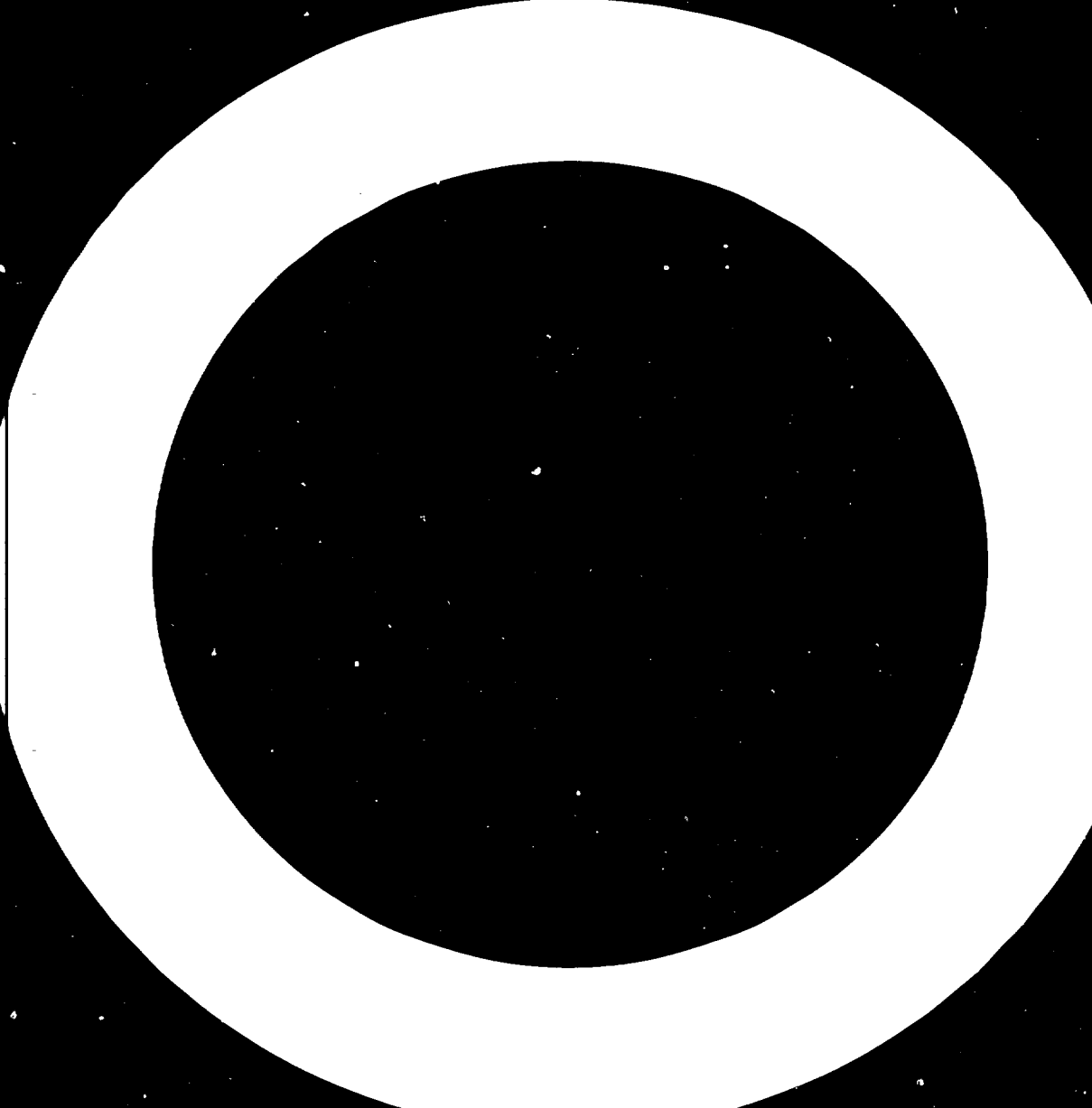
In this context, there is also a need for greater effort to be made in training at all levels the types of institutional staff needed to implement the stated goals and in this regard regional co-operation between African countries to facilitate a greater understanding of the complex problems involved, may be appropriate.

In the final analysis and looking at the problem from a wider perspective there is a vital need for local as well as multi-lateral agencies to develop well conceived alternate strategies for tackling the problem in a more integrated manner appraising both current policies and recommending future action for specific countries.

Summary of recommendations made by the meeting :

- Governments should establish programmes to train and develop staff from different levels, different functions and from private industry itself in the same programmes, in order to develop their individual and institutional capacity, and to foster co-ordination between them.
- Rural small industry development institutions, in addition to providing finance and physical infrastructure, should stress the provision of advice, training and ideas which complement existing needs, resources and skills, and which mobilise communities' ability to do things for themselves.
- UNIDO should prepare a study of alternative institutional mechanisms which the least developed countries can use in developing small-scale and rural industries, to offer these countries a "basket" of institutional options.
- A profile should be prepared of all existing industrial consultancy institutions in Africa, including particularly those in the least developed countries, in order to assist the least developed countries in studying small and rural industrial projects, and to provide for their involvement in project appraisal studies in their own and other countries.
- In accordance with the spirit of co-operation between the least developed countries, UNIDO should encourage and facilitate attachments for engineers and other senior staff, particularly those responsible for technology choice, from industry and industrial development institutions in the least developed countries of Africa, to enable those engineers to work in industries and technical institutions in other developing countries.
- In accordance with the spirit of present plans to improve the selection and employment of experts, international agencies should consider the possibility of arranging for final interviews of long term experts to take place in the prospective host countries themselves.

- Governments should consider establishing national industrial consultative and advisory committees, where similar committees do not exist, under the chairmanship of the Minister of Industry or a similar authority, to constitute the machinery for co-ordination and harmonization of the activities of the various institutions involved in industrial development and of bilateral and multi-lateral agencies interested in the same field, and this should be matched by formal and informal co-ordination between the institutions at every level, but most importantly at the field level.
  
- Industrial promotion institutions, and in particular those directed towards small industries, should aim to assist communities' efforts to do things for themselves rather than imposing package solutions from above.





SUMMARIES OF PAPERS

G. R. Latortue

Improving The Output Of Industrial Institutions

Most developing countries have in recent years set up institutions to assist industrial development; the establishment of these institutions has not always been on the basis of an overall plan, but has often arisen from attempts to remedy particular problems, or the failings of particular institutions, by setting up further institutions whose responsibilities are often not clearly defined, and which may duplicate the tasks already intended to be carried out by existing institutions.

A more positive approach might be to identify the causes of failures in existing institutions and remedy them rather than by establishing new ones. However, establishment and control has become more a matter for inter departmental struggle than a well planned attempt to promote industry. It is important from the outset to be clear as to functions that must be assigned to industrial development institutions; these are planning, project identification, the identification of entrepreneurs, financing, investment guarantees, incentives, extension including consultancy before and during the establishment of an enterprise, export promotion, standardisation and industrial training. Countries have approached the allocation of responsibility for these ten essential functions in what may be summarised as three different ways; first, some countries have created special institutions for almost every one of the functions; some other countries have attempted to concentrate as many of the functions as possible into a very small number of institutions while a third group of countries have adopted a compromise somewhere between these two extremes.

While there are numerous problems involved in industrialisation, and in institutions established to promote it, the major difficulties may be said to lie in the choice and evaluation of industrial projects, in identification and selection of entrepreneurs, co-ordination between the institutions and their own operating deficiencies. It is recommended that institutional proliferation should be avoided, that co-ordination between institutions should be institutionalised, that extension centres should have certain financial responsibilities, that industrial institutions should have special legal status, that industrial planning should receive priority, that industrial training should have a privileged place and that small and medium sized industries should be especially promoted.

Laurence L. Barber

Major Conceptual Issues In Analysis Of Key  
Functions Assigned To Industrial Institutions

Every country must make its own decisions as to the goals of industrialisation, and must set up and operate industrial development institutions accordingly. It is therefore not possible to suggest global solutions for specific indices of the quality of industrial service, but certain rather general questions may reasonably be asked concerning most institutions and their answers will give useful guides as to their effectiveness;

- 1) Has the institution been created from national thinking and culture, or does it copy an institution in some other country?
- 2) Exactly what are its functions, and what need(s) of the national industry is it supposed to be meeting?
- 3) What other institutions within the country also have any responsibility for the same function or functions?
- 4) In what ways does the institution act to meet immediate needs? In what ways is it acting to prepare for the needs which industry will face one or two or more years in the future?
- 5) What innovations or new ideas for industrial action within the country has the institution produced with the past year? What evidence is available to show their acceptance and application by industry?

- 6) How do the economic planners and political leaders see the institution's role as part of the total pattern of industrial and economic development?
- 7) What specific joint action programmes does the institution have with other industrial development institutions?
- 8) How does the institutions' budget and staffing compare with those of other industrial institutions in the country, and what are the reasons for any differences in scale?
- 9) In what documents are the functions and responsibilities of the institution and of its senior staff members specified? What methods are used to ensure that these specifications are followed?
- 10) What actions have been taken, and by whom, in the past two or three years to review and simplify the institution's organisational structure?
- 11) What specific data is available showing the degree to which those participation in the institute's programmed planning and actions by industry as a whole? By appropriate sectors (such as small-scale or agro industry)? By industrial workers? By consumers?
- 12) In exactly what ways does the institution supply information regarding its present and planned work? To industry? To other institutions? To the political leadership?
- 13) What evidence is available to show positive effort by the institution to provide its services equitably to all industrial enterprises and industrial promoters? What evidence is available showing the ways in which the institution is attempting to spread industrial benefits to regions within the nation which are presently less developed, or to less privileged groups?

- 14) What data can the institution itself provide as evidence of industrial satisfaction with its services? What data regarding this is available from other sources, particularly from industry and its workers? What devices exist to provide feedback, not only to show satisfaction and dissatisfaction but also to supply industries' suggestions for improvement of the institution's services?
  
- 15) Taking all the above into consideration, is the institution adequately justifying its cost and existence by really fulfilling its function in meeting some specific needs of the nation's industry?

Malcolm Harper

Industrial Consultancy - The Institutional Problem

Consultancy and other services should be made available to the marketing and distribution sector or industry as well as to manufacturing industry itself, and public or co-operatively owned businesses that are in need of consultancy as well as privately owned ones.

The majority of industries believe that their major problem is their lack of finance but closer analysis usually reveals that their employment of existing finance is inefficient and can be improved often by very simple management changes. Even when the most participative forms of learning are used, classroom training can often contribute very little to improved industrial management, particularly in small-scale industries; it is necessary to provide specific tailor-made advice to the enterprise in the field. Consultants must not only diagnose problems, suggest solutions and assist in their implementation, but must pass on their own skills so that entrepreneurs can in future carry out the same service for themselves without outside assistance. Many enterprises may be unaware of their need for consultancy, so that consultants must actively promote their services to them and not wait to be asked for advice. Consultancy must be comprehensive and reach out to every business, of any size, in the country; this implies a large scale service but also one which is economical. The services of consultants will often not have been actively solicited, and their main task may be to diagnose problems, they should in the first instance be generalists, who can provide access to more specialised consultancy services when this is necessary; particularly in small and medium scale enterprises it is both possible and economical for a generalist to give useful advice on his own. It has proved extremely difficult to select and appropriate institutional base for a national, large scale, economic, comprehensive generalist consultancy service with appropriate

specialist backup where necessary; it may be that it is inappropriate for one national institution to try to provide this service throughout the country to all types and sizes of industry. Private consultancy firms, voluntary organisations working on a regional or local basis, Government institutions concerned with particular sectors, industries or regions and even foreign consultants all have their role to play; consultancy is not generally an activity which benefits from economies of scale and it may be appropriate for Government merely to ensure that some sort of service is available to all industries in the country, tactfully to steer new services, or the expansion of other ones, in the direction of gaps that are identified and to ensure that all organisations providing consultancy are fully aware of the various specialist financial, technical and other services which may be available from other sources.

Philippe Nouvel

Some Reflections About Financing  
Industrial Development In Africa

In the least developed countries of Africa it is difficult to identify viable industrial projects, because of the small scale of local markets, but it may sometimes be possible to develop industry on a regional basis and there are products such as agricultural tools and implements which are widely demanded even in the smallest countries.

The institutions developing industry, and in particular those providing finance, must be free to operate on their own initiative within broad macro economic guidelines; when financial institutions have been established, Governments should not interfere with their day to day decisions.

There are numerous channels through which finance can reach industry in the least developed countries, including commercial banks, direct Government finance and development banking institutions. It is easy for a corresponding proliferation of financing institutions to come into being, and it may be better to consider the establishment of multi-purpose development banks which provide funds to industry, agriculture and other sectors. It is important to ensure that the small-scale and cottage industry sector is adequately covered. Development banking institutions usually concentrate on medium to long term finance; it is vital to ensure that adequate working capital resources are also available to the enterprise. Interest rates should at the very least be positive in real terms, and it may be appropriate to encourage some foreign involvement in management in order to ensure objectivity in the allocation of funds. It is particularly difficult to establish appropriate institutions for channelling finance to small industries, but there is no doubt that such institutions must have field representation close to industry and their procedures must be extremely



simple; entrepreneurs must also have access to support services such as technical advice, marketing, consultancy and so on along with finance. A clear decision must be made as to whether these services should be provided by the financial institution itself or by other specialised institutions, but whatever solutions is reached there must be the closest co-ordination between them. It is relatively easy to train local staff in the appraisal and evaluation of projects but far more difficult to provide engineering capability and experience and effective management for the enterprises once established. In the interests of efficiency and rapid implementation it may be necessary to adopt apparently inappropriate technologies which are tried and tested rather than to attempt to develop more appropriate technologies. Skills and resources that are available for developing appropriate technology may better be applied to construction and transport since industry has such a small impact on most of the least developed economies.

S. I. Edokpayi

Manpower Aspects Of Institutional Infrastructure  
For Industrial Development, With Special Reference  
To African Least Developed Countries

Skilled manpower is the primary ingredient of industrial success, and it is equally necessary that institutions set up to develop industries depend on the quality of their staff for their success. There is a need to staff a large number of different types of institutions; Government Ministries in the field of Industry, Finance, Planning, Trade, Education, Labour and Science must be staffed with people who have the capability to plan, co-ordinate and direct the various institutions responsible for industrial development, as well as actually carrying out some of the development functions themselves. Other institutions, demanding other skills, are responsible for resource allocation, such as banks, specialised services such as statistics, information and consultancy, research and development, training and regulations by developing and imposing standards, price controls, and so on. This list clearly implies a wide variety of skills and the most effective institutional structure cannot function unless these skills are available. Staff must be capable of direction and control, planning policy formulation and review, effective execution and implementation and the provision of supporting services. All these functions are important, but it may be said that the most vital groups, and those perhaps to which the least attention has been directed, are the middle and junior levels responsible for execution and supporting services. Clear job descriptions must be produced and training and on-the-job staff development programmes set in motion to enable staff to perform the functions demanded of them. In the majority of the least developed African countries the population itself is fairly small, and the numbers of appropriate training institutions, and thus the number of trainees within them, is very limited. It is therefore unlikely that such

countries can on their own develop all the skills necessary for effective industrialisation or industrial development institutions and these countries must adopt a policy of collective mutual self-reliance in order economically to train the necessary staff. In many countries there is a dearth of middle level technical training as opposed to higher level academic training and this causes further difficulties. There must in any case be extensive reliance on outside institutions. University and even secondary and primary school curricula must be modified in order to prepare the population for constructive dynamic industrialisation as opposed to static administrative tasks.

Universities must play a major role both in terms of high level training and consultancy and research; post secondary technical institutions providing vocational and management training also have a vital role to play and enterprises must themselves develop and in-plant training capacity for all levels of staff. There should be a suitable Government structure for co-ordinating industrial training and possibly for funding it through some form of industrial training fund. If Africa is to achieve the planned 2% share of world industrial trade by the year 2000 a massive training and manpower development effort must be undertaken; training on its own however cannot ensure effective operation and institutions and industries themselves must be effectively managed in order to make the best use of the trained manpower which is available to them.

A. Le Van Chau

The Selection Of Foreign Technologies In  
Relation To The Development Of Local Technical Potential

Before attempting to choose an appropriate technology, it is vital to ask certain fundamental questions. What products are to be produced and are they to be produced for local consumption or for export? What quantities will be required and what production resources are available for their manufacture? What types of enterprise, in what location, is to be preferred for the production process?

The specific development objectives of the country concerned must always be employment creation, the use of local resources, the satisfaction of the people's needs or saving foreign exchange must be taken into account, as must be the environment and the techno-economic conditions. Suitable technologies may in themselves trigger off the initiative for the establishment of other enterprises or, if they are unsuitable, they may lead to the establishment of enterprises which are incapable of attaining viability.

Most of the least developed countries have no technical research agencies for the monitoring of technical development and imports and development banks, industrial promotion boards and state investment corporations must co-ordinate their activities in order to ensure that appropriate technologies are selected. It is probably appropriate to locate the responsibility for technology choice within the industrial promotion institution, which can advise the prospective entrepreneurs and investors and can also ensure that appropriate technical training is provided.

Attention should be paid as much to existing industries which wish to expand as to the promotion of new enterprises. There are numbers of small-scale appropriate technologies in the field of ice making, moulded paper packing material, food preservation and sanitary material which can reasonably be adopted in any of the least developed countries.

Existing universities and other research institutions must be involved and the international agencies must be used both in order to provide advice and in order to foster establishment of effective and friendly co-operation between the least developed countries in this vital matter of technology choice.

Milton J. Esman

Developing And Managing Institutions  
For Industrial Development

Every country must develop its own industrialisation strategy and on this institutions responsible for promoting its development must be based; it is important however to avoid temptation to create a number of highly protected import substitution industries which produce luxury and semi luxury products at very high cost for only a small part of the population; a wide based industrial structure must be promoted and this has implications for the type of institution for development. Similarly Governments should hesitate to assume a major role in the operation of small-scale industries; services and assistance should be provided but their actual establishment and management is best left in the hands of individual entrepreneurs or other forms of ownership and management.

Certain basic guidelines can be stated for the design of suitable institutions; the number of organisations should be kept as small as possible and the aim should be to develop multi functional organisations wherever possible, which make the best use of scarce human and financial resources and also simplify the problems of the entrepreneur who it is there to support. Institutions must be located high enough in the structure of Government to enable them to perform effectively their political as well as their linkage functions, and they must be effectively co-ordinated at all levels with the variety of Governments and other bodies involved in industrial development.

In order to build effective institutions it is vital to generate effective and dynamic leadership, whether this be on group or an individual basis. An organisation must have a clear doctrine involving a sense of common purpose within the organisation and an authoritative and consistent view of the organisation to those outside it. The emphasis should be on service and assistance rather than institutional self preservation and growth for its own sake.

The organisation must develop appropriate programmes for achieving its objectives and these will depend on the creation of human, informational and financial resources. The human resource is vital; because of fast turnover and rapid promotion which is important to develop a strong sense of shared purpose and job satisfaction so that all employees can give of their best. The internal structure of organisations must facilitate the achievement of their objectives and there must be a combination of co-ordination with genuine decentralisation and encouragement of decision making at the lowest possible level. Services must be extended into the field and in the interest of staff development and good service those located in the field must be allowed to exercise their own initiative.

Institutions must develop effective external linkages with their client industries, with Government agencies, with non-Government organisations and with foreign interests.

In general terms, institutions must continually evolve and change according to the dynamics of the situation in which they find themselves and this involves a continuous learning process within the institution itself.

Marcus D. Ingle

Viable Institutional Delivery Mechanisms For  
Industrial Development: An Implementation Perspective

Institutions responsible for developing industry must prove their viability in terms of their ability to deliver services which are needed and valued by industry; in order to have this capacity an institution must demonstrate technical capacity, a commitment to its final goals, innovative thrust, a consistent environmental image and spread effects whereby its forms are adopted by other institutions.

An institution must be evaluated not in terms of its ability to survive and grow but in terms of its image, that is what people think and know about its activities, its connotation, that is the attitudes held both within and outside it and its purchasables, its resources in terms of money or things that can be bought. Those responsible for institutions must evaluate them in terms of their ability to generate support both now and in the future, their value as perceived by the market which they exist to serve and their long term prospects.

Effective service delivery depends on turning out the complete process from implementation analysis and planning, to organisation and start up to actual operations and their monitoring and to a feed back mechanism whereby their impact is assessed. Leakages can occur at each of these stages and institutional management must monitor and endeavour to correct these leakages.



It is simple to state some general conclusions about institutions currently entrusted with industrial development.

- 1) The current reinforcement structure in industrial institutions typically favours institutional aggrandizement above appropriate service delivery.
- 2) Detailed implementation analysis and planning for industrial services is insufficient or inaccurate.
- 3) Many industrial services are seriously impeded during their initial organisation and start up phase.
- 4) Many on-going service activities are neither properly monitored nor evaluated.

In order to remedy these deficiencies institutions themselves and those responsible for their creation and support must analyse their success in terms of service delivery. Client response is the true indicator of institutional success. Various practical mechanisms for remedying the implementation deficiencies are available.

William Millager

Energising The Operational Industrialisations  
System: Project Development And Implementation

The drive towards industrialisation rarely proceeds at the pace required; the project life cycle from initial inception to effective operation illustrates the need for activities by large numbers of institutions and reveals possibilities for slippage. In particular, the implementation process is delayed by haphazard project selection, unequal negotiations, lapses of political will, slow decision making, weakness in marketing and underutilisation of capacity. It is possible to examine the performance of the existing system by analysing the past success in terms of investment, employment and output and investigating the current portfolio of important new projects.

If deficiencies are identified, preliminary steps may be taken in terms of improving the co-operation of existing institutions, rationalising responsibilities and where necessary, although this should be treated with suspicion, proposing the establishment of new institutions or departments for tasks which are not covered at all.

These delays, and inappropriate project selections, often occur because sophisticated, and time consuming social cost benefit analysis techniques are used, which even when they are completed are not necessarily valid. It may be useful to adopt rather more simple systems to identify both industries and particular projects which are economically and technically viable and also pass the tests of internal and external benefits which must be imposed before projects are finally approved. Conventional cost benefit analysis does not measure factors such as local involvement in engineering construction, use of local materials, local production

or availability of spare parts, the existence of suitable distribution networks and linkages to other sectors of the economy; an attempt must be made to rank projects by these standards before final selections are made.

High level industrial consultancy can be used as a means of improving project selection but also developing indigenous skills within industrial development institutions and in industry itself.

J.P.H. Peemans

The General Problems Of Small-Scale Rural  
Industrialisation In The Light Of The  
Present Agricultural Crisis In Africa  
South Of The Sahara

The concept of rural small-scale industrialisation has sometimes been presented as a panacea for development problems but it is confused and its results have not always justified the confidence placed in it. The concept arose not in a positive way but as a result of the negative effects of modernisation and the failure of "trickle down" approach to development. Small-scale industrialisation has not generally achieved its objectives because no clear distinction has been made between the role of large and small-scale industries and in any case neither the employment nor the income distribution objective have been effectively achieved.

Two types of small-scale industry have developed, namely the micro enterprises surviving in the informal sector purely because of their low rate of profit, and rather larger factory type sub contracting enterprises which survive at the will of large industries and produce non-indigenous products at very low wages.

Neither of these types of enterprise contributes to effective local capital accumulation. The frequent conflict between co-operation and entrepreneurship has further complicated the issue. Small-scale industry development must often be based on political and other non-economic grounds so that it does not genuinely contribute to self sustained industrialisation.

In the People's Republic of China, where there is total national commitment to rural small industry and an appropriate political structure, only some 30% of communities are said to have benefited even in a small way from 20 years of consistent programmes directed towards rural small industries. In Africa, where the political system is more centralised, the markets far smaller and the institutional infrastructure less developed the prospect would seem to be even less favourable. Pricing policies have favoured the urban sector, credit has been directed mainly towards cash crops and food crop production has often been inadvertently discouraged.

A remedy may be to de-emphasise the promotion of rural small-scale industry for its own sake and to concentrate on encouraging the production of food crops in every way possible; this will obviously involve the promotion of rural small-scale industries to produce inputs and to process and distribute the output and it may be that industries founded on this basis will be more viable than some of those which have been established. Rural development should be approached on an integrated total basis without emphasis on small-scale industrialisation for its own sake. Profiles of suitable industries for this purpose should be developed, and representative regions within the least developed countries of Africa should be chosen for the application of integrated rural development programmes.

Richard Stanley

The Case Study Of A Development  
Of A Viable Village Enterprise

Experience suggests that it is possible for village communities to start and successfully operate their own industries if these are based on their own needs and resources. Outside intervention must be minimal, and must be based only on firm knowledge of what exists within the village. A small, relatively poor rural community needed an improved water supply and an outside agency intervened with suggestions for a suitable design and the loan of simple tools. The villagers constructed a form of pump which appeared appropriate to them but was judged to be unsuitable by the women who had to operate it.

After this failure one of the villagers himself discovered what appeared to be a more suitable pump design in a neighbouring village and the outside agency restricted its intervention to the provision of tools and advice as to the sources of supply of materials. The villagers built a prototype pump and after some modification installed it and it was found to be suitable.

The villagers then went on to set up a small informal co-operative which manufactured and sold the pumps to the State Water Authority and to communities which were in need of it.

Problems arose when the new enterprise had to open a bank account in order to cash cheques received for sales and because of regulations designed for agricultural co-operatives it proved difficult to register this activity under the normal regulations. Conflict arose within the community between those who wished to maintain the activity as a workers co-operative and

those who wished to run it as a village industry, but these appear to have been satisfactorily resolved and the industry should continue to prosper; this enterprise, which was never a "project" as conceived by an outside institution, shows that resources and ideas exist within the village which can be mobilised with a minimum of outside intervention.

James Tomecko

Selection By Institutions Of Rural Industrial Projects

There is a growing need to involve the rural areas in the process of industrialisation, and the most efficient means to do this is through the vehicle of small-scale industries. This requires institutions with the necessary competence to select the projects which are "best" for the rural environment; how can public institutions of this sort select suitable rural industrial projects?

One method is cost benefit analysis, but this does not take into consideration public interests such as employment, income redistribution or foreign exchange. Social cost benefit analysis does incorporate public interests and attempts to weight them, but in general it is a complicated procedure for rural projects and the cost of a complete social cost benefit analysis may exceed the investment required in the project. Social cost benefit analysis does not relate to policy issues such as encouragement of public over private or local over foreign investment.

What are the constraints that should be examined in determining what method is best suited to selecting rural industrial projects? There are three types of infrastructure; physical, institutional and social. Infrastructure can be used as a yardstick in determining the "ruralness" of a locality, and the lack of it used as an excuse for overlooking rural projects. Insistence on the presence or provision of physical infrastructure in fact automatically reduces the "ruralness" of the environment selected and thus should disqualify the projects concerned. There is a need to generate projects which do not rely on physical but rather on public institutional infrastructure.



To avoid failure in selecting rural based projects, it is vital to be intimate with the social environment in order to determine the areas of economic activity and communities' receptivity to change. This can be determined by examining whether the area shares similar problems and where it had diversified resources which could be mobilised by development institutions in order to enable the community to solve its own problems.

In developing projects in economically active areas capital is not the answer and this can frequently have a negative effect on employment. The preliminary and vital input into rural industrialisation should be in the form of "software" which consolidates the already existing potentialities. Once this software has proved effective and a number of project options emerged which method is best suited for selecting them?

Commercial analysis does not consider the public interest, social cost benefit analysis is too complicated and using common sense is too vague. Proper weighting should be given to the effect of projects as on satisfying basic needs, creating employment, redistributing income, and stimulating further balance in industrialisation. This can be incorporated into a two tier evaluation process which first examines the commercial viability of a project and secondly analyses its impact on national policy objectives.

Institutional Requirements For  
Industrialisation Of Rural Areas

The experience of Tanzania and some other countries indicate that it is possible to draw some general conclusions about the institutional approach to industrialisation of rural areas. Rural industrialisation must be seen clearly in its social context, and there must be a wholehearted commitment to rural industrialisation at the highest level in Government. Government must formulate clear policies and programmes to this end. Industrialisation must be more than a slogan; it must be reflected in effective programme implementation.

Rural industries must be clearly defined and institutions must be set up by legislation to promote them. The education system must be realigned towards self-reliant technologies and belief in local initiative, and public institutions and large establishments must support this through financial and moral assistance. The forward and backward linkages of rural small industries must be clearly recognised in relation to larger enterprises, the Government sector and above all agriculture. Appropriate regulations on standards and quality, which may involve unpalatable decisions, will have to be taken in order to encourage initial efforts for rural industrialisation. Government must rely on its own resources and not depend wholly on foreign aid for rural industrialisation.

Rural industrialisation development institutions must usually initially be set up by Government and it is probably necessary at least at the outset to make no charge for their services. The actual implementation of projects should be left as much as possible in the hands of the entrepreneurs and the promotional organisation should restrict its activities to the promotional function. The overall structure must

not be highly centralised; the maximum amount of authority should be decentralised and the institution should have comprehensive field representation in the rural areas themselves. The promotional institution must have resources at its disposal other than project selection and encouragement, such as training and individual advisory services. It may on occasions be necessary to combine finance with advice and assistance, especially for the tiny sector, but wherever possible reliance should be placed on commercial banks and other financing institutions. Extension workers should be carefully selected and trained, and in order to provide the numbers necessary for comprehensive coverage it may be necessary to recruit "consultants" at rather lower than normally accepted levels in the educational hierarchy. The transfer and development of appropriate technologies must be fostered by national and international organisations and by training of all kinds and at all levels.

Rural industrialisation may appear uneconomic but in terms of quality, prices and standards but the advantages in terms of income distribution, employment, mobilisation of resources and improvement of agriculture generally more than outweigh the costs.

Promotion institutions must look for entrepreneurial communities and groups as well as individuals and it is vital that the people should be involved at every stage in the rural industrialisation process. Promotion institutions must avoid the temptation to impose ready made solutions, such as "rural workshops" from above; they must work with rural communities and provide only such assistance as is necessary to help them to work out and implement their own forms of rural industrialisation.

Institutional Requirements For Industrialisation  
Of Rural Areas: A Study In Decentralisation  
Of Multi-Functional Institutions

Small-scale industry can mobilise unemployed resources, provide jobs, assist in discouraging urban drift and provide products which people need; it can certainly not solve all developing problems but can make a significant contribution.

Rural small industries must have a positive commercial rate of return as well as providing intangible social benefits, and specialised institutional programmes must not be allowed to emphasise the distinction between rural and urban or small and large industries.

In most of the least developed African countries the colonial model of industrialisation continued after independence; the service sector predominated, what industries there were were concentrated in the capital area and there were generally devoted to import substitutions rather than exports or providing products required by the masses. In order to correct this it is necessary to establish a central multi-functional institution, and above all to find one person with the necessary commitment and ability to lead and direct it. Assistance must be taken by certain institutions to rural small industries and potential investors in rural areas themselves and an effective extension force is needed for this purpose. Both the commercial organisation and financial institutions must be decentralised and co-ordinated with one another in order to provide service to the rural community and to compete effectively with traditional money lenders. Those institutions responsible for promoting large and small industries must have effective links between them so that they in this way develop links between large and small industries themselves.

There are appropriate technologies for promoting industry the same as there are appropriate technologies to be used in industry itself and simple unsophisticated techniques should be used whenever possible. It may be argued that because small-scale industry is only a small share of industry as a whole, it should not receive the same amount of support as large-scale industry; on the other hand, the investment cost per job created in small-scale industry is typically one tenth or less that of large-scale industry, and this allows a substantial margin for training, promotion and other services. Feasibility studies should be carried out in a way which is appropriate to the type of enterprise being studied, and existing institutions should be used as sources of information whenever possible.

Although it may be attractive to consider totally packaged integrated rural development programmes, experience has shown that these are usually very expensive, and often ineffective, so that rural industry must be promoted effectively in co-ordination with but not as a part of a general rural development programme.

Nils Sjoebom

Small And Medium Scale Industry  
Institutions: A Case Study Of Ethiopia

The Ethiopian Handicraft and Small-Scale Industries Development Agency (HASIDA), is an interesting example of a rural small-scale industry promotion institution which has been founded in an immediate post revolution situation and which incorporates many of the lessons which have been learned from other countries' experience.

The objectives of HASIDA are to formulate policies for the development of handicrafts and small-scale industries, to supervise their implementation, to carry out surveys and research, to identify new industry potential and to study the market for small-scale industry and handicraft products. They are to assist and encourage the establishment and growth of small industries, to operate demonstration and training centres, to assist in marketing, raw material supply and equipment, training, management and obtaining credit, and to promote the social status of craftsmen and the dignity of manual labour. The function of regulations and licencing is also entrusted to HASIDA, as is the registration and supervision of service and producers co-operatives.

HASIDA is divided into four major sections, namely the Industrial Promotion Department, the Project Preparation Department, the Co-operative Promotion Department and the Ethiopian Handicrafts Centre. Regional offices are being established in the regions of the country and technical extension officers and co-operative organisers will operate as mobile teams throughout each of the regions.

HASIDA will work through the rural peasants associations and urban dwellers associations which offer a channel of communication to the mass of the people. Appropriate technologies will be identified or developed and special assistance will be provided to areas with little or no industrial development at this time.

Experience suggests that while it may appear inappropriate to allocate the regulation and licencing authority with a promotional institution, that the advantages of doing this in terms of ensuring that the regulations are appropriate outweigh any of the normally accepted disadvantages. HASIDA has started some regional offices on a private basis, and school boys with a total of twelve years of education are being used to promote co-operatives after a five weeks crash course in co-operative development. HASIDA appears to be playing a useful role in rural industrialisation and in encouraging the resurgence of community and individual entrepreneurship.

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