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International Working Party
on Industrial Programming Data
First Session

Vienna, Austria, 18-27 November 1968

AIDE MEMOIRE:

PURPOSE, SCOPE, OPERATIONAL FRAMEWORK AND

PROVISIONAL AGENDA

for the First Session of the Working Party on Programming Data

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(The description of other specific agenda items to be submitted by participants will be circulated later as they become available.)

I. <u>Introduction</u>

The first session of the International Working Party on Industrial Programming data is being convened for the purpose of examining the problem of the so-called "data-gap" facing industrial planners in the developing countries. The expression "data-gap" is used here to describe the substantial discrepancy between the quantity and quality of statistical information required, and that which is currently available, for planning purposes in the developing countries.

It is commonly agreed that adequate, accurate, and up-to-date data are an essential prerequisite for effective planning and programming. The absence of this requisite is invariably cited as the factor limiting the reliability of nearly all the industrial plans, feasibility studies, and project reports prepared in the developing countries.

A recent study undertaken by UNIDO has revealed a surprisingly large number of attempts on the part of both international and national government organizations to deal with various elements of this over-all informational problem. UNIDO itself has developed several programmes in this domain.

Recently, however, it has become increasingly apparent that the solution to this problem lies not in the sort of fragmentalized approach that has been pursued in the past, but rather through co-ordinated, authoritative, sustained efforts on the part of the various international, as well as national, organizations concerned with industrial development.

Accordingly, UNIDO has taken the initiative in organizing an International Working Party to seek solutions for the problems of industrial programming data and to promote and co-ordinate various action programmes in this field.

II. Explanation of the issues

Neither "Industrial Programming Data", the issue confronting
industrial development planners, nor an "International Working Party",
the framework within which it is to be considered, may be a familiar
concept to most people. Therefore, it appears advisable to describe
a few key aspects of the issue before proceeding to such routine
administrative details as procedure and agenda for the proposed first
session of the Working Party.

A. Scope of industrial programming data

1. Synthesis of economic, statistical and technological data

Industrial programming is a multifaceted, complex activity
which draws freely on the disciplines of economics, statistics
and engineering. Each of these fields makes use of a principally
quantitative approach; however, each discipline tends to rely on
its own, rather specialized type of data and data-generating
procedures. Some industrial programming data, if not all, should
be aimed at a synthesis of these three, often widely dissimilar,
types of data, particularly in the context of industrial planning
and project programming.

This synthesis can actually take a variety of forms. Thus,
industrial programming data generally draws not only upon
analytical exercises applied to the data from regular industry
census and surveys but also upon a wide range of techno-economic
studies connected with industrial development projects, programmes
and plans.

2. Indigenous vs. reference programming data

It is indeed important to make every possible effort to
improve the indigenous data system within each country. The need
for sound development programming invariably calls for improvements
in the working basis on which the necessary data on production,
marketing, finance and other operational parameters is generated

through the survey of the existing industries. However, this would serve as only a partial solution to the problem.

In most developing countries, experience with industrial development is relatively recent whereas the changes in the industrial structure envisaged in the context of development programming are relatively radical. There is generally little scope for extrapolating the indigenous data on existing industries, even where it is available. There is thus great need for creating reliable reference programming data drawn from experiences in other countries at a variety of stages of industrial development.

The concept of reference programming data is still an open field for investigation, especially in regard (i) to the specific types of data that are particularly suitable for cross-country referencing, and (ii) to the specific ways in which the collection, analysis and dissemination of such data can be effected at the international level.

3. Working basis for multi-national plan harmonization

Apart from the problem of fundamental data gaps in the young developing countries in the sense mentioned above, particular attention is invited to the need for building an effective working basis for regional or sub-regional industrial co-operation. The task of securing sufficiently comparable and mutually exchangeable data systems between different countries should be considered as the first necessary step for the so-called plan harmonization.

Political dialogues on the potential of integrated, multi-national approaches to industrial development have lately been taking place with notably increasing frequency. While the "international" element of industrial programming data deserves attention in general terms, it would be advisable, from the standpoint of the Working Party, to emphasize the strategic significance of the programmes aimed at strengthening a common data base for each particular regional or sub-regional country groups.

4. Limitations of the ordinary industry statistics

Especially in connexion with the problem of sub-regional industrial co-operation it would be necessary to look closely into the scope and limitations of regular national census and other statistical programmes. In doing so, special attention should be paid to the level of specificity on which internationally "comparable" data ought to be sought.

In many developing countries, the existing base of their industrial sector is relatively small: the emergence of a few new factories would radically change the characteristics of the corresponding "industry" defined, say, in terms of the ISIC 2-digit grouping. It is extremely important not to lose sight of the conditions and potentials of individual productive units (factories or establishments) for most of the purposes connected with industrial programming.

The superficial comparability, rather forcibly attained at a highly aggregative level, and hence serving only limited purposes, such as general trend analyses, is the consequence of the immature statistical base in given country, as well as poorly co-ordinated programmes on the multi-national level.

Although gradual improvements are taking place in the national statistical apparatus in most developing countries, this is generally a slow and costly process. There is obviously the need for supplementary data systems, designed for relatively quick results, in order to generate the type of data so urgently needed for today's programming purposes: that is, the kind of data that would help planners to handle their economic calculations at a level not too many steps removed from individual industrial plants, and at the same time on a sufficiently comprehensive basis to retain the standpoint of over-all national and regional economy.

5. Ad hoc industrial studies

It is clear that industry statistics in the conventional sense of the term meet only part of the data requirements for industrial programming purposes. Although many ad hoc industrial surveys,

pre-investment studies, and establishment-level case studies are repeatedly undertaken by different organizations, generally little co-ordination seems to exist among these studies. Provision is seldom made for utilizing this information to develop a coherent stock of programming data for general flexible uses. To make matters worse, there are many indications that industrial enquiries of a more or less similar scope are repeatedly undertaken on different occasions by different organs. Even the most limited of such ad hoc industrial surveys and studies can be expensive operations.

In view of the fact that these ad hoc surveys and studies are an important source of industrial programming data, a sensible approach to the improvement of programming data systems calls for a special international unit, such as the Working Party, that can function as central consultative machinery for the local and international co-ordination of key technical aspects of such surveys and studies.

B. Expected role of the International Working Party on Industrial Programming Data

While the above several paragraphs can suggest the most important characteristics of "industrial programming data" and the issues to be considered in promoting concerted action in this area, the real situations underlying the general issues vary greatly from case to case. Consequently, specific schemes for data organization to be applied in particular situations can be of a nearly infinite variety. While the Working Party will be instrumental in organizing a methodical response to the over-all problem, its primary role should consist in the development and control of selected actual projects of immediate practical significance.

1. General features

It appears advisable to emphasize the extremely flexible attitude which is being taken toward the development of the Working Party concept. In effect, the Working Party is expected to define

its own organizational structure, domain of inquiry and eventual modus operandi. In the following paragraphs a provisional format is offered which, it is expected, may be greatly modified as a result of the findings of the first session.

The Working Party is not intended to be just a conference, an expert group meeting or a seminar. The term "Working Party" has been tentatively adopted with the intent of suggesting its desired operational features. It is hoped that each participant will consider himself as an active member of a "task force" on the advancement of industrial programming data. This applies both to participants from the United Nations family and to those representatives from developing countries. Most participants are directly or indirectly concerned with specific programmes for new systems of data organization.

In the following, tentative "operational guidelines" are enumerated with a view to clarifying the expected functional features of the Working Party, as distinct from those of the more familiar frameworks such as conferences and seminars.

2. Suggested operational guidelines

It is intended that the International Working Party serve as a sustained unit whose function is to promote new efforts and to co-ordinate on-going projects in the domain of industrial programming data. This is an ambitious and broad undertaking which, if it is to ield helpful and concrete results, should be evolved with respect to the following operational guidelines:

Co-operation: The International Working Party (IWP) should be prepared to take into account the position and draw on the experience of all those international organizations concerned with the problem of industrial development;

Technical competence: The IWP should attempt to bring together (i) personnel familiar with the needs and institutional peculiarities of the developing nations and (ii) qualified technical experts skilled in the data aspects of industrial planning and programming;

Domain: The IWP should be prepared (i) to develop new data systems in support of industrial planning on the aggregate as well as on the project level, (ii) to function as a trouble-shooting unit capable of generating immediate and effective responses to designated data problems, and (iii) to give particular emphasis to programmes which will promote and support integrated, multi-national approaches to industrial development;

Continuity: The IWP should be developed as a sustained forum, convening periodically in order to evaluate the progress of its operational counterparts in carrying out past recommendations and to designate new areas of inquiry and action;

Authority: The IWP should be given the authority to instruct its operational counterparts on the matters of its particular expertise.

3. Note on the relationship with the United Nations Statistical Commission

The concept of industrial programming data in many respects runs tangential to the regional and international statistical programmes that fall under the aegis of the United Nations Statistical Commission. Under no circumstance will the action proposals of the Working Party be intended to compete with or to replace the programmes being set forth by the Statistical Commission. The action proposals of the Working Party would primarily be oriented towards the improvement of local programming data systems in particular developing countries or particular institutions concerned with industrial development; their objective is essentially to complement the regular statistical programmes. The centralized accumulation and dissemination of the results of those proposals, if any, would be, in principle, a secondary aspect of the Party's activities; any programmes to be adopted in this direction would thus be considered as the Party's supporting research activities intended to increase the practical usefulness and effectiveness of specific local activities.

It is agreed that UNIDO shall remain entirely dependent upon the United Nations Statistical Office and its regional counterparts in regard to the collection and use of industry statistics from

official national sources. Although the Working Party
can be instrumental in constructing the working basis for
a UNIDO-housed statistical data centre, which is as yet non-
existent in formal terms, this is not expected to affect the
above-mentioned position of UNIDO concerning its "statistical"
dependence".

III. The First Session, Vienna, 18-27 November, 1968

A. Participants

1. United Nations Family and individual countries

It is hoped that the first November session, which is primarily designed to operate at the inter-regional level, will be conducive to the subsequent establishment of regional or sub-regional working sessions. The general findings and recommendations of the first session can then be translated into action programmes at the regional or sub-regional levels. The "inter-regional" elements of the first session refer primarily to the Regional Economic Commission, UNESOB and other international organizations. Invitations to country participants in the first session are extended only selectively, with particular emphasis on countries in the sub-regions having relatively advanced prospects for multi-national industrial co-operation. It is hoped that the specific problems, needs and project proposals to be submitted for discussion by those country participants will serve as a test case for the action-oriented operational framework proposed for the Working Party. The real implementation of this framework will materialize in the form of subsequent regional or sub-regional sessions.

Both the United Nations and country participants will be responsible for the presentation of specific agenda items and for the execution of the specific action programmes formulated at those working sessions. It would be advisable for at least part of the country participants in the first November session to be absorbed into the standing task force of the Party so that the experience gained by these people could be fully utilized at subsequent sessions. A similar procedure may be suggested for those who participate newly in any of the subsequent working sessions.

2. Export component of the standing task force

In promoting the notion of this Working Party on Industrial Programming Data, UNIDO has taken the initiative in conducting some of the necessary pre-sessional field studies. A special UNIDO consultant, who will act as part of the "export" component of the standing task force of the Party, was sent on a preliminary mission to a group of five East African countries for the purpose of evaluating the feasibility of several projects connected with the agenda of the first session of the Working Party. His major tasks were to locate and confer with key personnel working in the field of industrial planning, statistics, project promotion and evaluation and to establish working linkage with the persons who are particularly active in one or more topics to be considered at the first session. A similar mission is being undertaken for the countries associated with the Central American Common Market.

For the specific projects or proposals suggested for the Party's deliberation at the November session (see Agenda Items), there are usually one or more special consultants who assist in gathering professional views on the relevant technical subjects. These consultants are also invited to participate in the session as the "export" component of the standing task force of the Party.

B. Provisional agenda

The problem of industrial programming data is a vast and complex one. As suggested earlier (see Section II-B above), the most sensible approach for the working session would be to evaluate in detail several specific project proposals whose common goal is to strengthen the data basis for industrial programming. This almost brusquely pragmatic approach will have an advantage over an idle debate on the issues and methodology in general. It is hoped that the discussion on various specific proposals will shed a great deal of light on the more general problems concerning the task of the Working Party.

The provisional agenda suggested for the first session includes certain specific projects which are already being carried out by UNIDO under its regular Programme of Work and the ideas which UNIDO has seriously considered for future implementation. Needless to say, these projects and proposals are all intended to meet the actual needs of various developing countries. However, the inclusion of these specific proposals in the agenda by no means implies that the participants should attach any particular priority to them. These are put forth at this time primarily to provide an indication of the relevant areas of interest and the probable project prototypes to be undertaken by the Working Party.

As indicated above this agenda is incomplete. Space has been left for proposals to be submitted by participants. The final arrangement of these agenda items, both from the substantive standpoint and in terms of the exact time scheduling, will be subject to the approval of the Working Party as indicated by item a-1.

Agenda a: <u>Procedural matters and general discussions</u>

    a.1: Election of officers, adoption of agenda, selection of discussion leaders, etc.

    a.2: General discussion of goals, strategy and format.

Agenda b: <u>Specific projects and proposals</u>

    b.1: <u>Profiles of Manufacturing Establishments</u>: (UNIDO)

    Evaluation of the potential working uses of and the possibility of extending this series of reference data on manufacturing establishments.

    b.2: <u>Profiles of Pre-investment Industrial Projects</u>: <u>(ECLA/IDB)</u>

    Examination of the alternatives for developing a standardized format and effective institutional arrangement for a sustained, systematic compilation of the techno-economic statistics generated by pre-investment industrial project reports.

b.3: <u>Industry File System</u> (UNIDO):

Examination of the feasibility of establishing
a data bank type operation, especially on a sub-
regional basis, which will provide a continually
up-dated and reasonably comprehensive list of both
existing and proposed industrial establishments.

b.4: <u>Time Profiles of Industrial Project Implementation:</u>
(UNIDO)

Examination of the framework of data collection to
be used for a series of case studies on industrial
project implementation, whose goal is to identify
major bottlenecks or trouble spots retarding the
construction and operation of individual industrial
projects.

b.5: and on: <u>Other participants' proposals</u>

Other additional country, sub-regional or other
project proposals to be submitted by the participants [1]

Agenda c: <u>Organizational Plan for the Working Party</u>

c.1: Long-term Work Programme of the Working Party and
formulation of the suitable organizational layout.

c.2: Regional or sub-regional working sessions to be
convened in 1969-1970.

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[1] In the course of the presentation of the above particular UNIDO
project proposals, a few other additional projects, such as
"Potential investment opportunities matrix", which are currently
being considered by UNIDO in the field of industrial information
services, may also be described, with a view to clarifying the
elements tangential to the task of the Working Party on Industrial
Programming Data.

ANNEX I

PROFILES OF MANUFACTURING ESTABLISHMENTS

(Provisional Agenda Item b.1)

A. General Description

The Profiles of Manufacturing Establishments is an on-going project of UNIDO. Volume I of Profiles was published in 1967 (ID/SER.E/4) and Volume II in 1968 (ID/SER.E/5); these two volumes, which contain some 460 cases drawn from 5 countries, India, Israel, France, Japan and Yugoslavia, may be considered as the output of Phase I of the project.

Preparations are currently underway for the third and fourth volumes of the same series, surveying selected establishments in Ethiopia, Mexico, Tanzania, Uganda, Austria and the Federal Republic of Germany (as of September 1968); negotiations are currently underway in a few other countries for further extensions of the Profiles.

The purpose, the technical features and the limitations of this series are explained briefly in the INTRODUCTION to the first volume of the Profiles (pp. 1-4). Perhaps the best way of summarizing these is to recall that the primary purpose of the series is "to provide a 'zoo' of live specimens of industrial establishments", which may be studied by various users for various purposes.

Each profile is designed to provide a capsule form summary data on the structure and performance of an actually existing industrial establishment for a given accounting period. The identity of the establishments in the Profiles would not be revealed; only the particular countries or sub-regions in which they exist will be indicated. The compiled data rather faithfully reflects the records on the actual performance of each selected enterprise or establishment; only a limited degree of effort has been made to "normalize" the observations. Those records quite naturally subsume a number of factors peculiar to the given establishment, such as markets, management, accounting practices and other historical and environmental conditions. The intent is, therefore, not to force upon the users a hasty image of "representative" specimens or a hasty delimitation of programming "norms", but rather to invite the users to acquaint themselves with the range of possibilities to be encountered in the real world.

B.   **Role of the Working Party on the subject**

With Volumes III and IV the Profiles series has already entered its second phase. But the project as a whole can still be considered as evolving through an experimental stage. Although the basic approach remains the same in both Phase I and Phase II of the project, Phase II is so distinguished because of certain modifications or improvements effected with respect to the extent of information to be compiled and the method of selecting candidate establishments. The present position of UNIDO with regard to the key elements of the approach is sketched below. It is hoped that the Working Party will afford a thorough review of the project in its entirety and in its parts and specify recommendations concerning scope, procedures, and techniques. These recommendations should be drawn up, taking into consideration the desired parallelism between this project and the other Profiles series, i.e. **Profiles of Pre-Investment Industrial Studies**, the latter being proposed as **Provisional** Agenda Item b-2.

1. **The Users.** The Profiles are designed primarily to serve as an aid to persons (particularly those qualified as "industrial economists") engaging in various phases of industrial planning and programming in the developing countries.

2. **Principal uses.** The Profiles offer a variety of potential uses. In order to permit a high degree of flexibility in this respect, the presentation is designed so as to provide raw materials for further study rather than a ready-made "manual" for industrial programming. With this reservation, the areas of potential application include, among others:

   - A preliminary shopping list for industrial projects

   - A comparative reference for evaluating the project recommendations of industrial consultants or contractors

   - A standard of comparison for the efficiency and viability of existing factories

   - A cross-reference for economic feasibility studies on industrial projects

- A reference which permits (after appropriate adjustments) cross-country comparisons of the performance of actual industrial plants

- A reference for assessing the variability of basic parameters characterizing various industries

- A basic material for studying the general discrepancies between pre-project programming data and actual-project performance data. (A systematic approach to such a study would require a collection of comparable pre-project data as suggested in Provisional Agenda Item b.2).

3. **Scope of data.** The compilation is designed to provide, for each selected establishment or enterprise, a complete set of descriptions of the economically important aspects of productive activities, such as process equipment and other capital assets, outputs, material inputs, employment and its technical layout, value added components, capacity utilization, etc. Currently, efforts are being directed to providing better control on the descriptive accuracy of the primary data and also more complete information on marketing and institutional aspects (government pricing policies, import tariffs, etc.). The standard form being used currently for the compilation is available upon request.

4. **Selection of candidate establishments.** Establishments are selected on the basis of an explicit set of criteria (see TECHNICAL NOTE I of Profiles Volume I, pp. 5-6) as well as the willingness of establishments to co-operate in providing the requisite information for the study. A variety of manufacturing industries are covered, with particular attention to the types of industries that are characterized by relatively large variations in the product-mix at the establishment level, "modernness" of plant and plant size. In Phase II of this project, special efforts are being made to control the process of selecting the candidate establishments, particularly in the developed countries; for each Profile obtained from a developing country, a more or less directly comparable case will be sought in a developed country.

5. Policies for further extension of this series. The collection of
the primary data for the Profiles series has so far relied on an
ad hoc working group, organized in each selected country, which
completes the standard questionnaire form prepared by UNIDO for
a group of selected establishments. The work of these ad hoc
working groups is financed entirely from the UNIDO's own resources.
UNIDO wishes to continue its efforts in extending this series until
the sample for each specific type of industry reaches a size large
enough to permit comprehensive cross-country, cross-establishment
evaluation.

However, it is admitted that the Profiles series, as generated
through the above procedure and released in the form of publication
series, can play only a passive role vis-à-vis the actual need for
specific reference programming data arising in various countries
and in various operational contexts. In other words, a given user,
faced with a given need, may not necessarily be able to locate in
the available Profiles series the precise kind of reference specimens
that he is looking for.

A more practically useful (and perhaps even less costly)
approach may be that, prior to selection of any particular countries
and establishments, specific users' needs will be registered; this
specific requests concerning the desired types of reference estab-
lishments, the desired kind of information on such establishments,
etc., might be submitted. An integrated system for the identification
of specific needs, compilation of relevant reference data (or
analytical digest of already compiled data) and delivery of the data
to specific users, would serve more directly the very purpose for
which the Profiles series has been developed.

The desirable strategy for the future extension of the Profiles
series should also reflect upon the fact that the applicability of
the present form of Profiles to the context of pre-investment pro-
gramming should best be investigated by comparing it with other kinds
of reference data, especially data derived from the techno-economic
feasibility studies concerning various pre-investment industrial
projects. As suggested in ANNEX II, it appears highly desirable that
the concept of a "zoo of industrial projects" be approached in dual

terms, covering both "live" and "prenatal" specimens. The
technical framework of data compilation for the original
Establishment Profiles should finally be adjusted accordingly,
in both scope and depth, so as to ensure the desired degree of
comparability between the two series.

ANNEX II

PROFILES OF PRE-INVESTMENT INDUSTRIAL PROJECTS

(Provisional Agenda Item b.2)

A. Background

It is often pointed out that there are usually considerable discrepancies between the techno-economic data on industrial projects as used for pre-project evaluation purposes and those observed when projects are actually materialized in the form of on-going factories. These discrepancies reflect, among other things, the fact that the originally anticipated characteristics of any project are subject to various modifications in the course of its implementation. Such modifications may have been introduced either to cope with changes in underlying economic conditions, or because of poor control on the implementation process of the project, or simply because the original programming data itself was incorrect or insufficient.

Therefore, it would be highly desirable if both the data involved in the pre-investment programming of a given industrial project and the corresponding data to be revealed in the actual post-investment phase of the same project could be made available for comparative evaluation.

One of the possible approaches may be to trace the technical details of an existing factory or enterprise back to its pre-investment phase. This is apparently an extremely difficult task, and may be undertaken in the form of a rather limited number of case studies. An approach of this type, geared specifically to the purpose of contributing to the analytical assessment of time delays in industrial project implementation and the techniques of programming and controlling the various stages of project implementation, will be considered under Provisional Agenda Item b-4 — "Time Profiles of Industrial Project Implementation".

Apart from this possibility, it should be noted that a large number of techno-economic feasibility studies on various pre-investment project proposals, as available in industrial banks, development corporations, governmental planning agencies, international organizations, etc., could themselves generate useful reference programming data, if properly retrieved and analytically digested. The bulk of potentially useful information contained in those studies seems to be used once and then filed into oblivion. This immediately points to the possibility of utilizing those studies in a form more or less comparable to the Profiles of Manufacturing Establishments. Thus, the proposal on the "Profiles of Pre-investment Industrial Projects" may be considered as an integral part of the extended, dual approach to the Profiles-type reference programming data.

3. ECLA/IDB Proposal

It appears that an attempt at systematic data compilation, compatible with the above guideline, is already underway under the joint ECLA/IDB/ILPES programme for industrial development integration. It is expected that a detailed description of this attempt and the current state of its progress will be submitted later by the ECLA component of the Working Party.

It is understood that the ECLA/IDB project was initiated while the UNIDO project on the Establishment Profiles was evolving in its preliminary phase, but not particularly with the intent of establishing a methodical parallelism between the two projects.

However, both projects were initiated sharing commonly the same view regarding the limitations of the "conventional" approaches to reference programming data. One of the conventional approaches was to rely on the technical coefficients of industrial plants as observed in only a few advanced countries. Such data is allegedly abstracted from the market conditions prevailing in any particular country, but the data itself does not offer the necessary reference for assessing its

applicability to the conditions prevailing in any given developing
country. Another conventional source is the industry census and
related statistics.as available in the developing countries; the
limitation of this source with regard to the desired kind of pro-
gramming data is quite obvious.

Thus, while the UNIDO Establishment Profiles apply a specially
designed tour of inspection to a wide range of actual industrial
establishments in various countries, the ECLA/IDB project concentrates
on the retrieval and analysis of those techno-economic coefficients
which have actually been applied to various industrial projects in
the developing countries in the form of pre-investment feasibility
studies.

According to the memorandum on this ECLA/IDB project, issued as
of 7 June 1967,[1] not only has the project been conceived for the
common goal, but also the proposed scheme of data compilation appears
to involve a number of elements comparable to those of the UNIDO
Establishment Profiles. There appears to be great scope for further
developing these two approaches in a mutually co-ordinated manner.

C. Role of the Working Party

It is hoped that the Working Party, with a detailed report on
the technical aspects of the ECLA/IDB project before it, will be
invited not only to evaluate the prospects for extending a similar
attempt to other regions or sub-regions, but also to identify specific
technical requirements for effecting the desired parallelism between
the two different Profiles series.

An extension of the ECLA/IDB type approach to other developing
countries would obviously need a special organizational arrangement
for the pre-selection of the relevant kinds of pre-investment reports
from a vast variety of available studies. As regards the possible
working linkage with the Profiles of Manufacturing Establishments, care
would have to be taken to ensure a reasonable degree of comparability
between the two kinds of approach, both in terms of specific types of

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[1] "Esquema para un estudio sobre coeficients de capital y otras relaciones
des intereses en los sectores industriales."

industrial projects or establishments to be covered and in terms of
the particular items of information to be compiled. Some adjustments
or compromise solutions might be called for on the part of both of
the approaches. It would be worth noting in particular the possibility
that, once the integrated, dual approaches were initiated, most of the
industrial projects considered for the Pre-investment Project Profiles
can be earmarked as major future candidates for the Establishment
Profiles. This possibility may at the same time open a new channel
through which the other type of proposal, as set forth under Agenda
Item b-4, could be put into operation on a sustained basis.

ANNEX III

INDUSTRY FILE SYSTEM

(Provisional Agenda Item b.3)

A. Background

This proposal, tentatively termed the "Industry File System",
represents an idea that is yet in embryonic form but is believed to
have particularly good possibilities for implementation on a sub-
regional basis.

The proposal reflects upon one of the serious limitations of
ordinary national "industry statistics" as noted in the main text of
this Aide Mémoire (see II.A.4). The proposal in its preliminary form
is in part inspired by certain characteristics of the current business
data-bank practice in the United States, in particular the roster-system
of U.S. industrial establishments recently developed by Dun and Bradstreet
Inc. The scheme to be applied in the developing countries would differ
in detail from that of Dun and Bradstreet but would share at least one
basic principle. In brief, the principle consists in creating a new,
simplified, but highly flexible, version of "census of manufacturers"
that can supplement those nameless statistics offered by the conventional
national censuses of manufacturers, and that can facilitate a number
of actually important tasks connected with industrial programming, project
evaluation and project implementation.

B. Outline of the tentative scheme

The basic problem confronting the idea of the Industry File System
has been to reconcile what is desirable for industrial programming
purposes (that is a great deal of information) with what is actually
feasible (that is precious little). Accordingly, the proposal is intended
to structure a <u>minimum system</u> that can be useful even in its earliest
state where only a small group of countries may be ready to participate
in it.

A tentative scheme is described as follows:

1. **Coverage within each participating country**

   Both of the following categories may be covered:

   a) Actual industrial establishments considered as falling within the "modern" sector (i.e., excluding very small establishments); and

   b) Potential industrial establishments (or projects) as identified at a certain range of implementation stages (e.g. ranging from the stage at which the project can be considered as "bankable" to that of commercial production).

2. **Minimum required information on each establishment or project**

   A key characteristic of the Industry File System is that it utilises only an extremely limited amount of information on individual establishments and projects, concentrating on a reformulation of a few of those already familiar items collected through existing systems (industry license bureaux, project bureaux, development banks, etc.). Tentatively, the following may be suggested as the minimum:

   a) Location of establishment — country, district and town;

   b) Establishment status — independent enterprise; branch-establishment; subsidiary; etc. (coded);

   c) Year of reference;

   d) Specific products being produced (actual establishments) or expected to be produced (potential establishments): — one to five major products may be specified by, e.g., SITC 5 digit code (or ISIC-SITC combined detailed industrial commodity classification code);

   e) Year in which commercial production was first started (actual) or expected to be started (potential); for potential establishments, a gradation (A, B, C, ...) may be attached in order to indicate roughly the current stage of implementation: e.g. A (approaching the stage of bankable project); B (adopted as bankable project); C (construction underway); D (initial pilot operation); etc.;

f) Total employment (approximate number) - anticipated
size of employment in the case of potential establishments;

g) Gross annual sales (approximate value or quantity or both)
- a working estimate will suffice for potential establishments.

In addition to the above "minimum", the following items could
be considered for inclusion on an optional basis:

h) Ownership mix - private/public; domestic/foreign;

i) Gross (annual) investment;

j) Significance of raw material imports and product exports
(gradation A, B, ...).

3. Continuity

To be compiled at least annually; preferably twice yearly.
It is important that the Industry File System not only has
good cross-sectional coverage but is also-up-to-date and offers
inter-temporal continuity and comparability.

4. Participating countries

The greater the number of participating "related" countries,
the greater the usefulness of the System. The most immediate
use of the system in its early stages will arise in the context
of sub-regional industrial co-operation. A group of countries
with a mutually recognized interest in industrial co-operation,
and whose base of industrialization is yet relatively small,
should provide the most practicable test case. Specifically,
it is considered that countries in the East African sub-region
and in the Central American Common Market will be appropriate
for an ititial application of the System.

5. Retrieval system

The information suggested above is simple enough to be stored
and retrieved in machine-readable form. One of the merits
expected of the Industry File System is that it is eligible
for a computer-based data-bank approach, which in turn ensures

high-speed processing but also a high degree of flexibility
in the retrieval and analysis of the filed data which will
be carried out upon various users' requests.

The filed data on industrial projects and establishments
will be treated as confidential material, available only
for uses agreed on by the participating governments. A
central unit in charge of data analysis and processing
(data bank) could be structured so as to generate a special
predigest of the entire File in response to the needs expressed
in each particular request.

C. Possible uses

Despite the severe limitations on the actual quantity of
information to be collected from each participating industrial unit,
the Industry File System should, even in its early stages, lend itself
to a variety of uses, on account of its data bank characteristics. As
a tool for industrial programming, it can offer important advantages
which the ordinary industry statistics cannot; namely,

- Assembly and retrieval of up-to-date information, on both a
  national and regional basis on the existing industries as
  well as the new industries expected to emerge;

- Application of an identical, or at least parallel, data format
  to all participating countries;

- Spatial identification of specific establishments;

- Information on the product-mix aspect of industrial development;

- Flexible framework in which a number of potentially useful schemes
  for classification and aggregation are to be applied.

Clearly the System ought to be used, for its best application, in
conjunction with the other types of industry statistics and other kinds
of programming data as required. The principal anticipated pay-off of
the System will be associated with several phases of industrial pro-
gramming; in particular,

1) Market identifiers - A directory-type application, which can
   help to locate specific enterprises which are either potential
   buyers of the products of a given project or potential suppliers
   of the production materials it needs.

2) <u>Regional or sub-regional co-operation</u> - Identification of specific industries or projects, across national borders, that might be considered for development under some form of co-operative arrangement; an industry map which will permit the dovetailing of individual countries' development programmes and the elaboration of import substitution and export promotion strategies on a regional or sub-regional basis.

3) <u>Surveillance on the implementation phase of industrial development programmes</u> - Identification of troubled industries and troubled projects; assessment of investment maturation lags. (This applies in particular to the time-series component of the Industry File System.)

4) <u>Current-year industry survey</u> - Identification of both newly emerging and declining factories and product categories for the purpose of trend analysis; assessment of capacity utilization (e.g. in terms of changing output of given establishments, start of production in new projects, bankrupt establishments, etc.) and capacity expansion (e.g. in terms of start of construction for new projects, changing product-mix of given establishments, changing size of employment in given establishments, etc.).

5) <u>Industrial forecasting</u> - Presentation of intentional statistics in the form of a list of projects actually being considered for implementation; checking the plausibility of conventional quantitative trend extrapolations against the chronicle of major establishments and projects.

D. <u>Role of the Working Party</u>

The Industry File System in the above suggested form is still a preliminary conception. The details of its possible working format will require careful examination of the conditions prevailing in various developing countries to stimulate the initiation of necessary actions for

their participation in the System. The pre-sessional field visits
of a special UNIDO consultant in the East African and the Central
American regions were intended, among other things, to introduce
this new concept to a number of persons in those countries who might
represent either a potential working force for its implementation or
the major potential users of the System..

Obviously, this proposal could best be tested as a pilot project
in its minimum version, with particular emphasis on its usefulness for
the common-market type sub-regional country groups.

The November session of the Working Party may be invited to
provide the first technical and institutional feasibility study on
this subject, rather than a straightforward argument on an "accept
or reject" basis. If the basic principle of this proposal is found
acceptable, a detailed programme for technical research and institutional
arrangements should be laid down by the Working Party. 1/

1/ A study surveying the current practice of business data bank in the
United States, especially in the field of corporate planning, will
be submitted by UNIDO to the November session of the Working Party.
This background material will, it is hoped, serve to pinpoint a few
major technical elements to be taken into account in elaborating
and utilising an IFS-type data bank scheme.

ANNEX IV

TIME PROFILES OF INDUSTRIAL PROJECT IMPLEMENTATION

(Provisional Agenda Item b.4)

A.   Many developing countries lack the necessary experience in
programming and controlling the implementation of their industrial
development projects.   Serious delays, over-run costs and under-
utilized scarce resources in the implementation phase of projects
are well-recognized as contributing to a general impediment to
industrial development in developing countries.   UNIDO has long
devoted attention to this aspect of the problem of industrial
programming, mainly in connexion with its technical assistance
programmes.

The supporting research being undertaken in this area constantly
points to the desideratum in terms of necessary reference data.
A new, forward step is needed to assist industrial programmers in
their daily efforts, particularly in (i) checking the efficiency of
implementation of specific projects under execution, (ii) evaluating
the time schedule, resources, and costs proposed by foreign
contractors or consulting firms for the execution of industrial projects
in developing countries, and more generally, (iii) assessing the direct
and indirect economic costs being incurred by delayed or troubled
project implementation.

The proposal under consideration is currently at a preparatory
stage.   The actual collection of relevant data in the form of "Time
Profiles of Industrial Project Implementation" is expected to start
early in 1969.   The potential working linkage of this project with
some of the proposals to be considered by the Working Party has already
been pointed out in Annex II of this document. (See especially the
third and last paragraphs in Annex II.)

B. General description

In brief, the "Time Profiles" are intended to provide a collection and analysis of the information concerning project implementation, including particularly important programming parameters such as specific tasks, time durations, resources and costs required to execute various industrial project components. Both actual completed projects and projects being implemented will be studied for this purpose.

It would be desirable if the Time Profiles study could be designed so as to include the Benchmark Project Implementation Plan as envisaged for each given industrial project to be surveyed. In this connexion, certain types of networking procedures might be used to great advantage, such as those prepared and being used by UNIDO to cope with the conditions prevailing in many developing countries. 1/ In addition, the information on the delays encountered in implementation and their effects upon the investment cost will be included. Besides quantitative data, information on the organisational and technological problems encountered should also be provided. Of course, the specific industrial projects to be surveyed will not be identified by name.

In order to permit meaningful comparative evaluation of various cases to be studied, it would be desirable to have a specially designed compilatory framework that can be applied more or less commonly to different cases. Such a framework ought to be established with due regard to the complexity of the problems involved in various aspects of project implementation. Also, the compiled data will lend itself to flexible uses for the various purposes connected with project

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1/ A project implementation plan, or a time-phased plan of action for executing a project, should indicate the sequential relationships and interactions between project activities (or components) and thus provide a set of definite time schedules for respective project activities. The networking procedures adaptable to the conditions of developing countries are described in UNIDO/IPPD/3: "Procedures for Programming and Control of Implementation of Industrial Projects in Developing Countries"
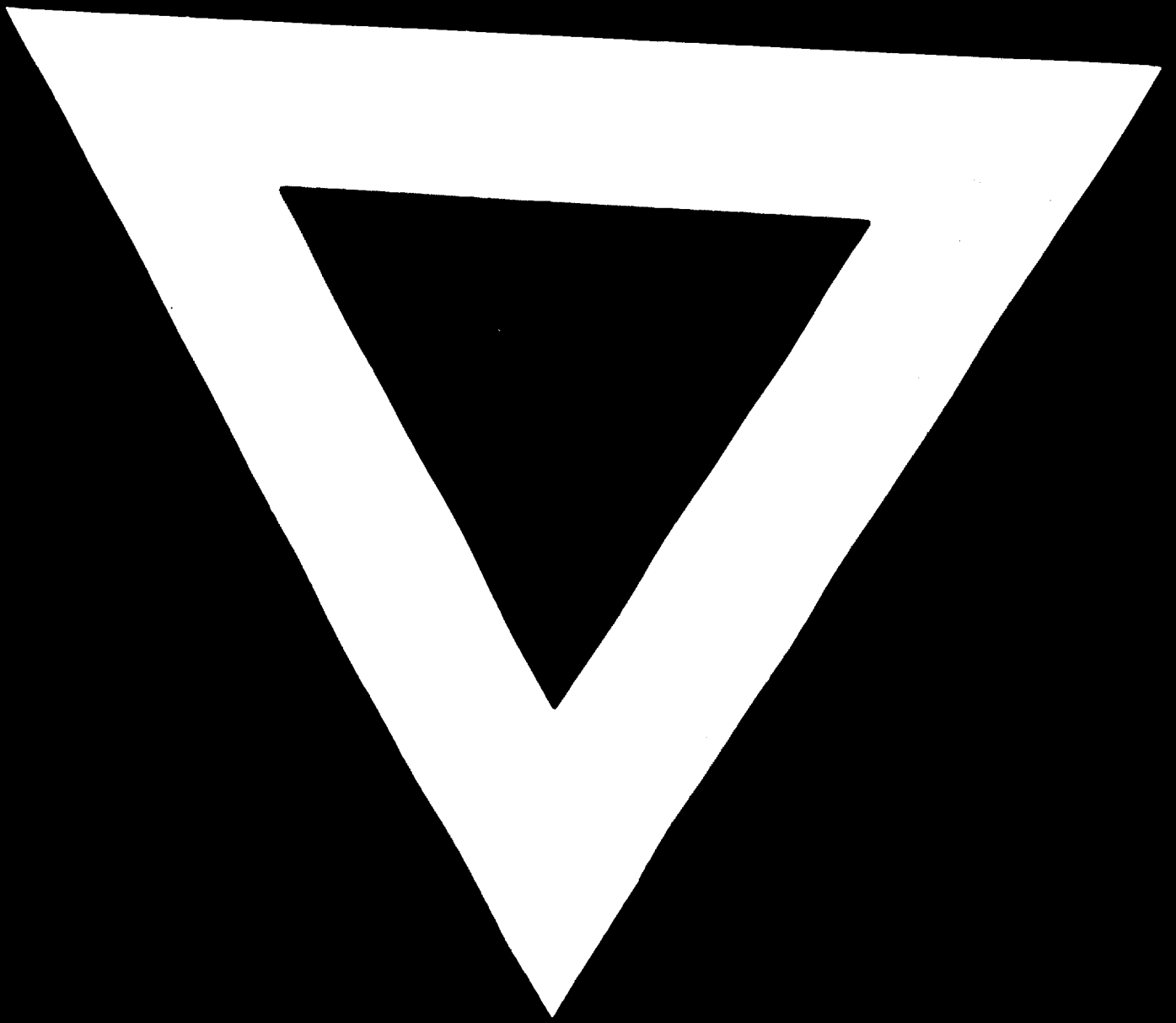
programming and implementation, if the results of each case study,
properly evaluated and summarized, is assembled in the form of a
"Time Profiles" series - a dissemination format rather similar
to that of the Profiles of Manufacturing Establishments.

During its initial phase, the compilation of this series may
have to be limited to no more than a few dozen industrial projects
selected from only a few countries. The working groups which will
be organized for the compilation of other types of programming data
series, especially the Pre-investment Project Profiles and the
Establishment Profiles, may be instrumental in locating the sources
of the required information for this series as well. When this
possibility materializes, the Profiles-type approach to reference
industrial programming data may be unrolled in "triple", rather
than "dual", dimensions.

C. Role of the Working Party

A pilot research study is currently underway in UNIDO, purporting
to establish an appropriate working methodology for this proposal.
It is expected that at least a preliminary result of this study will
become available to the Working Party at its November 1968 session.

The Working Party will be invited to evaluate in detail the
proposal as generally described above and its specific technical
aspects as may be exposed by the above-mentioned pilot research. It is
hoped that the Working Party will then put forward recommendations and
suggestions as regards specific methods, tasks and organizations to be
set up to achieve the main objective of this proposal.

74.10.17