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PROJECT IDENTIFICATION SERVICES -- PROPOSED ORGANIZATION  
AND STRUCTURE

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## PROJECT IDENTIFICATION SERVICES - PROPOSED ORGANIZATION AND STRUCTURE

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PROJECT IDENTIFICATION SERVICES - PROPOSED ORGANIZATION  
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INTRODUCTION: THE SCOPE OF PROJECT IDENTIFICATION SERVICES

1. Valuable comments have been received from UNIDO<sup>1/</sup> on the first draft of the ECA document No. E/CN.14/CAP/10, "Suggestions for Establishing Project Identification Services in Africa". Agreeing that the paper attempts to tackle one of the most pressing needs of developing countries in general and of the countries of Africa in particular, UNIDO's comments outline the scope, functions and structure of a Project Identification Service and make suggestions for international technical assistance. While this identity of views is very encouraging it must be noted that UNIDO's comments are especially designed to encourage industrial development. But in the planning of the acceleration of development of the developing economies, all suffering from an acute scarcity of skills and capital, an integrated approach to the development of all the various sectors is called for. Therefore the organization and structure of Project Identification Services is outlined for all sectors, closely following UNIDO's comments. This paper is intended to be complementary to the ECA document mentioned above.

2. It is agreed with UNIDO's comments that the shortage of soundly conceived projects is at times a much greater handicap in many of the developing countries than the scarcity of resources. This situation has an adverse effect on the flow of external resources since the extent of the availability of foreign resources - private or public - is largely a function of the known and identified investment opportunities. Thus the scarcity of soundly conceived projects and the scarcity of foreign resources often co-exist in developing countries.

3. This and therefore the disadvantage of not having well-organized Project Identification Services in developing countries is illustrated

1/ Cf. P. Sanghvi: Project Identification Service - a Brief Account of the Functions and the Structure, UNIDO, New York, August 1967.

by West German bilateral assistance as described in the paper "The Balance of Payments Adjustment Process - The Federal Republic of Germany, 1960-1966", written by Ekhard Brehmer, International Monetary Fund, June 1967 (p.20): "The flow of official bilateral capital aid to developing countries indeed might have risen more steeply had it not been for the considerable time lag between commitments and loan disbursements to the developing countries. This was due mainly to technical factors such as inadequate project preparation and the lack of co-operation between the parties involved.<sup>1/</sup> .....The large percentage of unutilized commitments and the overloading of the 'pipeline' in the first years of the Government's capital assistance programme had apparently made Parliament less willing, particularly in 1965, to continue to allocate additional funds for development aid. This situation had recently been aggravated by budgetary difficulties."

4. As the scope of Project Identification Services has also been explained in the chapter on "The need for the establishment of project identification services" of the above-mentioned ECA document E/CN.14/CAP/10, this paper only wants to suggest guidelines for setting up Project Identification Services and for the work of such Services after they have been established. An attempt is also made to give a priority scale for following the suggestions made in that document in regard to the functions of such Services.

A. THE ORGANIZATION OF PROJECT IDENTIFICATION SERVICES

1. Organization on the various spatial levels

5. In the above-mentioned ECA document E/CN.14/CAP/10 there is a chapter on "Organization, personnel and financing of the proposed project identification services on the various spatial levels" so that it is only intended to give a summary here.

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<sup>1/</sup> See OECD, Development Assistance Committee (DAC), Annual Aid Review 1965, Memorandum of Germany, Paris, 1965 (restricted), p.28.

(a) The local level

(i) Rural communities

a. Community development services

6. These services have anyhow to be organized for all the sectors, including rural crafts and industries. They are charged with the tasks of data collection, survey making, social and infrastructure project identification, elaboration and implementation. But their teams need additional training in economics or an economist as additional staff member so that they can also collect data, identify, elaborate and implement projects in the purely economic sectors. A division of labour must be established between these services, the agricultural extension services and the other local officials.

b. Agricultural extension services

7. These services have already the tasks of data collection, agricultural project identification (including marketing, storage, transport, credit, processing, etc.), elaboration and implementation. Their staff could be trained to identify projects also in other sectors such as crafts and small industries, communications, education, health and housing. Training in social project identification is only necessary if there are no community development services available.

c. Other local officials

8. In rural areas, where no community and agricultural extension services are available, it will be necessary to train other local officials in the tasks of data collection, project identification, elaboration and implementation, in both the social and economic sectors and also in the infrastructure sectors.

(ii) Urban communities

a. Industrial extension services

9. Even in small urban areas such services might be available. Among their main tasks should be data collection and project identification, elaboration and implementation.

b. Chambers of Commerce

10. There might be also professional associations functioning, like Chambers of Commerce, which should have data collection and project identification among their tasks in the trade, other service sectors and the industrial sectors. Special training will be necessary or the recruitment of additional staff.

c. Statistical services

11. These services are already busy with one main pre-condition for project identification: data collection. It may therefore be appropriate to attach project identification services to already existing statistical services, at least physically, because of the special legislation under which the statisticians must operate. Additional staff and finance will thus be required.

(b) The regional level (regions inside one country)

(i) Regional development authorities

12. Not many have been set up, as yet, in developing countries. Some have been mentioned in the above-mentioned ECA document E/CN.14/CAP/10. Their main tasks are data collection, project identification, elaboration, promotion or execution. Only in very small countries it may not be necessary to set up regional development authorities because the services they render can be supplied by the national institutions. Federal governments may set up such authorities in each of the individual States, or for a group of them, other governments could use the provincial or regional level for this.

(ii) Provincial or other regional services

13. If there is no possibility to set up a regional development authority yet, project identification services could be established in existing provincial or regional services, preferably attached to statistical services, because, as mentioned above, project identification depends on data collection, i.e. on all the data which are already collected

and additional data which have to be collected especially for project identification.<sup>1/</sup>

14. Project identification services can also be provided by the agricultural and industrial extension services or by special multi-disciplinary teams which are established on the regional level. But in this case, they must be especially staffed and equipped to identify projects also in the services, social and infrastructure sectors.

(c) The national level

15. How are projects identified in developed countries? It appears that a very large proportion of new projects is undertaken by the existing enterprises which have their own research and development departments entrusted with the responsibility of identifying projects. A small number of new projects are initiated by non-corporate entrepreneurs who take the assistance of consultant firms in identifying projects, especially in preparing feasibility studies. It is the absence of large established enterprises and consultant firms in developing countries which creates the bottleneck in identifying the projects. It is apparent that this lacuna, at least for a temporary period, will have to be filled in by the public sector in developing countries.

16. Thus, as regards the public sector and also as regards the private sector, to a certain extent, the planning units of the ministries and of the other government agencies must be charged with the task of project identification. In most cases, even if ministries do not have a planning unit yet they do have a statistical service to which the project identification service could be attached. As efficient general and sector planning requires the establishment of planning units in the ministries and other government agencies, one of the main tasks of these planning units will of course be data collection and project identification. E.g. in Ethiopia

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<sup>1/</sup> Cf. ECA document no. E/CN.14/CAP/10, chapter on "The various project identification methods which can be used on some of the spatial levels and for the different social and economic sectors".

planning units are the main channel of communication between the Ministry of Planning and Development and the operating ministries and agencies. They receive information from the Ministry of Planning and Development about planning objectives which give them the guidelines to prepare projects and programmes for incorporation into the national plan. They must in turn transmit to the Ministry of Planning and Development information which the Ministry of Planning requires to formulate the plan and they must provide periodic reports on these programmes to the Ministry of Planning and Development for inclusion into comprehensive reports covering the progress of national plans. Other main functions and responsibilities of a ministerial planning unit in Ethiopia are:<sup>1/</sup>

- (a) To promote in its field new investment projects, whether to be financed from public or private resources;
- (b) To gather information on economic and social requirements and activities in its field;
- (c) To prepare, on the basis of directives issued by the Ministry of Planning and Development, a detailed analysis of the requirements in its field for inclusion in each proposed five-year or longer-range development plan;
- (d) To receive from each designated provincial representative of its ministry or government agency proposals for inclusion in the annual recommendations of its ministry or government agency (see paragraph (e) below), after each provincial representative has consulted the Governor-General of his province on the formulation of such proposals;
- (e) To prepare a list of recommendations of development projects in its field for the following fiscal year and to submit such recommendations to the Ministry of Planning and Development together with a proposed method of financing each project,

<sup>1/</sup> Cf. Imperial Ethiopian Institute for Public Administration: Suggestions for a Planning Manual, Addis Ababa, 1967, mimeographed.



an explanation of the role of each project in the wider development programme, and a list of priorities;

- (f) To co-operate in the preparation of a development expenditure estimate based upon the annual programme approved for submission to both the Ministry of Planning and Development and the Ministry of Finance;
- (g) To follow up, after final enactment of the annual programme and the annual budget by Parliament and the Emperor, the implementation of all projects approved in the field of its ministry or agency;
- (h) To ensure the preparation of quarterly progress reports, in financial and physical achievement terms, by units directly responsible for the execution of projects or for the control of contractors, and to consolidate such reports for submission together with such recommendations as might be required to the Ministry of Planning and Development;
- (i) To strictly follow the established planning and budgeting time-tables.

17. Some ministries and other government agencies might have already sufficient economists and engineers on their staff for manning their planning units but most of them will have to recruit new staff for this purpose. Work for some steps in project development, like preliminary technical requirements studies and technical feasibility analyses could be done by technical agencies (as e.g. in Ethiopia) or by public or private industrial research, development and consulting institutions (as e.g. in Tanzania, Morocco, Libya, etc.) but the bulk of the work will have to be done by the planning units of the ministries themselves. The final aim should be that they are so well staffed and equipped that they can also serve the private sector. In very small countries one development authority for the whole country might be sufficient, organized for instance, as in Puerto Rico.

18. In many developing countries the various stages of project identification are still executed in a haphazard manner and inefficiently by executive departments of the various ministries. Most of these ministries do not carry out a step-by-step investigation but hire an expensive foreign firm to carry out a feasibility study. Often it is necessary to hire more than one firm for cross-checking the results. Any such studies are generally conducted only for government projects in very few sectors and regions. No systematic approach in project identification is thus assured. It is therefore essential that each developing country should set up one or more project identification services for both the public and private sectors, preferably one unit for each major sector of activity. The private sector could be served by one well-staffed and well-equipped development board, serving all types of private activity.

(d) The sub-regional level (multinational level)

19. The importance of multinational projects for small countries arises from a simple barrier in the form of the small size of the national market. A multinational project often becomes imperative because strategic raw materials and fuels required for a project are distributed among a number of countries. A project may require a volume of resources beyond the capacity of an individual country and can only be executed by pooling financial, technical and managerial resources of a number of developing countries. Very few of such projects are undertaken at present. There is great scope for identifying such projects in Africa, East Asia and Latin America. A distinct project identification service can alone explore the full potential for the multinational projects.

20. Institutions which could provide such a service have been mentioned already in ECA document No. E/CN.14/CAP/10, para.17. The ECA Industry Division has done a lot of work already for establishing such institutions as sub-regional Industrial Information and Promotion Centres which should have, as one of their main tasks, project identification and also data collection, elaboration of projects and promotion of their implementation.

21. The question is only: how will non-industrial projects be identified? It is suggested that these centres should be established for the identification of all economic, social and infrastructure projects, with the name of "Economic and Social Information and Promotion Centres" or "Feasibility Analysis Centres". They could serve also as "project exchanges" as suggested in para. 19 of ECA document E/CN.14/CAP/10. Sub-regional projects can be found not only for industry but also in the following sectors: agriculture,<sup>1/</sup> manpower and education, mining, power, transport, communication, health, trade, tourism, banking and other services.

(e) The regional level (continental level)

22. On this level the existing institutions such as the ECA, the OAU and the African Development Bank in Africa, the ECLA, the OAS and the Inter-American Development Bank in Latin America and the ECAFE, the Colombo Treaty Organization and the Asian Development Bank in Asia should have project identification as one of their main tasks.

23. Work for standardization (see paras. 41 and 42), also for quality control (e.g. export quality control), safety and sanitary measures, weights and measures, statistical and other information, transport and communications systems, traffic regulations, testing procedures, etc. should be done on this level or on the world-wide level. But also on the sub-regional and national levels standardization work can be done to great advantage.<sup>2/</sup>

(f) The world-wide level

24. It is mainly the United Nations family of organizations which can identify projects in all the economic, social and infrastructure sectors.

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1/ Cf. R.v. Gersdorff: "Proposals for Inter-regional Agricultural Planning in Africa" ECA/German Foundation Joint Seminar on Problems and Approaches in Planning Agricultural Development, Addis Ababa, 16 October to 7 November 1967.

2/ E.g. in Ethiopia the Battelle Institute (consulting engineers, Frankfurt, W. Germany) is working also in this field, not for project identification and elaboration alone.

But in some fields, such as e.g. the placement of personnel, world-wide institutions are still missing.<sup>1/</sup> The technical and capital assistance rendered by the United Nations family of organizations and the individual donor countries should be well co-ordinated and clearing house exchanges established in regard to project identification.

2. Organization according to type and size of activity

(a) Small-scale enterprises

25. The identification of small-scale projects is usually in the domain of agricultural and industrial extension services and of community development services. These services should not only cover the functions of a project identification service but should also supply the final project reports including blueprints to entrepreneurs.

(b) Medium- and large-scale national enterprises

26. Medium- and large-scale national projects will be mainly in the following sectors: agriculture, animal husbandry, forestry, fisheries, industries (size according to size of country), transport, communications, power, housing and building (including water supply, sewage services), Mining, education, health, trade, tourism and other services.

(c) Multinational projects

27. As stated above in para. 19, it is necessary to establish institutions for the identification of such projects, especially for regions where there are various small countries, as e.g. in the various African sub-regions: West, Central, East and North Africa. Multinational projects can be identified in all the economic, social and infrastructure sectors.

3. Internal structure

(a) General structure

28. The two major objectives of a systematic and logical development of project identification and elaboration are first to conduct a thorough

<sup>1/</sup> Cf. R.v. Gersdorff: Proposals to Establish an International Placement Service (I.P.S.), in CAPITAL, Calcutta, 13 April 1967, and in International Development Review, Washington, D.C., June 1967.

investigation and analysis of the commercial, economic, social, technical and financial aspects of projects and second to ensure that financial commitments are made in the course of project development only on a step-by-step basis as the soundness of each additional step is proven by the results of the investigation of the preceding step. While the former's objective is universally recognized, the latter is often overlooked, in practice. This is especially important in the last phase of the project formulation viz. the final project report, including the technical blueprints, which usually accounts for 5 to 15 per cent of the total cost of the project, so that avoiding premature commitments is an important element in working out a logical course in project development. With these objectives in mind, the following sequence of project development may be suggested for developing countries:

1. Data collection;
2. Preliminary general identification: the finding of project ideas;
3. Preliminary surveys of the potential markets;
4. Preliminary technical requirements studies;
5. Feasibility studies:
  - (i) Commercial profitability analyses and national and sub-regional economic profitability and social desirability analyses;
  - (ii) Technical feasibility analyses;
6. Bankable project reports;
7. Evaluation of the bankable project reports;
8. Final project reports including blueprints.

29. The first phase is the collection of data on all the spatial levels mentioned above in section 1. Evidently, without the collection of appropriate information no projects can be identified. The second phase is the finding of project ideas on the basis of the collection of data

by the project identification services. Project ideas may also arise in the mind of the entrepreneur or the technician or the manager or any other person in the private or public sector.<sup>1/</sup> The third phase is to undertake the preliminary market survey, for unless a substantial market does exist, there is no need to spend the money on a subsequent phase. A fourth phase specially recommended for developing countries is to secure the technical requirements study which is designed to obtain a competent account of what a country needs to have such an enterprise in terms of the supply of inputs, alternative processes of production and approximate costs. The technical requirements study may cost up to 1 per cent of the total project costs. The fifth phase of the feasibility study is undertaken only if the broad comparison of technical requirements with the local resources data (collected previously) warrants it. The feasibility study is designed to find out the commercial profitability of the project and the gains expected from it for the country as a whole as well as the technical feasibility of the project. If the feasibility study establishes that the project is feasible as well as desirable, the sixth phase is to prepare a bankable project which not only incorporates the findings of the feasibility study but also includes the detailed financial requirements of the project at the construction and the manufacturing phase, the sources of finance, the structure of management including the envisaged pattern of staffing, training of personnel, the proposed technical and/or financial collaboration with foreign enterprises, fiscal and tariff implications, etc. The bankable project report is then evaluated by an independent agency (independent from those who have made the previous studies) or an independent group comprising competent personnel.<sup>2/</sup> Once the project is

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1/ See chapter "Suggestions of the public submitted to project identification services" in ECA document E/CN.14/CAP/10, page 43.

2/ Complete independence may often not be feasible because most development banks are public institutions and are therefore subject to governmental and parliamentary control.

approved after a careful and competent scrutiny, the preparation of the final project report, which includes engineering, services, is commissioned.

30. The first task in designing the project identification service is to define the phases of the sequence of the project development that need to be included in the proposed service. It is evident that the preparation of the final project report is excluded because the objective of the service is not to formulate the project in its entirety and because the preparation of the final project reports calls forth a large variety of specialized engineering services which cannot be easily combined in a single agency. The evaluation of a bankable project report is also outside the scope of this service since an objective and impartial appraisal of the project cannot be expected from the persons who themselves are involved in the preparation of the project. It is also clear that the first four phases: data collection, the finding of project ideas, the preliminary survey of the potential market and the technical requirements study should be incorporated in the proposed project identification service.

31. The main issue is then to decide whether the feasibility study and the bankable project report should be included within the scope of the project identification service. Most of the research work and the field investigations required for technical feasibility analysis, commercial profitability analysis, national economic profitability and social desirability have to be done at the local level and can be done by competent engineers, economists and sociologists without a specialist in the activity concerned, since its requirements have already been detailed in the technical requirements study. On the other hand, the lack of facilities for preparing sound feasibility studies is a widely known major obstacle to private or public investment. It therefore appears desirable on purely pragmatic considerations to include the preparation of feasibility studies within the scope of the project identification service.

32. A similar case can be made out for including the preparation of the bankable project reports in the project identification service. However, the identification of the sources of finance may present some difficulties and cannot be done without the full confidence of the private or public agency interested in the project and its willingness to share the necessary information. The development bank or corporation may be more suitable to perform this specific task. It thus seems advisable that the service in the form of preparing a bankable project report should be made optional and be offered only at the specific request of the sponsors of the project by the project identification service. In brief, the project identification service should collect the data, generate the idea, undertake the preliminary survey of the potential market, commission the technical requirements study and conduct the feasibility study as its essential functions and offer to assist in the preparation of a bankable project report only on the basis of the specific request of the sponsors.

(b) Data collection

33. Suggestions are made in ECA document E/CN.14/CAP/10 in regard to the data which should be collected for the various project identification methods which can be used on some of the spatial levels and for the different social and economic sectors (chapter B.). ECA document E/CN.14/CAP/24, "The Feasibility of Socio-Economic Data Collection on the Local and Regional Levels in Africa for Systematic Project Identification", outlines the difficulties of data collection and presentation on these spatial levels. Suffice it to state here that the collection of data and especially their presentation at the local and regional (sub-national) levels is extremely difficult in developing countries and especially in Africa. Although government statisticians have to collect data on the local level when sample surveys and censuses are undertaken, this does not mean that data collected is available at that level. Surveys and censuses are normally conducted on a sample basis for the national level, hence do not provide data at local level. Also for the regional (sub-national) level very few data are presented which can be used for



project identification. However, sample surveys can be used for project identification, even at the district and sub-district levels, provided they are made to get data with the necessary degree of precision at these levels.

34. It appears that presentation of data at the local level is not feasible. E.g. agricultural extension agents and similar staff are in most cases not of sufficient numbers in their localities to provide the necessary data. Collection of basic agricultural data does not only entail completion of data sheets. It entails also:

- (i) The use of objective techniques of measurement (for measuring area and yields), a time-consuming process in which not more than 5 fields can be covered in a day.
- (ii) Travelling to scattered villages a great distance apart and from field to field of the same holder situated 2 - 3 miles from each other (two-thirds of the day is spent travelling, e.g. under average African conditions, and only one-third in doing actual field work).
- (iii) The need to visit these holdings at the right time of harvesting which may take place throughout the village lands in a period of 3 to 4 weeks and hence a limit is imposed on what each man can do during that time before crops are harvested.
- (iv) There is also the need to collect data 3 - 4 times during one season.

In short, one enumerator can at most cover about 20 farmers in a locality, but since enumerators also have other duties to do, the number should be reduced to 10. With the number of such agents available at local level, it seems that not a sufficiently large sample can be covered to provide precise data at the local level, let alone covering all the lands in a village. Sampling is the only answer to this and at the very best data furnished can only be precise enough for the country as a whole

and its major geographical or administrative regions, only. Presentation of precise data at the local level is extremely hard to get under present conditions, e.g. in Africa. The position will no doubt be different if farmers would use suitable units of measurement, if land was cadastrally surveyed and if travelling could be made easier.

35. The amount of financial contribution that can be made at local level for financing data collection projects is very marginal. In the field of agriculture, where a considerable amount of travelling and supervision is necessary and a substantial amount of survey equipment, estimated at not less than \$25 per enumerator, is required, it is often found that surveys of this nature cost not less than \$10 per holding. Considerable funds would be necessary to provide a reasonable coverage of holdings in different localities, or in one country as a whole.

36. Special survey teams can certainly provide data for project identification in specified areas but it may not be feasible that the rest of the basic and current statistical data are furnished by these teams on a reasonable and continuing basis. Moreover, in countries with large territories the efforts of such teams may only be confined to certain areas, while the rest of the country remains uncovered.

(c) Preliminary general identification: the finding of project ideas

37. One of the most important functions of the project identification service is to generate ideas for projects on a continual and systematic basis for further exploration. All these functions have been described already in ECA document E/CN.14/CAP/10, but here a certain priority scale should be suggested with reference to that document (chapters therein):

- (i) Import substitution (C. II. d).
- (ii) Demand projections of specific commodities (C. II. b).
- (iii) Discovery of new and exploitation of known natural resources (C. I. b).

(iv) Application of inventions and imitation of innovations  
(C. I. e)

(v) Aggregate demand projections based on input-output  
analyses (C. III. a).

(d) Preliminary surveys of the potential markets

38. The first and most important of the above-mentioned methods consists in the careful examination of the list of imports into a multinational sub-region, a country, a sub-national region or a locality in order to identify those goods which are imported in a sizable quantity to form a potential market for the project. It should be noted that imports of commodities may understate the size of the market in countries with balance of payments problems on account of either quantitative restrictions or high import duties. The exceptionally high prices of a locally manufactured product may also represent the locally unsatisfied demand.

39. The second priority source of ideas are simple demand projections of specific commodities based on an assumed rate of growth of the national income and the income elasticities of demand.

40. Also the aggregate demand projections based on input-output analyses are an important source of project ideas, although lowest priority, especially for the projects to produce intermediate and capital goods and services and some of the large-scale economic infrastructure projects.

41. The above-mentioned sources merely provide the ideas which serve as a basis for conducting specific preliminary surveys for the potential markets. The first objective in such a survey is to identify a more or less homogeneous commodity and/or service and the size of the market for it. For example, shoes by themselves, do not constitute a homogeneous commodity. They need to be classified by the type of the material and style and the sizes to get a homogeneous product. Similarly, the demand for steels needs to be broken down into the types and products of steel. The citizens, whether as consumers or producers in developing countries, generally have strong "consumer's prejudice" on account of the product differentiation introduced by a variety of means including the advertisement for a group of products which otherwise constitute a single homogeneous

commodity. This is especially true in case these goods are imported from developed countries with tremendous domestic markets, characterized by an extremely high degree of product differentiation. Consequently, it will be necessary to group such products into the homogeneous commodities by means of standardization, that is, the tolerable range of substitutability of commodities. The standardization is relatively much easier to attain in the case of intermediate and capital goods than in the case of consumer goods and is absolutely indispensable to secure a market large enough to justify the establishment of a domestic plant of the minimum economic size.

42. During project selection (a subject which may be put on the agenda of the third session, Conference of African Planners) proper consideration should also be given to the possibilities of standardization. Proliferation of types and models of the same product group, imported or manufactured in developing countries, implies high prices, high replacement costs (too many replacement parts) and excessive down-time for repairs because of unavailability of parts when needed. Large savings could be effected by limiting the variety of kinds and classes of the same type of product imported or produced in those countries (reduction in unit prices, cost of maintenance and saving of foreign exchange in case of imports). Concomitantly, there would be a substantially enlarged market for replacement components because of standardizations in the replacement parts field (which is only possible with a reduced variety of models) and this in turn opens up opportunities for quantity production of spare parts which should be considered for developing countries in many industry branches: vehicles, other motors, agricultural machinery, electrical machinery, machine tools, communications and transport equipment, other equipment used by public utilities, etc. In each of these branches, there are advantages to be gained from early attention to the possibilities of standardization.<sup>1/</sup>

<sup>1/</sup> Cf. Seymour Melman: Aspects of the Design of Machinery Produced during Economic Development, in: Industrialization and Productivity Bulletin, No. 8, United Nations, New York, 1964, pp. 62-63.

(e) Preliminary technical requirements studies

43. According to the priority list, mentioned in para. 37 above, the third source of ideas for projects is the knowledge and/or the discovery of natural resources. In this respect, it is necessary to keep in mind that the existing knowledge of natural resources in developing countries, especially in Africa, is highly limited.

44. The application of inventions and the imitation of innovations in the field of commodities and processes of production are the fourth source of ideas for projects mentioned in para. 37. Since such inventions and innovations are generally likely to take place in developed countries the task of project identification services in developing countries is to keep track of such developments (e.g. by using registration cards) and screen them for their potential applications.

45. A major objective of the preliminary technical requirements study is to relate the identified homogeneous commodities to the processes of production. It is important to bear in mind that there is a high difference between the classifications of commodities (e.g. Standard International Trade Classification) and industries (e.g. Standard International Industrial Classification) used in statistical data on the one hand and the classification of the processes of production on the other hand. The number of processes of production is incomparably small compared with the number of commodities and industries listed in the former classifications. Each process of production with slight modifications is capable of producing a number of homogeneous commodities. The establishment of the link between the process of production and a number of commodities which it can produce is most important for project identification. It is only on the basis of this linkage that the technical requirements study can be commissioned or carried out.

46. The technical requirements study provides the following information:

(a) The alternative processes of production available for a given

industry and their relative merits and defects.

- (b) Different sizes of plants available for each process of production.
- (c) Requirements in terms of quantity; quality and specification of each kind of raw material, equipment, supplies, labour, fuel, power, transportation, water, waste disposal, repair and maintenance facilities, etc., for each size of the plant.
- (d) The major items of capital costs in terms of foreign and domestic currencies.
- (e) Total and unit production costs divided into operating and overhead costs.

This study will also include the information on the trend in technological development including the prospects of the development of new processes, the alternative uses of the products and the possible substitution of the product by a new product.

47. Extensive experience and high level of competence in the particular industry concerned are indispensable for preparing the technical requirements study. Only the highly senior and specialized engineers working in the industry, or in a leading firm of consultants which specializes in the industry concerned are qualified to undertake such a study. The function of the project identification service will be to select such one or more persons for commissioning the study, compare the requirements suggested in the study and the available skills, raw materials, etc., and to decide whether the feasibility study of the project should be undertaken or not.

(f) Feasibility studies<sup>1/</sup>

48. The feasibility study of a project deals with the detailed investigation of commercial profitability, national and sub-regional economic profitability and social desirability as well as with technical feasibility. It may cost up to 2 per cent of the total project costs.

<sup>1/</sup> Cf. R.v. Gersdorff: The Making of Feasibility Studies, in International Handbook of Management, McGraw-Hill Book Co., New York, 1965, pp. 463-474.

(i) Commercial profitability analyses and national and sub-regional profitability and social desirability analyses

49. The commercial profitability and national economic profitability and social desirability investigations can be carried out simultaneously as a part of a single exercise. Specific market research, especially the prospects in the foreign markets, are an important part of this exercise. Serious attention has to be paid to the feasible productivity of labour and efficiency of management in calculating costs of production and comparing them with costs of imported articles in domestic markets and with the costs of other exporters in the foreign markets. The discounted cash flow method is an important tool in calculating commercial profitability. The calculation of national economic profitability requires central parameters such as the social rate of discount, shadow prices of unskilled labour, capital and foreign exchange and indirect benefits and costs arising from external effects and impact of the project on future consumption, savings and social plan objectives. A social benefit-cost analysis is the most effective tool for calculating the national economic profitability and social desirability. The major defect in the feasibility studies currently conducted is that these studies either omit the national economic profitability and social desirability analysis altogether or treat it very superficially and that too in only qualitative terms.

(ii) Technical feasibility analyses

50. A technical feasibility analysis requires an item-by-item study of the availability, cost, quality and accessibility of all the goods and services needed for:

- (a) All feasible sizes of the plant.
- (b) Different processes of production.
- (c) Alternative locations on the basis of the local resources and requirements detailed in the technical requirements study mentioned above.

The selection of the process of production is a complicated task. One has not only to avoid both absolescent and commercially untried technologies but also to take into account the specific endowments of natural resources and factor proportions obtained in the economy. Consequently, it will be a joint decision of economists and engineers. It is imperative not to employ anyone in selling equipment and services in the work of technical feasibility investigations.<sup>1/</sup>

B. INTERNATIONAL ASSISTANCE FOR THE PROJECT IDENTIFICATION SERVICES

51. As to small-scale enterprises, the United Nations can assist developing countries in establishing and strengthening the national extension services in agriculture and industry. The assistance may take the form of providing the services of experts, training of local personnel and the supply of blueprints for small industrial projects. Blueprints can be pooled together from a large number of countries, reproduced and distributed to the developing countries which need them.<sup>2/</sup>

52. It appears that the most urgent need of the developing countries is the establishment of project identification units in the field of industry, power, transport and irrigation for medium- and large-scale national and sub-regional projects. Two forms of assistance may be suggested for international assistance. Existing Special Fund projects such as the Industrial Development Centres can be broadened to include the project identification service. Alternatively, it may be feasible to establish distinct project identification units as a new category of the Special Fund projects.

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1/ Cf. K.K. Apeadu: The Preparation and Execution of Development Projects, ECA/German Foundation Seminar on the Financing of Development Plans and Projects, Addis Ababa 24 January to 18 February 1966, Paper No. SEI/66-12, pp. 13 and 14.

2/ Cf. ECA document E/CN.14/CAP/10, pp. 16, 20, 22, 24-26, 36-38.



53. Project identification services for multinational projects do not exist at present in any region or sub-region of developing countries. Nor do any prospects for their creation by the co-operative efforts of developing countries appear on the horizon. The task here is evidently two-fold: to convince developing countries of the importance of multinational projects and the establishment of project identification services for them. This appears to be the ideal activity for the United Nations Development Programme (UNDP). In addition, there is, at present, a serious danger that there will be no such services if the United Nations do not help to establish them. Here is an excellent opportunity for initiating a new category of Special Fund projects in the form of "Economic and Social Information and Promotion Centres" or "Feasibility Analysis Centres" as mentioned above (para. 21). It is also hoped that this paper as well as ECA document E/CN.14/CAP/10 may serve as a basis for the work programme of the United Nations Industrial Development Organization (UNIDO) and the other United Nations agencies in the field of identification and formulation of industrial and other projects.

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