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PROJECT FORMULATION AND EVALUATION  
IN RELATION TO DEVELOPMENT PROGRAMMING

(Note prepared by the Secretariat)

## PROJECT FORMULATION AND EVALUATION IN RELATION TO DEVELOPMENT PROGRAMMING

A. Project evaluation not a substitute for Development Planning

1. The rationale for project evaluation is that private economic profitability is not always a useful yardstick from the point of view of overall social economic benefit. In a comprehensive development plan fully worked out in every detail, the individual projects included have been selected from the point of view of maximum contribution to the growth of the economy and other objectives aimed at by the government. In those cases no special procedures for project evaluation according to social-economic values are necessary. However, comprehensive plans are often not fully worked out; moreover many times comprehensive development plans are altogether absent. In such circumstances, it is often felt that calculations of costs and benefits of contemplated projects should include considerations with regard to the economy as a whole as well as to the overall objectives of the government. Project evaluation as a technique has been developed to introduce such considerations and to broaden the basis of evaluation of development projects.

2. Project evaluation is not a substitute for development planning, including (where appropriate) the application of programming techniques. This is so for a number of reasons. In the first place, the process of economic development is a process of structural transformation of the economy. In the African context, this means a transformation from an economy based on low-productivity agriculture, often of a subsistence nature, into a diversified high-productivity economy. The changes which will have to occur in the process of this transformation can only be indicated by an overall economic analysis, and not by any known procedure of individual project evaluation.

3. In the second place, the raising of productivity itself is only one of several objectives of the development plan. The distribution of income among different social groups or different regions of the country; the national integration of the economy; the need to retain popular support for the government; national independence or self-sufficiency - all such objectives of development policy should enter into the choice of projects. Project evaluation intends to take account of as many of these objectives in as well-founded

a way as possible but cannot be fully satisfactory in any theoretical - or practical way as long as it falls short of a fully comprehensive consideration of the economy as a whole and its preferred future course.

4. In the third place, project evaluation itself depends on data which must be supplied to the evaluator from the frame work of overall government objectives and priorities. For instance the choice between project A, which is of lower productivity but quicker in showing its returns, and project B, which is more productive but slower yielding, depends on the rate of time horizon of the planner. If the government insists in its planning on quick returns, perhaps because it is highly conscious of the urgency of present poverty or because it has to be re-elected in a few years' time, the project evaluator has to work within the framework of this time preference. The same applies to the choice between a project C which is highly productive but also very risky and project D which is less productive but more certain in its yield. The project evaluator cannot rank these two projects, until he is told what degree of risk it is legitimate to run; but this is part of development planning, not of project evaluation.

5. In the fourth place, the calculation of benefits will strongly depend on the assumed size of markets and the assumed course of future prices of the product and the cost factors of the project. Here the project evaluator depends again on the development planner to supply him with the economic background information which he needs. If the evaluation is based on market prices, future prices have to be projected (if present market prices or present size of markets are assumed to continue, this also amounts to a projection, and one which is particularly likely to be wrong in the context of a developing economy). If market prices are discarded and replaced by values reflecting social costs and benefits (whether called "accounting prices" or "shadow prices"), this adjustment from market prices will reflect judgements of the relative scarcity of various factors of production and products, including changes in

these scarcities during the life time of the projects. Such judgements can generally more reliably be formed in the context of a comprehensive plan.

6. In the fifth place, the interdependence of economic factors is such that nearly always the choice of project A over project B also implies that project C should be preferred over project D, project E over project F, etc.; whereas in the case of project B being preferred over project A, all these other choices would also be reversed. In other words, a real project evaluation cannot be conducted simply in terms of project A versus project B, but rather in terms of the combination A plus C plus E, etc., versus the combination of B plus D plus F, etc. Thus, it is project "packages" rather than individual projects which often are the basic unit of evaluation. But as soon as we think in terms of a "package" we shall obviously move much closer to developing programming. The "package" is likely to include complementary developments in many different sectors: transport plus power plus industry plus agriculture, and is further likely also to include both public and private investment. This makes evaluation more difficult since the type of benefits, the type of costs, and even the principles of computing benefits and costs are not the same in different sectors of the economy. Evaluation of packages rather than individual projects is one step nearer to comprehensive planning, while the choice between packages requires standards of measurement to be derived from overall objectives.

#### B. The Crucial Role of Project Evaluation

7. If project evaluation is not a substitute for development programming what is its value? It has already been suggested above that it is a compromise though mostly a very useful one which, in those cases where a fully detailed comprehensive plan does not exist, either provides a link between concrete investment projects and the overall projections of insufficiently detailed plans, or introduces to a certain extent

considerations of general economic well-being into the evaluation of projects which otherwise would have been determined subjectively or on the basis of one or two isolated aspects only, such as, capital cost or private economic profitability.

8. Within the framework of sectoral distribution of investments, determined by a plan couched in general terms only, or by a development strategy chosen arbitrarily or based on assumptions concerning future markets and future scarcities, only concrete projects can express the aims of the government and lead to economic development. Project evaluation without strategy and policy guidance has only limited value, but the best strategy, the best development policy without proper projects would be even more useless to a country.

9. But this is not all: By their nature, development targets, a development strategy and a good development policy cannot be formed by inspiration. They can arise only from a study of concrete project data and development possibilities as expressed in projects. Thus, project evaluation is at the same time the raw material and the translation of development policies. That country is likely to put its limited resources to the best use where this mutual relationship is most developed, where the policy makers can saturate themselves with the data of the project evaluators, and where they in turn can give the direction and assumptions which the project evaluators need to make the optimum choice of project combinations.

10. It is therefore in ensuring the realistic foundation as well as the best possible expression of development policies that the main task of project evaluation lies. Where no suitable projects exist, and where none can be formulated in the time and with the resources available, the policy (even if by inspiration it should be right) or a plan is useless and a second best or third best policy must be substituted which can be translated into projects. Where the projects are available and can be

formulated, project evaluation is necessary in order to make a rational choice among projects.

11. The formulation of projects evaluated as sound is also necessary, in addition to leading to the best use of domestic resources, to attract assistance from abroad. The various agencies which are sources of external finance and assistance for under-developed countries operate often on the basis of specific projects, even though the need to judge the development policy or programme as a whole is also usually recognized. Hence the presentation of sound projects and the presentation of evaluation data in accordance with the requirements of the various financing institutions is a precondition for receiving assistance. This is true not only of external, but often also of domestic sources. The formulation of sound and properly evaluated investment opportunities in the form of concrete projects is likely to actualize potential sources of finance which would otherwise have gone into consumption, investment abroad or unproductive forms of saving. As usual in economic development, the relationship between investment and finance is of the hen-and-egg variety. Investment is limited by the finance available, but the finance available also depends on the concrete investment opportunities which are presented.

12. Due to the arbitrary elements - from a theoretical point of view - in the techniques of project evaluation this method becomes more accurate as the projects among which a selection is to be made become more similar in nature. For instance, while project evaluation is somewhat hazardous when it is a question of deciding whether to give priority to transport development as against health or education expenditure or as against industry, project evaluation becomes much more reliable when it is a question of deciding whether within a given allocation to transport priority should be given to railways, roads or water transport. Project evaluation can become even more accurate if it is a question of deciding whether a given allocation to railway development should be devoted to region A or region B; or when it is a question of deciding whether a railway line should be single-track or double-track, or whether traction

should be diesel or steam.

13. The reason for this is fairly obvious. In deciding between transport and industries, different judgements as to future markets, future prices, etc., will lead to widely different results concerning the ranking of projects in these two sectors, while additional disturbances are caused because the results of investments in one branch will depend very much on developments in the other. However, if it is a question of diesel versus steam traction for the same railway line, the same market projections, the same assumptions concerning the future development of the region served by the railway, the same assumptions concerning future operations, etc., can be made for both. Therefore errors or divergencies of judgement would not affect the relation, or comparative ranking, of the alternatives considered by the project evaluator.

14. This also indicates the importance of close connection between project evaluation and project formulation. The contribution of project evaluation becomes greater to the degree that the field of choice is narrowed as has just been explained. Therefore project evaluation makes its best contribution if it has a maximum choice among different ways of carrying out a fairly closely defined purpose. If the project evaluator is faced with single projects which he must evaluate on a take-it-or-leave-it basis he is hampered in the application of his tools. His tools will be put to best use if he must choose between alternatives and can suggest changes or adjustments to the project, i.e., the substitution of a different technology, a change in scale of the project, a different location for the project, etc.

15. This illustrates the great importance of a close working relationship between those who formulate projects and those who are expected to evaluate them. In the case of public projects, those who formulate projects will normally be working in individual government departments, such as the Ministries of Transport, Health, Industry, etc.,

while those who are asked to evaluate projects will be in the Ministry of Finance, or the Planning Commission or in a similar more general department. The need for a close link between project formulators and project evaluators therefore translates itself also into a problem of administrative co-ordination between the various groups and departments involved.

C. The Factor of Known Projects and Pre-Commitment  
of Resources

16. The relationship between individual projects and the development plan is two-fold, as has been indicated above by the reference to projects being both the raw material for and the translation of development policies. Any development plan must, in addition to a list of projects under construction, start off with an inventory of known projects which may exist in some form or other, either as proposals or in the files or drawers of government departments. These known projects represent investment possibilities and a first step is to examine them regarding their distribution over the various sectors, their possible complementarity, their possible improvement by forming related packages, etc.

17. Having thus constructed a tentative initial investment programme based on known projects, a two-fold task is presented: (a) to study this initial programme in the light of the general objectives, targets and possibilities laid down by macro-economic studies or by general policy directions of the government; and (b) to compare this plan with available resources, both in the over-all sense and in the sense of specific resources and specific shortages. From this confrontation of envisaged projects with known available resources and general objectives and priorities, it will emerge that the list of envisaged projects will have to be modified, and that it appears desirable to invest in sectors for which no or an insufficient number of projects

are listed. To correct the last of these two situations, however, is a longer-term proposition and constitutes an argument to start the project preparation for development plans well in advance of the initial date of the plan. It is also an argument for having a reserve list of projects available even in excess of currently known resources.

18. At any given point of time, the situation is further complicated by the fact that available resources are often to a large extent pre-committed to the completion of projects taken over from the previous planning period, or to the completion of projects which are closely complementary to those recently completed. Thus, the project selection of today's development programme determines the allocation of resources not only for the current programme, but beyond that for the next planning periods.

19. In economies where available resources are limited, and where attempts to develop have been made in the previous periods, the percentage of pre-committed resources may be very high and the percentage of "free" resources correspondingly low. It is clear that in such circumstances project selection and proper project evaluation is even more crucial, since the abandonment of a project already started is likely to result in serious loss. On the other hand, the danger to continue with an uneconomic project, or to try to rescue a bad project by extending it or adding complementary projects is great also. Thus, the factor of pre-commitment means that the appearance of freedom and mobility of resources which may be suggested by macro-economic studies, and by discussion of priorities among projects may be largely illusory; project evaluation may at best affect only a proportion of "free" resources or relate to the allocation of resources in a more distant future.

20. It may be noted that the difficulties and limitations to planning arising from this factor of pre-commitment are diminished to the extent

that planning becomes more comprehensive and brings into account all available resources and all productive activities in the economy. It is also less important in an economy which has already taken off, where resources are increasing and earlier projects are bearing fruit: in such circumstances the proportion of "free" resources in relation to "pre-committed" resources is likely to be much higher.