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Discussion Paper No. 16

Projections, Projects, and Procedures: Some Aspects of Planning
for Implementation

by
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November 1965

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Projections, Projects, and Procedures: Some Aspects of
Planning for Implementation by R. H. Green

I.

Economic development planning is implementation. A Plan, in and of itself, has no more (and usually less) significance than a similar policy and possibility oriented research paper by an independent economist. A Plan which includes neither projects and policies through which to operate nor a firm state commitment to its operation is more akin to the stock New Year's Day budget resolutions than to serious economic policy-making.

The need to emphasize this platitude stems partly from observing that in fact politicians, civil servants and economic technocrats in Africa and South Asia tend to look on plan formulation and implementation as disparate processes rather more often than as integral and integrally linked parts of the development planning process. Even more, however, the need arises because even when such a unity is accepted its logic is not consistently applied either to plan formulation and revision or to implementation institutions and procedures.¹

A comprehensive plan represents a national resource allocation programme for a specified time period. A partial plan represents allocation of specified (presumably largely public sector and at the extreme public investment only) portions of national resources with

¹These comments are based on observations in Burma, Malaya, Singapore, Ceylon, Thailand, Ghana, Nigeria, Kenya, Uganda, Tanzania, the Cameroon Republic, the Sudan, and Ethiopia. A more detailed analytical examination of specific features of the Ghana, Nigeria, Kenya and Tanzania Plans appears in the Journal of Modern African Studies Vol. 3, No. 2, 1965, under the title: "Four African Development Plans".

with greater or less formulation of relationships with the mechanisms expected to allocate the balance of available real resources.

To be operational any budget must provide a system of defineable and quantifiable categories, a set of criteria for decision making which can be applied to concrete cases, a structure of responsibility for taking decisions and for taking them according to the criteria and within the categories set out, and a systematic and speedy information channelling set to allow central evaluation of the sum of individual decisions and decentralized receipt of adjustments to the category or decision criteria set. Only in such a framework can one meaningfully talk about-much less test for - feasibility and consistency whether prior to physical implementation or during the course of it.

In terms of plan operationality these conditions take the form of reasonably specific and costable project and project group proposals,² linked with a set of reasonably specific policies. e.g. in taxation, recurrent expenditure, private investment, role of state enterprise, and formulated within a computed (projected) fram of the relevant levels of constraining scarce resources available. For operationality to be sustained a system of rapid reporting not only of results but of future period operating plans must be imposed on all state and all major private units with a central statistical-analytical unit set up to make effective use of the data secured. Further, a set of principles for making additions to, subtractions from, and retiming within the project list is virtually essential if the exigencies of physical implications

²This is a minimum condition. The more precise the project identification and costing the smoother their physical implementation but the longer the delay in arriving at the pre-physical implementation stage represented by the Plan document.

are to be contained within the framework of progress toward central objectives. Unless such principles - based on interaction as well as direct cost/benefit effects - exist ad hoc decisions are virtually certain to lead to results bearing rather scanty relation to any coherently formulated set of objectives advanced either during the programme drafting or physical implementation phases.³

The logic of implementation further requires priority attention to three constraint areas which virtually always prove to be binding: personnel, institutional structures, and time. These tend to be underemphasized in the programme preparation phase and visualized only in an ad hoc, fragmented manner during physical implementation. Inadequate personnel, inappropriate or "inexperienced" institutions,⁴ and procedures which (however sophisticated the method or precise the results) are slow in yielding data and decisions can and do impede policy and project fulfillment at least as often and perhaps as much as the foreign exchange and investible surplus constraints.

Operationality, however, is not a purely technical or institutional matter. It is equally a question of political will. Here again the separation of programme formulation from physical implementation has

³Vide Ghana's 1959-1964 Plan (de facto abandoned in 1961), the Cameroun Republic 1961-1965 Plan, the current Nigerian Plan (except for the Eastern Regional Plan).

⁴Colonial administrative - civil service structures were neither designed nor equipped to carry out a broad, direct state role in economic development. Indeed, both in the U.K. and in France their metropolitan parallels have undergone sharp modifications in response to recognition of their similar inadequacies in relation to the economic role of the modern state.

unsatisfactory results. Governments are not interested in economic policy as an end in itself but as a means to attaining socio-political ends. Unless a national economic development plan proposal is seen by the state's leaders to be a quantitative statement of economic means to fulfill (partially) the national socio-political programme they genuinely seek⁵ it will not become operational. Verbal "acceptance" is not unlikely but there will be a political will to alter, not to implement.

Emphasis on implementation - and therefore operationality - requires recognition of at least seven critical absences in African (or for that matter tiers monde in general) economies:

1. of an effective market mechanism leading even approximately to desired resource and product flow, stock, or allocational results;
2. of the institutional framework through which such a market mechanism could operate;
3. of an adequate body of planning experience, structures, and personnel;
4. of the institutional patterns through which planning decisions could become implementation actions;
5. of adequate data from which to formulate projects, policies, and coordinated plans (or for that matter market mechanism improving reforms);
6. of any substantial body of economic analysis based on assumptions appropriate to the "general case" of non-industrial, economically dependent, low income states⁶;

⁵This statement is independent of the content of their programme. E.g. if the ruling elite's central aims are the creation of a "civil service bourgeoisie" within growing opportunities for personal enrichment no plan not furthering these objectives will be implemented.

⁶As opposed to the "special case" of industrial, largely autonomous, high income states. cf. Dudley Seers "Why Visiting Economists Fail" Journal of Political Economy, August 1962 and "The Limitations of the Special Case Bulletin Oxford Institute Econ. and Stat. May 1963 and the author's Stages In Economic Development: Changes In The Structures of Production, Demand and International Trade, Bank of the Sudan, Khartoum, 1965.

7. of government willingness (indeed often ability) to accept or implement economic policies unless these afford tangible short run gains to critical interest groups (which may or may not include the general public) whether or not these are consistent with rapid economic development.

From the implementation centred approach spring a series of arguments which can be grouped in four "cases":

1. The case for a project based approach;
2. The case for a comprehensive macro-economic frame of reference;
3. The case for plan centrality in formulating all policies involving resource allocation;
4. The case for state institutional pattern based on plan implementation requirements.

II.

Individually sound projects implemented in the absence of a plan are likely to have substantial beneficial results, a plan which is not composed of a set of projects cannot become a reality⁷. Most comprehensive African Development Plans lack not only a complete set of costed projects but even an initial list of known feasible projects for initial action and a comprehensive working list of identified proposals to be converted into a final project set during physical implementation.

⁷One can, in fact, point to successful colonial "plans" in illustration of this point. cf. B. Niculesch Colonial Planning, Allen and Unwin, London, 1958. The inverse, of course, also holds - individually unsound projects, if implemented, can do substantial harm to an economy especially if the "opportunity cost" of the scarce resources used is counted.

Project preparation is an area in which the inadequacy of separating the programme preparation phase in time and function is particularly evident. Given the reality of a low initial stock of projects checked for technical feasibility and cost, the need is for a continuous flow of additions to this stock - at least initially at a rate greater than that of physical implementation both to avoid bottlenecks (or resource mis-allocations) resulting from imperfect knowledge and to increase the data stock available in formulating decisions on future action.

The present heavy dependence on "outside" project analysis tied either to would be financiers, investors, or suppliers is distinctly unsatisfactory. There is no reason to suppose this type of analysis will yield a comprehensive group of studies, emphasize those most critical in national terms, or give a uniformly dependable picture of probable costs and benefits⁸. Priority needs to be given to building up one (or several coordinated) project identification and analysis staffs and to ensuring that their relative competence in agriculture, industry, physical infrastructure, and human infrastructure (education and training nutrition and preventive medicine, community development and administration) is reasonably equal. The need for balance stems from the fact that widely unequal competence will lead to overemphasis on the type of projects most competently identified and costed and failure to realize that this emphasis does not necessarily reflect underlying economic cost/benefit ratios.⁹

⁸Material aid programme analysts tend to work on the implicit assumption that their rational economic history and system is at least largely relevant and appropriate. Investor analysts seek to emphasize the risks and thus the need for guarantees, safeguards, and high profits. Seller analysts tend to be notoriously optimistic about the technical as well as economic viability of projects using their investment goods.

⁹In the short run the quality of the relevant project staff is a sound criterion for resource allocation. e.g. Kenya's 1964 Plan emphasis on agriculture flowed logically from greater ability to formulate action in that sector. However, an equal priority is to increase the competence of evaluation in other areas or a permanent bias will result.

The limitations of project analysis centered planning stem from the difficulty of handling interrelationships, of comparing alternative projects, and of evaluating the consistency and approximation to optimality of a programme aggregated from individual projects. These limitations are often overstated and can, to some extent be relaxed but they are real.

Direct cost/benefit ratio analysis of individual projects is usually reasonably straightforward. However, it does not deal with indirect effects nor with the possibly different cost/benefit ratios pertaining to inter-related project constellations. If it is assumed that the most important indirect effects are direct linkages then evaluation of project complexes e.g. livestock upgrading - tanning and packing - leather and carrying - required transport facilities as groups will approximate the overall economic impact of the projects.

Certainly there is no a priori reason to assume that projects or project groups with high cost/benefit ratios have higher than average indirect effects or future potential. The case for proving such offsetting gains rests on their proponents. However, it is valid to base computations of cost/benefit ratios on total flows (discounted) over an appropriate time span not merely on the first few years of full operation.

"Return linkage" effects actually create greater problems in project analysis than "outgoing" ones. The rate of growth of demand for an output cannot be calculated without reasonably definite data on the rate and distribution of growth in demand both nationally and internationally. This, in turn, depends both on all other projects and on exogenous (to the economy being planned) forces.

In principle a complete set of evaluated projects (all probable marginal and intermarginal cases identified, if necessary grouped, and fully analyzed) could be subjected to linear programming resulting in an aggregated

macro-plan which would be feasible, consistent and a fairly close approximation of optimality.¹⁰ However, this is not a live possibility when the identified project set is known to be incomplete and when final feasibility studies must be carried out during the implementation of the programme.

Arguments for using "real cost" prices diverging from those prevailing in the market are not limited to project centered planning - "shadow prices" if appropriate are at least as critical in a macro as a micro context - but do create another limitation. Overall scarcities and surpluses of factors exist only in relation to total - not individual project - demand. Therefore "shadow prices" must be calculated for the economy as a whole before application to individual projects.¹¹

III.

The case for macro-planning is confused by the existence of numerous examples of pseudo or erroneous macro - plans. These fall into at least four types:

1. The utterly unrealistic macro-plan put together in absence (or defiance) of data on the actual economic structure and potential of the state. The Cameroun Plan (1961 - 1965) exemplified this;

¹⁰It would not be fully optimal unless both optimum technical choices and, when appropriate, shadow prices had been used in the exercise.

¹¹In practice this may be a case for approximate calculation of foreign exchange, unskilled labour (including costs of relocation and services), and skilled manpower shadow prices not per se for a broad macro-approach. A tentative project set would allow such shadow prices to be determined and used as a basis for final project set amendment.

2. Macro-plans constructed on fairly plausible overall assumptions and targets but without any clear indication as to how these are to be implemented physically (projects or policies) on the micro-level. The sections of almost all African plans dealing with the private sector suffer in greater or less degree from this deficiency;
3. Macro-plans, not in themselves implausible, and conjoined with micro-proposals but with no (or at least inadequate) integration of the macro-projections and targets with the micro-means. Both the current Nigerian and the initial Kenyan Plans appear to suffer from such fragmentation;
4. Macro-plans superficially integrally supported by policies and projects but which, on more detailed examination, reveal that the micro-components were deduced from the macro-level without serious attempts either at direct identification or of preliminary cost and feasibility evaluation. The current (1964-1970) Ghana Plan displays a number of cases of such "forced fitting."

These "approaches" all violate the principle of programme formulation integration with physical implementation. While an "aggregated" plan consisting of individual projects can be feasible and consistent even in the absence of a formal macro-framework¹² an aggregate plan without a structure of projects is not operational and cannot be tested for consistency or feasibility in any manner relevant to implementation.

The case for aggregative plan lies in its use to create a framework of broad quantitative goods, relationships, and constraints which both provide for an orderly approach to the micro-level and aid in the identifi-

¹²By definition however a consistent and feasible set of projects does have an implicit macro form. The operational question is whether the cost/benefit ratio of making that frame explicit and of formulating it first as a guide to project selection is such as to justify aggregative planning.

cation of likely project possibilities.¹³

Determining the impact of economic growth and change on demand levels - and therefore the viability of specific projects - can require either an initial aggregative estimate revised in terms of project possibilities or an aggregation of project proposals for checking and revision in light of their macro-implications. The aggregative initial step would appear to give a firmer analytical basis and to be likely to save time in selecting projects to evaluate in detail but the choice at this level could go in either direction.

The same alternative approaches hold true for the computation of certain critical macro-magnitudes e.g. foreign exchange gap (or mirabile dictu its absence), skilled manpower "balance". The maximum financeable gap can be estimated first and used in the process of project selection or the tentative project aggregation tested in terms of the feasibility of its import requirements (and savings) both capital and recurrent.

The clear gains resulting from a process of programme formulation by "approximation" beginning with a macro-projection "model" appear amenable to grouping in categories:

1. greater ability to ensure that the plan's overall results do relate to government socio-political goals and (therefore) of obtaining effective political backing;
2. a clearer picture of the broad structural¹⁴ relationships

¹³These factors may be of only secondary concern when primarily export industries, import substitution based on present market sizes and/or increasing gross national product through re-distribution of the ownership of present productive sectors form the bulk of the overall economic agenda. Even then a frame for project comparison can be of practical value.

¹⁴Structure is here used to mean the patterns of relationships between resources and their uses on the one hand and demand (national and global) on the other plus the institutional frame in which they operate.

within the economy and of their modification over the plan period. Such a picture would appear to be essential to any economic strategy based on bringing about basic changes in the structure of production, demand, or of factor income recipients.

3. a better organized procedure for estimating the total feasible programme and for weighing alternative projects against another;
4. a moderately precise yardstick against which to measure both the progress of physical implementation and of the implications of proposed changes at the individual project level.

How detailed an aggregative analysis is attempted depends partly on the data available,¹⁵ partly on the competences of staff, and partly on the role the macro-plan is intended to play. In fact macro-data is intrinsically no harder to secure than micro and, indeed, collection and evaluation at the different levels of aggregation are usually complementary. Staff competence is often a more serious constraint - if almost all available expertise goes into macro-planning this ("macro!") resource misallocation will lead to much larger resource mis or non-allocations during physical implementation.

The question of uses is more complex. Clearly a macro-plan may be used as an initial suggestive guide and a subsequent rough check on an intrinsically aggregated micro-plan. In this case the macro-plan need not be in great detail - its use is to preclude major errors of allocation, to highlight cases in which indirect effects must be explicitly considered, and to define the operative resource constraints. Alternatively- as in the Tanzania Plan and the ECA - FAO Zambia Plan Proposals - the macro-plan (first approximation) may be used as the initial step in drawing

¹⁵This is not a one way relationship. Data supplies are highly dependent on demand. To postpone aggregative planning on the grounds of inadequate data and the collection of such data as not essential to a micro-plan approach is circular.

up the micro-plan. The stages could run:

1. Selection of target rate of growth and of distribution of purchasing power;
2. Disaggregated pattern of demand growth;
3. Selection of viable projects from 2. checked against technical and cost feasibility;
4. Checking of projected production pattern for consistency;
5. Computation (aggregated) of total resource requirements and checking against projection of availability;
6. Successive repetition of the process to arrive at a final plan approximating consistency, feasibility, and optimality in terms of the original aims the plan is intended to further.

In this case the macro-planning cannot be separated from the micro and must be on a higher level of detail and precision. On the other hand, this formulation suggests that the "project approach" when generalized to take account of project complexes, indirect impact and shadow prices and "successive approximation" macro-approach tend to converge.

Two special problems arise in regard to techniques in aggregative plan formulation: sectoral breakdowns and capital/output ratios. On the first the relevant comment appears to be that sub-aggregates should be categorized in whatever method is most useful for the purpose in hand. The standard input-output table rarely meets this test, the "project complex" often does. Capital output ratios on a sectoral or global - as opposed to a project - level tend to be more dangerous than useful. Attempts to secure direct sectoral incremental ratios tend to lead to unrealistically low estimates (2.1 in the case of one current plan with heavy industrial and infrastructure components). Aggregation from project

estimates (which can more easily be derived from comparable past instances) appears much sounder. However, these can usefully be aggregated by sector and for the economy as a whole to see whether the derived macro-ratios appear plausible.¹⁶

IV.

The case for plan centrality stems from the fact that a resource budget cannot be implemented unless it is followed. From this point of view comprehensiveness is a virtue and the inclusion of public recurrent expenditure in the area covered by the plan qua allocation system virtually essential. The rate of recurrent expenditure increases in most African states is inconsistent either implicitly with investment plans or explicitly with plans including recurrent expenditure target within national income projections.¹⁷ The need for plan centrality is identical whatever the approach to programme formulation used.

The logic of plan centrality suggests that at least five "budgets" should be drawn up for the plan period during the programme formulation period and put in final annual form during the physical implementation stages:

1. an investment budget (including the private sector in as accurate a way as possible);
2. a recurrent public expenditure budget;
3. a skilled manpower budget (with further education as one of the uses);

¹⁶This process of testing derived aggregates against values observed under comparable conditions is probably fairly generally useful for high level manpower needs. Serious discrepancies on the low side suggest omissions in the micro-calculations.

¹⁷See bottom of page 14.

4. a foreign exchange budget;
5. a private consumption budget.

The first four budgets are self-explanatory. The last is less precise but can be useful in evaluating the impact of income changes on real consumption levels by major income group. In general, African plans underestimate the built in increases in consumption resulting from incremental salary scales and shifting of occupational distribution toward the cash crop and wage sectors.¹⁸

Precisely where responsibility for enforcing and, when appropriate, modifying these budgets is to lie is a separate question. Plan centrality is consistent with Treasury decision making if and only if - the Treasury feels committed to act within the context of the plan. Divided responsibility for the different budgets appears to be less likely to prove workable than united responsibility. At least in principle, the economic analytical staff associated with programme formulation and coordination - evaluation of physical implementation would appear the most appropriate group to draw up the annual budgets in each category, whatever their formal location in the government machine.

¹⁷The resource allocation feature is often complicated by imprecise allocation of output level increases by year. In some cases a constant growth rate during the plan period is assumed, a most unlikely result if the average rate is to be substantially above that of the past period. In virtually all plans there appears to be an inadequate allowance for the lag between project identification and full production. The result is a consistent over-estimate of resources available especially during the initial years of the plan.

¹⁸Given a population increase rate of 2%, a standard salary increment of 5% a year and a salariat growing 6% a year, and an increase of the commercial farming - wage earning proportion of the labour force by 1% a year (e.g. from 30 to 35% over five years) constant prices and no change wage or salary scale the annual rise in real consumption will tend to be 4-6%.

V.

Acceptance of the importance of economic planning represents a substantial shift in the explicit and implicit objectives and role of the state. From this follows the case for evaluation and revision of governmental and prastatal institutional structures in terms of their effectiveness in programme formulation and physical implementation.

One of the critical problems is that of outlook. Traditional ministries have set views on their proper status, duties and internal autonomy which often conflict with coordinated planning. The civil service as a whole usually tends to regard economic policy as primarily a matter of expenditure approval, a view strengthened by the tendency to Treasury primacy.

The debates on whether a separate Planning-Development ministry should be established or a Planning Directorate placed in the head of government's office often becloud the central objectives:

1. acceptance of Plan centrality by key state officials,
2. creation of understanding and support for planning by these officials not only verbally but in their own departmental operations,
3. broadening of the base of effective participation in planning (including programme formulation) while at the same time strengthening the coordinating capacity of the central planning staff.

The structure which does most to achieve these ends in any given situation is most appropriate. In practice, a universal requirement is a competent, politically significant minister with the ear of the head of government. For example if a Plan oriented minister of this calibre is named to finance,

Treasury primacy can be placed behind the plan and the all too typical Planning-Finance battle avoided (or fought within the enlarged finance ministry at lower real costs in time and decision reversal terms).

Plan centrality is often interpreted to mean centralization at least of programme formulation, coordination, and evaluation. So far as broad decisions are concerned this is valid but in practice the centralization tends to be much more inclusive and potentially self defeating. While the degree of decentralization optimal in any given case may vary, African plan formulation - coordination - evaluation mechanisms are almost all at the extreme centralization end of the spectrum. The practical reasons behind this stem from personnel shortages seen as requiring all significant decision taking to be put in the few professional hands available.¹⁹

The disadvantages are threefold. To the extent that the bodies responsible for physical implementation are not integrally involved in the process of programme formulation their understanding and support for the "accepted" programme will be limited. The continued physical implementation agency concern with the current Tanzania Plan despite an extended period of key vacancies in the ministry of Planning and Economic Development illustrates the positive obverse. To the extent that regional and local plan advisory - community implementation bodies are not created (and ideally staffed in a way leading to some technical competence) the plan will be the weaker both in terms of inadequate attention to local possibilities and small scale projects and also of mobilizing public understanding and support behind planning. The Tanzania's Zonal plans with

¹⁹At the extreme this attitude can result in the Planning Director formulating virtually the entire plan and the Director of Statistics virtually the entire annual economic survey.

their related regional and area development committees²⁰ represent a step in the direction of overcoming these local-regional weaknesses but have been of limited effect because of local technical weakness and central difficulty in staff recruitment coupled with distrust of decentralization. Finally concentration of all significant decisions in programme formulation - coordination - evaluation at the centre appears to violate the comparative advantage principle. Inexperienced local or regional decision makers may make slightly poorer average choices on secondary matters but they will gain experience and - more critical - the time of the limited expert group at the centre can be concentrated on fewer, more critical issues. The same considerations hold a fortiori in physical implementation agencies.

On the other hand autonomy of state agencies and a fortiori of state and para-statal (including cooperative federation) bodies is sometimes carried to a point more consistent with anarchy than planning. The first - and often the single most important - step toward tightening coordination in this direction lies in better information collection and better processing of the information once received. That a majority of even present African plans do not include annual evaluation analyses based on quantitative data is a telling illustration of this situation.²¹

Information is usually received in inadequate or inappropriate detail and only ex post (sometimes very considerably ex post in the case of autonomous units although the East African record is on the whole fairly

²⁰Kenya's regional plans - at least initially - suffered from the economic illogic of several of the regions albeit some appeared to show substantial data collection and evaluation as well as useful project identifications.

²¹Exceptions include Nigeria, Ghana, Tanzania, the UAR, and Kenya (counting the Plan revision as a de facto evaluation study)..

good in this regard). The budgetary process gives adequate projection data on government agencies but the same cannot usually be said of autonomous corporations and other public sector bodies. The concept of submitting annual proposals (perspectives) for output in physical and revenue terms, costs broken down by major category, use of scarce resources (especially skilled manpower and foreign exchange), investable surplus (including depreciation), investment targets and financing intentions for coordination into an annual resource budgeting procedure is not so much rejected as simply not envisaged.²² Effective coordination and evaluation requires better, faster, and different data submission. Only then can processes - which are critical to maintaining both pace and direction in plan implementation be carried out comprehensively and rapidly enough to have a real impact on error correction and opportunity capitalization.

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November, 1965.

²²In some cases such annual perspectives do not appear to exist even within the autonomous units, a failing with every serious implications. In such cases their required submission would have substantial micro-efficiency increasing potential.