AN OPERATIONAL APPROACH TO DEVELOPMENT PLANNING

by **Albert Waterston***

1. The Conventional Approach to Planning

A. The Status of Planned Development

After about two decades during which planning gained virtually worldwide acceptance, questions are being raised about its usefulness for accelerating the rate of development. Partly, this may be a reaction to the overly enthusiastic embrace of those who had great expectations that planning would automatically lead to quick development. But even the less naive are disappointed with the results of planned development.

Reacting to the general air of disillusion, Hans Singer complained in FAO'S *CERES* for May-June 1968 that the Development Decade of the 1960's is frequently referred to as a "decade of frustration." He is right that this is a"somewhat exaggerated" characterization. Yet it is not used without justification. For despite reservations about the statistical reliability of the data in the poor countries, what is available indicates that, despite steadily increased reliance on planning since the War, the annual rate at which real domestic product (GDP) has grown in all less developed countries has shown virtually no improvement since the 1950's.[1] This has also been true of Africa.[2] But in Latin America, and especially in Southern and Southeast Asia, the average annual rate at which GDP grew has declined.[3] The plight of the less developed countries may also be discerned from their declining share in world income. In 1950, the poorest 60 per cent of the world's population received 13.2 per cent of world income; in 1964, they received only 11.1 per cent.[4]

Those who oppose government intervention in the economy, in renewing or increasing

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*Lecturer in the Economic Development Institute of the World Bank. In this paper, I speak for myself, not for the Institute or the Bank. I acknowledge with appreciation suggestions from Loreto M. Dominguez, P. David Henderson, Raj Krishna and Eugene R. Schlesinger.

1 According to the United Nations, *World Economic Survey*, 1967 - *Part One* (p. 17), average GDP growth rates declined from 4.6 per cent in 1955-60 to 4.4, per cent in 1960-65 and from 2.3 per cent per capita to 1.9 per cent. according to The World Bank's *Annual Report* 1968 (p. 49), average GDP growth rates increased from 4.7 per cent in 1950-60 to 4.8 per cent in 1960-66, but declined from 2.4 per cent per capita to 2.3 per cent.

2 According to the United Nations (ibid.), GDP growth rates in Africa increased from 4.3 per cent in 1955-60 to 4.5 per cent in 1960-65 and from 2.1 per cent per capita to 2.3 per cent; according to data in the World Bank, GDP growth rates in Africa averaged 4.0 in 1950-60 and 1960-67, but GDP per capita declined slightly from 1.7 per cent in 1950-60 to 1.6 per cent in 1960-67.

3 According to the United Nations (ibid.), GDP growth rates in Latin America declined from 4.6 in 1955-60 to 4.4 per cent in 1960-65 and from 1.9 per cent per capita to 1.7 per cent; according to The World Bank (ibid.), GDP growth rates declined from 4.9 per cent in 1950-60 to 4.7 per cent in 1960-66, and from 1.9 per cent per capita to 1.7 per cent.

According to the United Nations (ibid.), GDP growth rates in Southern and Southeastern Asia decreased from 4.2 per cent in 1955-60 to 3.5 per cent in 1960-65 and from 2.0 per cent per capita to 1.2 per cent; according to The World Bank (ibid.), GDP growth rates in South Asia declined from 3.6 per cent in 1950-60 to 3.4 per cent in 1960-66 and from 1.7 per cent per capita to 0.5 per cent.

4 Weaver, James H. and Jones Leroy. "International Distribution of Income: 1950-1964." *Journal of Economic Issues*, Quarterly, University of Texas (forthcoming issue).

their attacks on the wholeidea of developmentplanning, havenotfailed to point to the poor record.[5] To this defenders of the accepted system of planning reply that what is at fault is not the conventional planning approach, but the failure of governments to follow the precepts and prescriptions laid down by planners.[6] In effect, they say that if the facts do not accord with the theory, so much the worse for the facts. This should not be taken as arrogance, for those who hold this view mean that governments, by their actions or their failure to take appropriate action, create or perpetuate situations which are inimical to development planning.

There is no doubt that planners have done much to make politicians increasingly aware of the cost-benefit implications of investment and other development decisions and the need to optimize these decisions within the context of prevailing sociopolitical values. To achieve this, planners have done well not to accept politicians' actions or lack of action as immutable. But it is also true that planners have frequently been unable to assess correctly--or have even refused to be concerned with -- the often considerable sociopolitical constraints on the actions required to achieve economic targets in plans they have formulated.

Thus, while malfeasance or nonfeasance may indeed be the crux of the matter, it may have have a different import than is intended by those who defend the traditional planning approach. Thus, if there are some things in the nature of conventional planning, or in the milieu of the low-income countries, which make it unrealistic to expect the responses required for successful operation of conventional planning in these countries, it may be more sensible to try, at least at first, to modify the theory rather than the facts, i.e., conventional planning rather than the responses of political leaders. If this be so, it is well to ask how it may be done. It is to these questions that this paper is addressed.

B. Conventional Planning

In his book on development planning, Professor W. Arthur Lewis advises countries which plan their development to adopt three kinds of plans: "There should be an Annual Plan, a medium-term Plan, and a long-term perspective Plan.[7] Jan Tinbergen in his book on development planning, also recommends that developing countries prepare perspective, medium-term and annual plans.[8] It would be going too far, perhaps, to suggest that there is a concensus among planning specialists about exactly how to approach planned development. But if the writings on planning are taken as evidence, it is fair to say that most planning specialists agree that national development requires the preparation of the three kinds of plans which Lewis and Tinbergen recommend.

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5 See, for example, P. T. Bauer's. "Dissent on Development," *Scottish Journal of Political Economy*. Vol. XVI, No. 1, Feb. 1969, University of Glasgow, Great Britain, pp. 75-94; Sirkin, Gerald. *The Visible Hand: The Fundamentals of Economic Planning*. McGraw-Hill Book Company, New York. 1968; and Jewkes, John. *The New Ordeal by Planning: The Experience of the Forties and Sixties*. Macmillan, London: 1968.

6 These are not straw men, but the real thing. One need only visit central planning offices almost anywhere in the less developed world to hear this *riposte*.

7 *Development Planning. The Essentials of Economic Policy*. Harper and Row. New York. 1966, p. 150.

8 *Development Planning*. World University Library. London. 1967, pp. 52-53.

Like most writers on development planning, Professors Lewis and Tinbergen suggest that planning should start with a perspective plan which embodies an assessment of a country's long-term development outlook for some 15 or 20 years. Development takes time and, therefore, the argument goes, the formulation of long-term goals is essential for insuring that current development decisions are consistent with long-term objectives, needs and possibilities. Perspective plans are recommended to planners as convenient devices for the systematic consideration of future cost and other implications of present investment decisions. They are also advocated because they provide guidelines for planners and others who make development decisions and show up bottlenecks which will emerge as the economy expands, unless anticipatory action is not taken well in advance.[9]

Planning specialists also advise that after a perspective plan has been prepared, a medium-term plan should be formulated. A medium-term plan usually ranges from three to seven years, but it may extend to 10 years. For example, Thailand had a 6-year plan; Iran a 7-year plan; Indonesia an 8-year plan; Liberia a 9-year plan; and Chile a 10-year plan. But five years is the most popular choice. The medium-term plan is more detailed than the longer term, perspective plan. It is the plan on which planners generally spend most of their time. It may take from 18 months to three, four and even five years to prepare.

Finally, there is the annual plan. The character and the direction of the annual plan is determined by the medium-term plan, just as the character and direction of the medium-term plan is governed by the perspective plan. The annual plan is essential to good planning because it provides the means by which medium-term plans are made operational. In fact, in socialized countries, where annual plans are needed as much as in mixed-economy countries which plan, annual plans are referred to as operational plans.

Since by far the largest part of the literature on development planning technique, as well as most of planners' time and interest, is concerned with medium-term plans, it is useful to review briefly the procedures which planning specialists consider essential for the formulation of a good medium-term plan. There is a general agreement among planning specialists that the preparation of a medium-term, comprehensive, plan (comprehensive in the sense that it covers the private as well as the public sector) involves the use of two simultaneously executed procedures. One of these moves from the general to the particular and is sometimes refered to as "planning from the top down," while the second moves from the particular to the general, and is sometimes referred to as "planning from the bottom up."

"Planning from the top down" starts with the setting of cleary - defined development objectives by the political authorities, and the formulation by the central planning agency of an overall or aggregative plan in conformity with these objectives. This is achieved by the construction of a series of interrelated projections, which with their assumptions, constitute a growth model for the proposed plan.

A model usually estimates the effect of an assumed rate of growth on public and private consumption, savings and investment; imports and exports; employment; and the demand and supply implications involved in producing the assumed national product or income. A variety of

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9 Lewis, W. Arthur, *op. cit.*, p. 150.

calculations are made to relate inputs of labor, raw materials, land and capital with the resulting outputs. Still other calculations show the relationships between the income to be generated and expended for consumption and investment in the public and private sectors, for imports ad exports, and so on. These calculations may vary from exceedingly simple, rule-of-thumb estimates or plain guesses, to complex formulations involving input-output tables, linear programming, or even more sophisticated econometric techniques. The results are tested to determine their compatibility with the overall targets, their consistency with each other and whether they are within the limits of available resources. [10]

When the aggregate model has been prepared and agreed upon, the "planning-from-the-top-down" procedure requires that the overall targets be divided or, "disaggregated," into interrelated sector programs and, occasionally, into regional plans. Where the overall plan is divided into regional plans, these must in turn be subdivided into sector programs. Each sector program, whether national or regional, has its own aggregate growth, investment, input and output targets. The final step in the "planning-from-the -top-down" procedure indicates the extent to which the different economic and social sectors, whether national or regional, require additional capactity to achieve plan targets and, sometimes, lists projects for providing this capacity.

While the "planning-from-the-top-down" procedure is being carried out, and starting even before because it takes longer, the "planning - from - the - bottom - up" procedure must be going forward. In the public sector, this requires that each operating ministry, department and public enterprise collect all the projects it expects to carry out in whole or in part during the plan period, list them as to priority, and combine them into coherent sector or subsector programs on the basis of well-defined objectives. These programs must be submitted by a specified data to the central. planning agency to combine and reconcile them with each other and available resources.

While the ministries, departments and agencies prepare their programs, the central planning agency canvasses industrial, agricultural, mining and other investors or, alternatively, manufacturing, agricultural, mining and other business associations, to determine the extent to which they (or in the case of associations, their members) expect to start new projects or expand existing plants. The central planning agency may list at least the most important projects which private investors expect to start, continue or carry out during the plan period; and estimate what it believes will be the extent of private investment in industry, agriculture, mining and other sectors during the plan period. These sectoral subtotals are added to produce a total for private investment which, when added to the total proposed by government organizations for investment in the public sector, constitute an overall investment plan.

If regional plans are to be included in the national development plan, the public and private sector projects in each regional plan must be built up by economic and social sectors and with the figures for the other regions aggregated into a total for investment in all the regions.

The sectoral and regional subtotals and the aggregates obtained from the "planning-from-the-buttom-up" process are not likely to coincide with the corresponding totals obtained from the

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10 Waterston, Albert, *Development Planning: Lessons of Experience*, Johns Hopkins Press. Baltimore, 1965. pp. 64-66,

"planning-from-the-top-down" procedure. The two sets of calculations must be considered as "first approximations" which must be reconciled. In the process of reconciliation, some figures in the original model may have to be reduced, and a few may have to be increased. These alterations, in turn, will require revisions in other figures, as well as changes in assumptions and targets. By moving backwards and forwards, using a system of trial and error, through a process which produces a series of so-called "successive approximations," the two sets of calculation produced by the "planning - from - the - top - down" and the "planning - from - the - bottom - up" procedures are gradually pushed, prodded and pruned to closer arithmetic proximity until there emerges an integrated, internally consistent, comprehensive, medium-term plan, with sectoral divisions often with a list of projects and, occasionally, with regional plans as components.

Conventional planning has great virtues. First, it provides the perspective required to test current investment decisions by reference to future costs and long-term development objectives. Second, through the comprehensive view of the economy afforded, it guards against the misallocation of scarce resources by allowing competing requirements in the public and private sectors to be balanced against one another so that marginal choices may be identified which promise to yield desired results at lowest cost. And third, through internal consistency, it provides protection against against the appearance of unexpected bottlenecks and imbalances which may impede growth. Finally, the procedures followed in preparing perspective, medium-term and annual plans have value in educating those who participate in preparing the plans in the essentials of planned development.

C. Methodological Shortcomings

Yet, it must be realized that in preparing plans in low-income countries, planners make use of a kit of tools largely devised in and for the more advanced countries. Experience raises some doubts about the relevance of this "transfer of technology." Thus, attempts to apply to less developed countries with a large subsistence sector concepts, categories and pricing policies used in a system of national accounts devised for industrialized countries may produce misleading or inaccurate conclusions. Because of skewed income distribution, per capita income is not nearly as significant a datum in poor countries as in the more advanced ones, where incomes are more equally distributed. Increased per capita income also is more deficient as a measure of progress in the poor countries than in the more developed countries because it ignores the institutional changes which are essential for the transformation of underdevelopment. Nor does the record indicate that time, money and effort spent on producing many-columned, input-output tables for low-income countries are nearly as worthwhile an expenditure of scarce financial and technical resources as in the more advanced nations. And it is doubtful whether the planning models used in preparing medium-term development plans in low-income countries have contributed much to development.

Considerable advances have been made in recent years in planning techniques. But most planning models *actually used* in medium-term planning in low-income countries constitute so great an oversimplification of reality that they often end up as inaccurate representations. The results, as Paul Streeten has said, may be technically elegant and shapely, but they lack the vital organs. Thus, the models often assume stable parameters (e.g., incremental capital-output ratios), when the essence of development is dynamism. At the same time, models may be too "dynamic," in the sense that projections for five, ten or more years usually produce results of dubious reliablility, given the present state of the art. Linear relationships among variables (in the form of constant output-input

ratios) are almost always assumed, although in the real world linearity is scarce and nonlinearity commonplace. The models usually describe the economics of low-income countries in term of one aggregate each for consumption, savings, investment, production, per capita income, and so on, when the dualistic or triplistic nature of most low-income countries requires two or three values for these. They often include only two sectors (e.g., agriculture and industry or production and consumption goods), instead of the larger numbers of important sectors usually found in even simple economies. They usually ascribe development to a single factor -- capital--although political, social and institutional factors are widely recognized as of critical importance in determining the results obtained from investment. And the calculations in the models are in terms of constant prices, although price changes sometimes distort sector relationships and alter financing requirements for the plan.[11]

D. The Data Gap

But to construct a model which would adequately reflect even a small, low-income country's economy and the more important forces determining its development would generally require the use of much more complicated techniques than are practicable in most low-income countries.[12] It would, moreover, greatly exacerbate the data gap which makes planning difficult even with the simplest models. Everyone who has worked in the field knows that statistical data in low-income countries are generally unreliable or absent. Not only are incremental capital-output ratios often little more than guesses, but basic data for population, population growth, production and national income, as well as many of the components of national income, are either suspect or nonexistent.

The data gap makes it difficult to plan qualitatively or quantitatively; but the danger of compounding errors is great when inaccurate data are incorporated in a plan which by its nature has to be internally consistent. In many plans, what is being made consistent are bad statistics, not the realities.[13] What is worse, whereas a careful planner knows the limitations of his data, most political leaders do not appreciate the low reliability of the data with which planners must work. Usually, therefore, they accept without much question the basic figures in the plans they adopt, thereby giving official sanction to error and incompleteness.

E. Instability, Uncertainty, the Will to Develop and Administrative Friction

The deficiencies in methodology and data, although serious, are not nearly as important as other factors in explaining why planned development has performed below expectation and need. The evidence indicates that when it comes to implementing their development plans,

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11 I am indebted to Enrique Lerdau for this point. Sometimes, a percentage increase in prices is assumed as a correction factor, but aside from the difficulty of forecasting price increases, there is no practical way of forecasting sectoral distortions which might be introduced as a result of price changes.

12 Alec Nove tells of one eminent economist who began a lecture thus: "I will assume perfect competition because if I do not, the mathematics becomes too difficult."

13 While consistency exercises may lead to the discovery that estimates are inconsistent, the discovery does not necessarily lead to the ability to correct inconsistencies. Planners may revise inconsistent figures to make them consistent, but with unreliable data the consistent results may still compound errors.

few of the low-income countries have the (1) political stability, (2) economic certainty, (3) political will and (4) administrative capacity required to carry out medium-term plans. Implicit in conventional planning is the assumption that although change is inevitable, it occurs in a generally stable environment. But the fact is that change, sudden, frequently unforeseeable and great, in political and economic condition of countries, particularly in the less developed world, has become characteristic of the modern world.

1. *Political Instability*

The record of the last decade makes it clear that political instability is the norm for low-income countries. In the last ten years there have been no fewer than 66 coups d'etat in the less developed countries. [14] The impact which these changes make on planning is better understood when one recalls that governments rarely continue with their predecessors' medium or long-term development plans. And even when there is no change in the top leadership of a government, political instability may make the execution of such plans difficult or impossible. This was true, for example, before the 1968 military coup in Peru, where six cabinets served in the five years President Belaunde Terry held office ; and it is true in a country, such as Nigeria, where civil strife reaches proportions which interfere with the orderly conduct of government.

2. *Economic Uncertainty*

Undue economic uncertainty also inhibits the preparation and execution of development plans in low-income countries. Where inflation or the stabilization of the balance of payments is a source of concern, as in Brazil, Chile, Ghana, Indonesia and Sierra Leone among others, political leaders and officials invariably give short-run problems priority over longer-term development plans. Unexpected declines in foreign and international aid and loans have also made it difficult in some countries to carry out medium-term plans. Substantial fluctuations in the prices of primary exports sometimes reduce foreign exchange earnings below expected levels, and make it difficult or impossible for some countries to adhere to planned investment targets.

3. *Political Will to Develop*

The largely formalistic acceptance of development plans by political leaders in some low-income countries is still another impediment to the implementation of comprehensive, medium-term plans. When the time comes to implement development plans, the preference of many political leaders for maintaining investment options in their own hands and for improvisation becomes apparent. This penchant of political leaders is also found sometimes in countries with coalition governments or in those with strong technical and finance ministers.

4. *The Administrative Factor*

Finally, it must be recognized that conventional planning assumes the availability of an administrative structure and a pool of trained manpower which do not in fact exist in most low-income countries. Most poor countries find it impossible to follow the procedures for formulating the three kinds of plans which are essential for conventional planning. Where perspective plans exist, they are generally rudimentary and unpublished. Countries which prepare annual plans

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[14] *The Economist*, March 1, 1969, p. 601.

regularly are exceptions to the general situation. Moreover, it is a rare country where the planners have succeeded in preparing a medium-term plan with *both* the "planning-from-top-down," *and* the "planning-from-bottom-up" procedures. Mostly, medium-term plans are prepared on the basis of "planning-from-the-top-down," almost never "from-the-bottom-up" because the project and sector information required from the technical ministries, departments and agencies for "planning-from-the-the-bottom-up" is either unavailable or, where available, is usually so poorly prepared that it is largely unacceptable for realistic planning. In the end, most plans in low-income countries are prepared almost exclusively by the "planning-from-the-top-down" procedure because it can be done in the central planning agency with estimates to fill the informational gaps. When it comes to implementing their development plans, few of the governments in less-developed countries have the administrative facilities to maintain the discipline required to carry out medium -term plans.

F. Planning in Practice

Political instability, economic uncertainty, formalistic acceptance of plans and administrative friction largely explain why it has been possible for the rates of growth in a country without much planning experience to decline as planning techniques have improved. It is, therefore, not unreasonable to ask whether the conventional method of planning as applied to these countries may not be in need of revision.

Indeed, the instability and uncertainty in recent years make this question equally relevant for countries which have considerable experience with planning. Countries with considerable expertise in planned development have had to abandon their medium-term plans when unforeseen events made it impossible to deal effectively with development problems framed in their plans. Thus, after two wars and two droughts in three years, India found it necessary to postpone its Fourth Five-Year Plan from 1965 to 1969 and resort to annual plans in the interim. Because its economy was heating up unduly, Japan first discarded its ten-year plan for 1961–70 and then the five-year plan for 1964–68 which replaced it. Although directives for the U.S.S.R.'s five-year plan for 1966–70 were approved in 1966, it was never formally enacted as a plan; instead in December each year, one-year target figures are announced. Although the reasons for this have not been announced, it may be at least partly because the new system of partially decentralized plan implementation introduced uncertainties which could not be dealt with effectively within the framework of the five-year plan. When the Yugoslav Government submitted its seven-year plan for 1964–70 to its Parliament, that legislature refused to approve the plan for two years, and annual plans were issued instead. (The plan eventually emerged as a five-year plan for 1966–70.) In France, there was no choice but to give up the five-year plan for 1966–70 after civil disturbances in May 1968 forced the Government to increase salaries and wages to an extent which so compromised plan targets that revision of the plan became impracticable.

1. *Planning as Facade*

In the prevailing circumstances, it is not surprising to find in low-income countries that medium-term national development plans, whether well or poorly devised are, in varying degree, facades which are ignored or circumvented by the technical ministries, departments and agencies charged with implementing the plans. In practice, these organizations generally pursue a "project-oject" approach, with many projects related neither to national development plans nor to

each other. Technical ministries, departments and agencies in most countries do not have staffs qualified to (a) identify, evaluate and prepare good projects, (b) fix project priorities in accordance with general economic criteria, (c) execute the projects in accordance with well-devised timetables, and (d) operate completed projects efficiently. There is generally a scarcity of well-prepared projects ready to go and it is hard to find coherent programs for basic economic or social sectors. The lack of projects reduces the number of productive investment opportunities. Projects which are likely to yield low returns in relation to costs are often approved and started because they are the only ones available. The lack of investment alternatives mocks economic investment criteria, shadow pricing techniques and estimations of the rate of return, since there is sometimes little point in applying these to the only project in a sector which is ready to go. The shortage of investment alternatives plays into the hands of those who prefer to choose projects of dubious worth. They can contend that if a project they sponsor is not accepted, there is no adequate substitute for it.

2. The Real Plan

In most low-income countries, the ultimate arbiter of the projects accepted by government is the budgetary authority, which frequently ignores the recommendations of the central planning agency or the national development plan. Because of this, the government budget in many countries comes closer in reality to being the public investment plan than does the national development plan. But since the budgets in most low-income countries are incomplete statements of public investment, and are besides poorly organized and administered, with systems and procedures designed to serve limited goals in a bygone and largely static era, budgets are often unsuited to the more dynamic needs of planned development under present conditions.

Because technical ministries and departments often cannot furnish reliable estimates of project costs and benefits, as well as dependable estimates of time of construction, budget authorities frequently make "across-the-board" reductions in requests for allocations, regardless of the merits of the projects. Use of so-called "miscellaneous" or "suspension" accounts, in which expenditures for different projects and programs are lumped indiscriminately, and delays in closing out these and other accounts, lead to poor reporting of past expenditures for projects and programs. This leads, in turn, to budgetary allocations for projects and programs without benefit of past experience.

There is considerable slippage in the mobilization and allocation of public resources, control of expenditures, and estimation of the impact of public investment on recurrent expenditures. Archaic budgetary classification systems make it difficult or impossible to relate capital budgets to recurrent budgets, or budgets to development plans, and to estimate the budgetary impact on development. Overspending by some ministries and underspending by others are common and it frequently happens that no one in authority knows how much is being invested in the public sector, or whether the sum is more than total expected financial resources.

Almost without exception, medium-term plans are not supplemented with the annual plans which are essential for making medium-term plans operational. Instead, the central planning agency usually prepares a partial public "development budget," which often includes non-development items like the construction of insane asylums or embassy buildings abroad, and excludes development items like agricultural research and training of personnel to operate development projects. In contrast, research and training expenditures, although often related to projects in the "development budget" and frequently as important as capital investments for development, are usually included in the recurrent budget, which is generally prepared by the budgetary authority. And since communications between the central planning agency and the budgetary authority in most low-income countries are inadequate, it frequently happens that provision is not made for maintenance and operating expenses for completed projects. This helps explain the schools without teachers; the hospitals without equipment, doctors and nurses; and the new roads which deteriorate quickly, sometimes before they have been completed.

3. *Planning Technical Assistance*

In providing technical assistance for low-income countries, donor countries and international agencies generally use national development plans as benchmarks. Since the plans are frequently ignored in practice, technical assistance programs which provide help for preparing plans may have little to do with on-going public investment activities. Technical assistance provided by foreign and international entities for projects in which they are interested are not in this category. But these projects average only a small prcentage of total public investment in developing countries. In contrast, despite the great lack of project expertise in low-income countries, most projects in low-income countries financed from domestic resources go begging for technical assistance. This is also true for budgetary improvement. Since a government's ability to identify, prepare and carry out productive projects, and to exercise appropriate budgetary controls over expenditures, are crucial determinants of public investment yields, it is understandable why shortfalls often occur in public investment targets.

II. Planning from Another Point of View

A. Improving Macroeconomic Models

What has been said makes it clear that the accepted system of planning has defects as well as virtues. The task is to eliminate the defects while retaining the virtues. Partly, this can be done by improving plan formulation. For example, macroeconomic planning models can be made more realistic by changing parameters into variables, that is, by including in planning models important factors which are generally treated as outside the scope of the models. Consider the administrative and political factors usually assumed away in most models. It has been suggested elsewhere,[15] and on the basis of research being done in The World Bank on completed projects which the Bank has helped finance it is suggested here, that it is feasible to calculate for each functional sector of a country, historical "coefficients of administrative friction" based on average discrepancies on completed projects between original costs, benefits and time of construction estimates, on the one hand, and actual costs, benefits and time of construction, on the other. These coefficients can then be used to correct cost and time of construction estimates for future

15 Waterston, Albert. *op. cit.*, p. 287-288.

projects. On the basis of these corrected estimates, capital-output ratio usually concocted from unreliable data may be corrected; or aggregated project capital-output ratios may be calculated for the public sector or for the economy as a whole. These as likely to be much more reliable than the capital-output ratios frequently included in planning models.

Experience suggests that it is also possible to measure and quantify the extent of the political will to develop. This could be done by (1) listing all feasible investment and policy choices available to political leaders. (2) For each choice, an estimate could be made of the increase in income or output to be expected if it were adopted. (3) The sum of the estimated increases in income or output obtainable from choices made by political decision-makers would constitute a reasonably accurate quantification of the government's "political will to develop."

B. Improving the Planning Process

If administrative and political variables were in corporated in planning models, plan targets would be more realistic than they often are.

But the problem of bettering results obtained from development planning goes beyond improvement of models or other aspects of plan formulations on the macroeconomic level. There is no way of improving medium-term, macroeconomic planning results with improved models within the context of the conventional planning approach, when a government is not prepared or able to do what is required to carry out a medium-term plan. The question then is how planners can make the best out of a given situation. Where there is a reasonable presumption, therefore, that a country is in this position, there is much to be said for another approach to planning which takes this into account.

In a period of about three and one-half years when, under World Bank auspices, I advised sixteen countries on their planning procedures, I was able to evolve and test an annual-planning-cum-sectoral-programming approach to planning which gives promise of increasing returns from planning efforts in low-income countries. Proceeding on the assumption that it would be desirable to redress the imbalance which has thus far greatly favored medium-term over annual planning, improved budgeting, sector programming and project preparation and execution, I proposed that greater attention be given to the following three elements in the planning process:

1. The preparation of annual plans in which the two basic items were: (a) an inventory of current public investment, rationalized by the application of general economic and other criteria and made consistent with available financial resources, and (b) policies for stimulating private investment along appropriate lines.
2. The improvement of budgetary organization, administration and procedures for (a) linking annual plans with budgets, (b) relating investment and recurrent budgets, (c) controlling expenditures and (d) reporting on the progress of projects and programs.
3. The preparation of multi-annual sector programs which concentrate on the identification of a shelf of potentially viable projects in each sector.

In essence, this represents an attempt to give greater emphasis to "planning-from-below," without which the practice prevailing in most low-income countries of "planning-from-above" with medium-term plans alone has yielded little. The proposed approach is primarily directed toward improving the management of on-going investment and other development decisions. At the same time, by setting up for each sector a multi-annual perspective with a "shelf" of projects from which selections may be made to be used as required, each sector program provides a bridge, now often lacking, between the medium-term plan and the projects prepared by technical ministries, departments and agencies. This tends to increase the probability that medium-term plans will be carried out. In countries without medium-term plans, the proposed approach lays a firm basis for their effective employment.

The record of some developed and developing countries with long planning experience supports this approach. When several of these countries have found themselves confronted with especially difficult problems, or have faced the prospect of unpredictable change or unusual uncertainty, they have resorted to annual planning with good results. As already indicated, the U.S.S.R., Yugoslavia and India have planned or now are planning with annual plans because their governments decided that for a time, conditions did not permit them to plan for more than a year ahead. France is in the same position, but is planning through its annual budget. Mexico, whose first plan (one of six years) was issued in 1934, has also planned for many years through its annual budget, notwithstanding the occasional preparation of medium-term plans by the Government. Yugoslavia and Mexico both have supplemented annual planning with multi-annual sector programming.

C. An Annual Plan of Action

In theory, every medium-term plan must be followed by annual plans which make them operational. Much more than medium-term plans, annual plans concentrate on specific projects and instruments of economic, fiscal, monetary and other policies and measures which a government must adopt immediately if a medium-term plan is to be implemented.

Annual plans are also needed to correct outdated estimates in medium-term plans. By allocating resources to specific projects in the public sector and programs, annual plans become the basis for government budgets; and by spelling out in detail the measures and instruments of policy required to stimulate private investment to conform with national development objectives, they transform the general development strategies and policies usually found in medium-term plans into a program of action for a year at a time.

The components of an annual plan when it is prepared within a functioning system of planning based on perspective and medium-term plans, have been described elsewhere.[16] But as already indicated, few low-income countries prepare annual plans worthy of the name. The lack of annual plans makes it difficult to relate a medium-term plan to annual government budgets. This can be a fatal flaw, since budgets must reflect the medium-term plan if the plan is to be implemented. The lack of annual plans also makes it difficult to convert the general development strategies and policies in a medium-term plan into specific instruments of policy for the private sector. Where a medium-term plan exists, it is frequently out-of-date or does not provide a usable framework for public investment or economic policy and, hence, for annual operational plans.

16 Waterston, Albert. *op.cit.*, p. 141-4.

In these circumstances, it has proven useful to prepare a comprehensive annual plan for the first possible fiscal year as an "Annual Plan of Action" to coordinate on-going development activities in the public and private sectors. An Annual Plan of Action can do much to reduce waste in the current allocations of scarce resources and help produce quick returns through the concentration of available resources on the most urgent public investment projects. This is attractive politically as well as economically.

Because the annual budget is the real determinant of public investment in many low-income countries, it often happens that imbalances are introduced in the pattern of public investment. The budgetary authority often makes annual allocations for projects without knowing how much has already been spent on each or how much will be required to complete it. The government is likely to know even less about the investment activities of public enterprises which use government funds to carry out projects outside the government budget.

Often, therefore, it is desirable as a first step in preparing an Annual Plan of Action, that an inventory be taken of all investment projects and programs sponsored by public bodies, including those sponsored by public enterprises.[17] While the inventory is proceeding, estimates are made for at least two or three years ahead (as a second element of the Plan of Action), of the amounts expected to be available for public investment, i.e., the sum of budgetary surpluses on current account, the expected net inflow of foreign public investment loans and aid, and net internal borrowing by the public sector. It is useful to have these estimates when the Annual Plan of Action is prepared because commitments made in the Plan to start or continue projects, if they are not completed within the year, imply that funds will be available to continue or complete them in later years.

If the inventory of public investment projects and programs reveals, as it often does, that more investment is being attempted that can be supported by resources likely to be available, some projects and programs have to be postponed or eliminated in accordance with priorities set after applying to them general economic, financial, technical and administrative criteria.[18] The Plan of Action should go beyond financial allocations for each project and program and include estimates of the physical progress which each project and program is expected to make during the year.

Since foreign exchange is usually a major constraint on investment in less developed countries, public investment projects and programs to be included in the Plan should also be examined to determine their foreign exchange requirements and to ascertain whether these requirements can be met. To this end, as a third item in the Plan of Action, a detailed foreign exchange budget, for two or preferably three years should be prepared; it should include exchange allocations for each project and program included in the Plan of Action. The foreign exchange budget should also make appropriate allowances for the foreign exchange requirements of the private sector.

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17 The inventory should include projects not yet under construction as well as those in process of construction.

18 The criteria and procedures to be followed in applying them are described in Waterston, Albert, *op.cit.*, p. 91-97.

Fourthly, the Annual Plan of Action should include a program of organizational betterment spcifically devised to implement the Plan. Since the time available to institute and carry out administrative and procedural reforms for this purpose will be short, only minimal changes required to achieve the Plan's implementation should be attempted. For this reason, major overhaul or basic reforms of the government's structure, the public service or administrative procedures -- all of which it is safe to assume will be needed -- should be postponed for a later time.

A fifth component of the Annual Plan of Action is a technical assistance program devised specifically to aid the implementation of the Plan. The technical assistance program should provide for consultants or other technicians required to expedite execution of public sector projects in the process of being carried out; the preparation of feasibility and other pre-investment studies for potentially viable projects or for investment studies of projects already identified as viable but not yet in process of execution; and the establishment and improvement of the organizational arrangements required to implement the Plan of Action.

As a sixth and final element, the Annual Plan of Action should contain a set of specific measures and instruments of economic, financial, fiscal and monetary policies through which the government will seek to implement the Plan and, especially, to stimulate private investment along socially desirable lines. Most annual plans are virtually limited to the public sector . Even Pakistan, with its unusually good planning procedures, largely confined its annual planning to the public sector before 1968–69.

Because appropriate preparation of the six components, particularly the rationalized public investment inventory, is likely to take all the time which planners have for preparing the Annual Plan of Action, it is best that material of lesser importance be excluded. Thus, the Plan need not be based on a quantitative model; nor is there need even for overall or per capita income or output targets in the Plan, or for an evaluation of the economy's performance in the previous year.

There is no disputing the desirability of including these things, and perhaps others. But the question of what is or is not to be included in the Plan of Action should be resolved on the basis of the opportunity costs of scarce planning resources. Aggregative income and output targets for the Plan of Action can be dispensed with because the inclusion of targets is unlikely to improve substantially the results obtained. In effect, income and output become known at the end of the year as achievements instead of at the start of the year as targets. Targets and other items omitted from the Plan of Action can be included in the annual plans which should follow the Plan of Action in subsequent years, when it should be unnecessary to spend time to rationalize a public investment inventory. For the first attempt at comprehensive annual planning, it is better to have an incomplete annual plan in time to influence basic development decisions, especially those made in government budgets, than to have a detailed plan which comes too late.

D. The Relation Between Plans and Budgets

The close relationship between plan and budget which is essential for effective plan implementation, requires a budget classification system and budgetary procedures for translating items in the plan into budgetary terms, as well as budgetary expenditure controls and information

to allow timely and accurate preparation of quarterly, semi-annual and annual reports of plan progress. Because of the short time available for preparation of an annual plan, prompt and accurate progress reporting of projects under way is even more pressing for annual plans than for medium-term plans. But in many less developed countries, budgetary classification systems make it difficult to relate projects and programs in plans to budgetary allocations.

Good planning also requires that current expenditures (e.g., for training personnel to be used on a project under construction after its completion), be related to, and phased with, capital outlays for the construction of the project so that all parts of the project move forward as required to insure the timely completion of each phase. In addition, it is useful in planning to be able to extract from the recurrent budget, development items which, when added to capital items for development, constitute a comprehensive statement of budgetary outlays for development. But in many countries it is impossible to do these things.

As previously indicated, another impediment to effective planning relates to the fact that development estimates are generally prepared in the central planning agency while recurrent estimates are prepared in the budget office, usually in the ministry of finance. Neither body may be aware of the estimates which the other is preparing until after they have been completed. Lack of communication between the planning agency and the budget office not only prevents proper phasing of capital estimates and recurrent estimates for development; it makes it difficult to measure the impact of current investment outlays on future recurrent expenditures. This is serious shortcoming, since capital expenditures almost always require increased recurrent expenditures. Failure to take account of this gives rise to unexpected increases in recurrent expenditures which reduces the surplus on current account available for development investment. Another shortcoming of budgetary procedure in many countries is the need for technical ministries to make two budgetary presentations, one for capital estimates to the central planning agency, another for recurrent estimates to the budget office.

Although serious, the problems outlines can be resolved without undue difficulty. The The object classification system usually found in recurrent budgets must be replaced by a functional classification system. It then becomes possible to designate the recurrent or capital account items which fall in the development category. With a classification technician available to help, the necessary changes usually can be completed in a year or so.

Ideally, the unity of the budget should not be endangered, as it is in practice in many countries, with one agency preparing capital and another preparing recurrent estimates. But a delicate problem confronts anyone who advises that the two parts of the budget be prepared by one agency when two are engaged in the task. The adviser who recommends this may have principle on his side, but he is unlikely to convince one agency to relinquish its pre-rogatives to the other. Given the political and administrative realities in many countries, another course generally has to be found in the short run for accomplishing the same result.

It has been found possible to deal effectively with the problems raised by dual budgets by establishing a Budgetary Coordinating Committee. Top officials representing the budget office and the central planning agency act as permanent members of the Committee, and a high official of each technical ministry, department or agency presenting budgetary proposals, acts as a tem-

porary member when his organization presents proposals for inclusion in the budgets. Each technical organization presents its capital and recurrent estimates simultaneously. The estimates are considered and discussed by the Committee, which reconciles capital and recurrent estimates and brings total budget estimates into line with available financial resources. Experience in Nigeria, the Sudan and other countries has shown that the procedure outlined not only permits realistic estimates to be made of the impact of capital outlays on recurrent expenditure, but also reduces from two to one the number of budgetary presentations which technical organizations have to make.

E. Sector Programs and Projects

Annual plans and budgets, by themselves, have limited value for influencing basic economic changes because not much can be done in one year to bring about such changes. Moreover, most available resources are already committed to existing projects and programs. Annual plans and budgets also lack the perspective required to gauge the long-term effects of current investment decisions. Without perspective, investment decisions that appear to be sensible in the short-run may produce serious internal or external bottlenecks and imbalances over longer periods.

But when annual plans and budgets are used in combination with multi-annual sector programs, maneuverability and perspective become possible. Thus , projects included in an Annual Plan of Action can be phased into sector programs over the years. The implications of going ahead with projects in a basic sector, e.g., in agriculture or industry, also can be related to other sectors, e.g., by the completion of complementary projects in transport and power. In this way, the Annual Plan of Action determines some investments in each sector "from-the-bottom-up". At the same time, by a system of "feedback" projects included in sector programs determine which projects are to be included in the annual plans which follow the Annual Plan of Action.

But, as suggested earlier, political instability, economic uncertainty, formalistic adoption of plans and administrative shortcomings, make long-term or even medium-term comprehensive forecasting difficult in most low-income countries and impossible in many. If the planners have not taken account of the likelihood that events will require major reorientation in the direction or scope of their plan, its life expectancy could be short. But if they have prepared for contingencies by considering feasible alternative development strategies, and have studied the projects and programs required to give effect to them, plan revisions become more manageable.

Sector programs may be especially useful for revising plans if they are prepared in such a way as to identify alternative strategies and the projects required to implement them. For example, in agriculture it would be possible to consider alternative strategies for improving and increasing the output of current export crops, diversification of exports and import substitution, or combinations of these. The projects and programs required to implement each strategy might be identified in the agricultural sector and in related infra-structure sectors, e.g., in the transport, irrigation and power sectors. Regional factors could be taken into account with projects in different regions of a country. This would also make it possible to disaggregate national sector programs into regional programs. Project priorities could be set on the basis of the strategy adopted. Different ways of implementing development strategies might be incorporated into a sector

program. Thus, some strategies could be carried out with the execution of one or a few projects; others with a whole series of projects determined by systems analysis. Development strategies might range from maximal to minimal, each to be brought into play if resources were augmented or if they were reduced. In this way execution of projects and programs could be speeded up or slowed down as resource availabilities dictated.

When sector programming is based on a series of different assumptions with the speed of execution of the variant chosen determined by changes in resource availability, sector investment and output targets have little value. However, to facilitate a coordinated approach, a rolling program for the first three years could be maintained in each sector. Coordinated programming for more years would be desirable, but it is unlikely to be of much value in conditions of uncertainty and instability. Projects in the first year of the sector programs would be included in the annual plan, and provision would be made as required for those that continue beyond the first year in the three-year rolling sector programs. The three-year rolling programs would be compared with each other to insure that adequate provision has been made for complementary projects and their coordination. Only minimal efforts would be made to relate projects among sectors beyond the three - year period on the assumption that inter-sectoral forecasting beyond a three- year period is likely to be unfruitful.

Annual plans would be the primary integrating force, with the three-year sector rolling programs as secondary, and to some extent less detailed, coordinating elements. Where medium-term or perspective plans were in effect, these could influence the composition of the annual plans and sector programs. But where these were unavailable, partial and, if possible, overlapping models could be prepared as supplements to sector programs, where this did not involve too much work. For example, it might be useful, and it would not be difficult, to project the level of exports required to support a level of imports implied in a proposed level of investment.

A prime purpose of sector programming should be the identification of various development strategies and the different projects required to give effect to them. When feasibility and other pre-investment studies for these projects had been carried out, a shelf of projects would become available to be drawn upon as circumstances require without great delay. This implies that more projects would have to be studied than are likely to be carried out. While this may appear wasteful, it is in fact likely to be less costly ultimately than being caught short of viable projects, a situation in which low-income countries frequently find themselves. Where a shelf of studied projects exists for a sector, choices among alternatives become possible. Furthermore, the existence of a stock of projects allows governments to arrange for financing projects long enough in advance to insure their completion in accordance with a predetermined timetable.

F. Longer-Term Comprehensive Plans

Where multi-annual sector programs exist, it becomes easier to prepare comprehensive macroeconomic plans. There is, of course, nothing sacrosanct about a five-year period and since most of the sector programs would be for ten years or more, a comprehensive overall plan could be prepared for ten years instead of five, with the sector programs as a foundation. Since comprehensive forecasts for more than three years or so are likely to be unreliable, both technically as well as otherwise, it would not be desirable to spend more than a few months on the preparation of perspective plan.

The preparations of a ten-year perspective as the last item in the planning sequence may be technically less desirable than to prepare it first, as is customary in conventional planning. But this seems to be a small price to pay for the benefits which are likely to accrue when planners start with an annual plan of action and an improved budget. Moreover, by providing a long-term, comprehensive framework based on well-prepared sector programs, the perspective plan is likely to have more substance than most perspective plans prepared at the beginning of the conventional planning process without benefit of sector programs.

III. Technical Assistance Requirements

Experience has shown that technical assistance is the main requirement for making the annual planning -- improved budgeting -- sector programming approach viable in countries where the government is prepared to adopt it. Much has been made of the scarcity of competent technical assistance for macroeconomic, and microeconomic planning, and for sector programming. There is no question that good technicians are hard to find, but the scarcity may not be as great as some believe. When an attractive program of action for planned development has been devised, especially where an influential agency has indicated its support, and where an aggressive search for competent technicians has been made to help carry out the program of action, people have usually been found to provide the technical assistance. While the supply of good technical assistance is insufficient to meet all demands, the record indicates that where a countryr eally means to develop, it can find foreign technical help for this purpose. The problem appears to be greater than it is because many technicians languish in countries which do not make adequate use of their services. If these technicians were reassigned to countries which need them more, some of the shortages would be alleviated.

IV. Conclusions

From day to day, governments in the less developed countries make investment and other development decisions. The way they are made and carried out reflects the state of the political, economic, social and administrative realities. And given the characteristics of underdevelopment, these decisions are often made without proper account being taken of development potentialities.

In contrast with the faulty decision-making usually found in low-income countries, high quality decision-making is required to achieve goals frequently found in medium-term plans. The The planners know this, of course, and hope that the necessary improvements will be made in the decision-making process. But the gap between the way things are done and the way they would have to be done to achieve the plan's objectives often proves to be too great to bridge in a medium-term plan period. Planners are usually better informed about the macroeconomic than the microeconomic aspects of planning. They therefore tend to have a much clearer notion about *where* a country must go to arrive at macroeconomic targets than they have about precisely *how* to bring about the political, managerial and other changes which are usually pre-requisites for starting up and maintaining momentum for the journey. Planners sometimes view their plan as though it were a beacon in the dark, without the need for marking out the way to it. Consequently, they rarely chart the reefs to look out for en route. Many who start the voyage do so with the optimism of the inexperienced who, finding the passage more difficult then they had expected, predictably give up before the journey's end.

Planners cannot limit themselves to saying *what* is to be achieved without showing *how*, by *whom* and *when* it is to be done. Unless they give attention to the means for reaching macro-economic goals, there is little reason to expect that planned development will be more successful in the future than it has been in the past. The operational approach to planning proposed in this paper is not especially original or new. Although the planning sequence and treatment proposed differs in some respects from the "planning-from-below" phase of conventional planning, the components in the proposed approach are all recognizable parts of the planning matrix.

The proposed approach is not a negation of comprehensive planning since it employs comprehensive planning in the formulation of annual plans. What is different is the order in which comprehensive planning introduced; and this change seems desirable because it is better to improve current development decision-making with annual planning rather than to postpone dealing with current decision-making (as is done in many countries) by starting the planning process with longer-term plans. In this sense, the proposed approach is a form of "instant" planning in contrast with the "delayed" planning in the conventional approach. There is , of course, some risk in this approach that the need for the long view will be lost, but this risk is greatly reduced by the multi-annual sector programs. By emphasizing annual plans, the proposed approach incorporates provision for plan implementation as an integral part of plan formulation. For whereas political authorities may make a plausible case for postponing firm decisions to implement a medium-term plan without immediately exposing themselves to the criticism that they do not really mean to carry out the plan (as happened in Nigeria in the case of the National Development Plan for 1962–1968), this is not easy to accomplish for an annual plan because of the short time available for implementing a one-year plan. This is one reason why the proposed approach is properly referred to as "An Operational Approach to Development Planning."

The proposed approach can be used in whole or in part with conventional planning, but it can be used alone if a country is not ready for conventional planning. While the two approaches are compatible they are not the same. Conventional planning seeks the optimal solution to the problems of development; the proposed approach seeks the optimal exploitation of development possibilities to obtain sufficiently good solutions, given the political, administrative and social realities in a country. Unlike conventional planning, which to be effective usually requires substantial improvements in the political-administrative-social *milieu* in the medium-term, the proposed approach accepts that *milieu* as given in the short-run.

Like conventional planning, the proposed approach seeks to improve development decision-making; but whereas the first approach does this by reference to goals which promise the greatest returns in the long-run, the second does it by reference to shorter-run which promise the *fastest* returns.

The second approach is second-best, but only if the first works. If it does not, and in many countries it clearly does not, the second approach may be the best one *available*, at least until institutional arrangements for decision-making are improved.

The proposed approach has certain advantages over the conventional approach. Its prime virtue is that it starts with the situation as it is in each country and applies those planning

techniques which give the greatest promise of ameliorating the situation, instead of attempting to force every country into the same mold, somewhat modified perhaps to take account of individual differences.

A second virtue is that it suggests a way (there are undoubtedly others) for providing, "from-the-bottom-up," a solid foundation for planning "from-the-top-down." After all, it is the microeconomic factor which largely determine a country's macroeconomic performance. Since plan implementation frequently starts before plan formulation (in the sense that it often takes longer to prepare projects than macroeconomic plans), the preparation of a shelf of projects for each sector provides a solution for "the project gap."

While a stable development strategy is obviously desirable and in fact essential for conventional planning, the proposed approach does not by itself depend on year-to-year continuance of the same development strategy. A third advantage of the proposed approach, therefore, is the flexibility provided by sector programming with alternative development strategies. This makes the proposed approach well suited to the politically unstable and economically uncertain circumstances in which most low-income countries plan today.

A fourth advantage is that the elements in the approach are separable, thereby making each part useable without the others. This adds to the flexibility of the proposed method.

A fifth advantage is that since it introduces few planning concepts which are new, it requires few administrative or structural changes in government organization.

A sixth advantage is that it widens the planning function by making planners of those in the technical ministries, departments and agencies who prepare sector programs and projects, as as well as those who work on government budgets. Virtually everyone concerned with projects and sector programs must see himself as a planner, and be recognized as such by central planners, if development plans are to be carried out successfully.

It would be premature to make claims for the success of the proposal outlined here. However, where it has been tried, the results have been encouraging. In several of the sixteen countries visited, application of part or all of the proposal outlined herein has produced improvements in planning procedures and organizations. Although modest, the improvements have been welcome especially because, for the most part, they represented a reversal of downward trends in planning performance.