

SYSTEM OF CO-OPERATION AND CO-ORDINATION
AMONG PLANNING BODIES OF THE
LATIN AMERICAN REGION *

PLANNING BULLETIN

*Set up at the First Conference of Ministers and Heads of Planning of Latin America, held in Caracas, Venezuela from 13-16 April 1977 and endorsed by resolution 371 (XVII) adopted at the seventeenth session of the Economic Commission for Latin America (CEPAL), held in Guatemala City from 25 April - 5 May 1977.

E/CEPAL/ILPES/G.12

December 1981

LATIN AMERICAN INSTITUTE FOR ECONOMIC AND SOCIAL PLANNING

I L P E S

Planning Bulletin

Nº 8

Santiago, December 1981

CONTENTS

INTRODUCTION		7
ARTICLES		9
Trevor M.A. Farrell	How to plan. AFROSIBER: The nine point method and its application to development planning	9
Barbados, Agricultural Planning Unit	Scope, objectives and special problems of planning for agricultural development with reference to Barbados	37
Mexico, The Ministry of Programming and Budget	The global development plan, 1980-1982 –Synopsis	49
Jere Behrman James A. Hanson	The use of econometric models in developing countries	85
Libran Cabactulan	The General Agreement on Tariffs and Trade (GATT)	129
NOTES AND COMMENTS		137
1. Co-operation for planning		137
2. First Meeting of the Ad-Hoc Working Group in Manpower Planning		138
3. First Meeting of the Ad-Hoc Working Group in Physical and Regional Planning		138
4. Co-operation between Africa and Latin America		139
5. The world's spending priorities		140

Abstracts of the last issue of CEPAL Review Nº 13, April 1981

INTRODUCTION

Economic and social development planning is called upon to play a vitally important role in the Caribbean countries. This statement is fully justified by the present state of development of these countries, their geographical characteristics, the similarity of their objectives and their deep-rooted desire for regional integration at all levels.

This new issue of the *Planning Bulletin* contains important studies and analyses of priority topics at the global and sectoral levels based on work published in the past.

The other articles and contributions reflect our concern to make the *Planning Bulletin* a useful and valuable publication for the member countries of the System of Co-ordination and Co-operation among Planning Bodies in Latin America and the Caribbean. To this end, ILPES will be pleased to receive contributions, comments and suggestions. Your participation and collaboration will be very much appreciated.

HOW TO PLAN

AFROSIBER: THE NINE POINT PLANNING METHOD AND ITS APPLICATION TO DEVELOPMENT PLANNING 1/

Trevor M.A. Farrell */

It is unfortunately still true that most Western-trained economists never formally learn how to plan. At the same time, planning contrary to the wishes or beliefs of its detractors, is steadily and quietly becoming more and more important at all levels -enterprise, urban, regional, national- and in a wide variety of countries. Even in the United States, one of the last bastions of fervent faith in untrammelled free enterprise, the last few years has seen the debate on the need for national economic planning steadily increasing in tempo.2/ And there need be little doubt that whether we like it or not, national level planning is destined to become more important still.3/

1/ Thanks are due to George Beckford, William Demas, Norman Girvan, Terrence Farrell, Maurice Odle, Carl Parris, Karl Theodore and Michael Witter, for detailed and important comments on and criticisms of, an earlier draft of this paper. Most of their criticisms have been accepted and incorporated in this revised draft. I am of course personally responsible for any errors remaining in this version, partly because of my recalcitrance in making all the changes urged upon me.

*/ Professor, Economic Department of the University of West Indies, Trinidad and Tobago.

2/ Noted mainstream economists such as Wassily Leontief have given their support to the idea of some form of national economic planning in the US 12, p. 20. Attempts have even been made to introduce what would amount to national planning through Congressional legislation (e.g., the Humphrey Javits bill). It should be noted too that increasingly over the last few decades, American faith in free enterprise, while consistently strident in theory, has been steadily less manifested in practice.

3/ No attempt is made in this article to present a justification for development planning. It is of course quite clear that State level planning has its dangers and its possible evils, especially in countries which are politically as well as technically underdeveloped. But the fact is that planning, properly done, offers benefits which cannot be ignored.

At the same time, observation of efforts at planning, especially in underdeveloped countries, reveals, all too frequently, widespread ignorance about how one should really go about planning and what are the complex of things that need to be done if one is to really plan effectively. This is true even in those countries that boast of years of planning 'experience'. This phenomenon is due in part to the general lack of training of Western-trained economists in planning method and planning problems. It is also due to the shortage of explicit, well-worked out material on methodology, plus the fact that in many cases, economists and others in charge of planning are suddenly pitchforked into these positions in the context of some crisis situation. This results in planning practice often floundering in a morass of confusion and off-the-cuff notions about how to proceed, and in planning as a result becoming ineffective, futile or chaotic, and winding up as a result with a bad name.

The present paper seeks to provide a simple, clear and comprehensive method for approaching planning which will serve simultaneously three kinds of uses. Firstly, as an operational framework suitable for use by the planning practitioner. Secondly, as a framework that can be used to advantage by the analyst seeking to evaluate a planning exercise. And thirdly, as a methodology which would be well suited to pedagogical purposes.

A survey of both the planning literature and planning experience would show that other attempts at outlining a methodology exist. These efforts however seem to suffer from either a lack of comprehensiveness or from certain elements of illogicality in the steps they prescribe or from lack of clarity, or from all these defects and more.^{4/} In other cases, writers on planning technique do not bother to articulate an explicit methodology or approach at all. Instead a variety of quantitative mathematical tools are offered in a methodological vacuum.^{5/}

AFROSIBER, the methodology outlined here, has been distilled from the intensive study of several planning experiences, their successes and their failures. Its major advantages are that it is comprehensive, can be used flexibly, is easy to grasp and to teach, and provides an explicit framework within which quantitative and mathematical techniques can be located and deployed. Most important it can also be used effectively as a framework for proceeding with practical planning.

In addition it is capable of being generalized to different kinds of planning and to different kinds of countries. Given the importance of planning to underdeveloped countries however, its use here is outlined in relation to the problems of development planning.

This claim naturally raises the question of whether it is really possible to devise a planning methodology which could really be applied to different countries, and different kinds of situations. The answer from the point of view of strict rationality, is yes, as long as we understand quite clearly what the use of a method or framework really implies, and what it does not imply.

^{4/} Examples abound. But see /10/ and /14/ as examples of the first two of these defects. The work of Faludi et al, /5/ and /6/ is a good example of lack of clarity, while the methodology provided by Spulber and Horowitz /15, p. 162⁷ is an example of all three defects noted.

^{5/} Todaro's book /17/ while excellent in terms of what it does treat is an example of this.

A methodology such as AFROSIBER simply provides a systematic approach to a problem. By itself it does not provide the answers to any specific situation. It merely provides an approach designed to enable such answers to be found. The precise answers, are really dictated by the concrete situation. In this sense, it is akin to other scientific methodologies.

An example of this is provided by medical emergency procedure. This is basically a well worked out method that enables the clinician to tackle efficiently, effectively and logically a wide variety of medical crises emanating from widely different root causes and requiring different treatments. The standardized procedures of taking a history, conducting a physical examination, etc., are designed to identify the specific problem and then based on this come up with the required prescription. Thus a proper planning methodology allows the planner to approach planning in a systematic fashion whether it be for a Russia under War Communism, a Dominica after a Hurricane David, or a late twentieth century Sweden or Switzerland.

Nevertheless, there are certain caveats that need be entered from the outset. First of all, it is necessary to warn that while the method is presented sequentially, and appears mechanical, in reality it is neither. Its application does not at all abrogate the need for creativity, imagination and flexibility. Some of the steps need not be, and often are not, carried out sequentially, but simultaneously, or occasionally in reverse. Furthermore, in terms of ideal practice, it is desirable to 'loop' or iterate through certain of the sequences.

Next, the methods outlined do not guarantee that any plan will be a success. No such guarantee can ever be given. One reason is that we the planners, can never control all the variables which affect the goals of our plan. Even among those we control, the use of some may be eschewed for one reason or another, or their relationship to the goals may be misunderstood and therefore their manipulation might be bungled. The uncontrolled or uncontrollable variables may easily wreck the best laid plan. Unexpected bad weather, an earthquake, external aggression, or changes in the international economy may all wreck a plan despite faithful use of the proper methodology for constructing it.

It should also be noted that planning, ipso facto, implies nothing about choice of economic system. In its essence, planning may be quite compatible with "socialism" or with "capitalism". The method outlined here also appears to ignore what might be called the politics of planning. This is taken up elsewhere. The crucial assumption is made here that the planners include the top political leadership. The significance of this assumption becomes clearer later on.

Nothing is said either in this exposition about the organizational requirements of proper planning -i.e., what it requires in terms of social attitudes, how the State sector should be organized, what structures and interactions need to be set up, etc.

Finally it should be noted that in practice the 'ideal' never works out. Things never quite work out as planned. However, this should not be regarded as evidence of the inefficiency of planning, since in many cases a reasonable approximation to the goals set is sufficient for us to regard the overall aims of the plan as more or less successfully achieved.

Let us move on now to an outline of the methodology. There are nine steps involved. We shall first list them, underlining the key word in each

step. These key words are used to derive the mnemonic AFROSIBER. Then each step will be discussed in turn.

- (1) Analysis and assessment of the context within which the planning is taking place.
- (2) Forecasting.
- (3) Resource evaluation.
- (4) Setting of objectives.
- (5) Enunciating formally the strategies for achieving the objectives.
- (6) Fleshing out the implications of the strategies.
- (7) Checking the balances that exist between objectives, resources, etc.
- (8) Execution.
- (9) Review.

Step No. 1 - Analysis of the situation and assessment of the context

The first step in drawing up and carrying out a plan is not setting objectives as is so often averred. One cannot decide what goals ought to be pursued without taking a close look at the particular situation, identifying what the problems really are, what opportunities or constraints exist, and what resources one may have at hand for tackling the situation. For goals and objectives to be meaningful, they cannot be set in a vacuum. It is the concrete situation that determines what the objectives of a planned course of action ought to be immediately, and in the short term, medium term and long term. What we actually decide to do, and how we decide to proceed has to evolve from an analysis of the existing situation. In planning it is both wise and necessary to start from a recognition and assessment of where you are and how things stand.

Once started, this sounds obvious even trite. Yet it is amazing to realize how widespread is the notion that the first thing to do in planning is to set your objectives. It is just as amazing to discover how often the first steps in planning are ignored in practice. This is partly due to the fact that people implicitly assume that the situation is already well known. They often feel themselves to be quite familiar with their country and its problems, partly because some of the problems are so glaring. It is as a result very tempting to plunge straight into the business of goal setting, and the first three steps in planning may never be formally and comprehensively carried out.

This approach however loses for the planner the advantages of systematic study of the situation. It encourages the mistaking of symptoms for causes, the failure to recognize that observed phenomena may be simply symptomatic of deeper lying ills. For example, inefficient, congested ports, failing public utilities, and a transportation system plagued by chronic bottlenecks and breakdowns, may all be simply symptoms of a crisis in public sector management.

All too often the approaches to planning which start by trying to set objectives on the basis of an assumed familiarity with what the problems are, end up proceeding on the basis of partial analysis, with certain features and problems not even recognized, and with some of the most glaring problems misunderstood. For curiously enough, the mere fact of long familiarity with a particularly glaring problem (e.g., unemployment or urban congestion) does not necessarily mean it has been properly and thoroughly analysed.

Stipulating a formal assessment of the situation as the first step in national planning is also important for another reason. It permits a decision to be made as to whether comprehensive national planning is

currently feasible in the existing situation, whether it is called for, and how it should proceed over time -i.e., what sequencing of objectives may be necessary.

The first step in assessing the situation for comprehensive national planning, is to ascertain whether the preconditions for effective planning do in fact exist.

What are these preconditions? They are six in number. First of all, it is necessary to have and be willing to exercise, a certain minimum level of control over the economy you are planning for. Planning cannot, and need not, require that the planners have total control over all the variables that can affect the goals of the plan. But at the same time any country which does not, cannot, or will not exercise a certain degree of effective control over its economy is wasting its time trying to plan for it.

The inability or unwillingness to control and manipulate certain key variables is a major reason for the so-called failure of planning in many underdeveloped countries. For example, where foreign transnationals are allowed to control the key export sectors of a developing country and to dictate their direction according to these companies own perceived interests, planning and setting goals for these sectors and even for the economy, can be a sheer waste of time and an exercise in futility.

A second necessary precondition for effective national planning is that there must exist a cadre of people with the necessary skills, training and commitment to operate the planning system. Thirdly, there has to be organizational structures set up through which planning, execution, monitoring and review can be effected. This means, inter alia, that mechanisms must exist, or be created, which enable planning to reach out horizontally, across the various regions and sectors of the country and economy. Similarly there must exist mechanisms which enable planning to reach down to the level of the line, where the action takes place and both affect what happens there and be affected by it. The requirement that effective and efficient organization exist for planning to take place, implies as well that the necessary management capability must also exist. Organization and management are inseparably intertwined.

Fourthly, there must exist a sophisticated understanding of what planning is, how it functions, what has to be watched for, what are the true strengths and limitations of planning, etc. This must most certainly exist at the level of the top political leadership and planning technocrats in the system. But it should also permeate the entire organizational system right down to the lower levels. Naturally developing this kind of understanding takes time, often considerable time.

Fifthly, and related to understanding, there must also be the will to plan and a serious commitment to planning especially at the level of the top leadership in the country. Lastly, since planning depends utterly on information to be efficacious, there must exist, or be created, a good information base.

If an initial assessment of the situation reveals that some or all of the preconditions do not exist, then one of the clear objectives of the first planning efforts would be to see that the situation is remedied and the absent preconditions are fulfilled.

This is why too in new countries now starting up planning, full-scale comprehensive planning often cannot be commenced immediately. The control does not exist, nor the people, nor the understanding, nor the information, even if the will exists and the organizational structures can be set up. Hence the first job of a central planning agency may be to provide education

on planning from the top of the system to the bottom, to find and train people, develop an information system and seek the necessary degree of national influence and control over the economy. It is also often necessary in such situations too, to engage initially in partial planning -concentrating at first on a few key sectors or areas given the limitations with respect to such resources as management skills, information and understanding of planning.

The next step in assessing the context in development planning involves a systematic study of the domestic and the international situation. Both of these will, at any given juncture of time, impose constraints on what may be done, dictate what needs to be attempted most urgently, and indicate certain opportunities that may be seized.

The analysis of the domestic situation ideally involves at least six different sets of studies. Exactly how many of these are done, how thoroughly, and in what order of priority is usually dictated by the exigencies of the concrete situation.

1. Analysis of the economic situation

There is firstly a need for a careful analysis of the economic situation. This proceeds on several levels:

- (a) Sectoral studies.
- (b) Geographical -urban, regional, etc.
- (c) Certain key macroeconomic magnitudes -e.g., consumption, investment, the public finances, the public debt, the organization and functioning of the financial system, etc.
- (d) The balance of payments.
- (e) Individual commodity analyses where key commodities are involved.
- (f) Problems of technology, indigenous technological capabilities, etc.
- (g) The international economic situation as it affects the country in general, and the several specific dimensions of the economic situation as outlined in (a) to (f) above.

2. Analysis of the domestic political and social situation

At any point in time, the distribution of power between various groups and classes in the society, the impact of foreign penetration and influence, the society's morale, the conflict of interests between various groups, problems of race and ethnicity will all affect what can be done or indicate what needs to be done, and with what priority. The economic situation and the political situation are usually most potent in determining what the immediate objectives of planning have to be.

In a Dominica devastated by a Hurricane David the priorities would be different, and what can be done would be different, from a Venezuela or a Trinidad and Tobago, enjoying massive windfall economic gains from high oil prices.

3. Population welfare

Thirdly, there is usually a need for a set of studies related to the welfare of the population and the distribution of income and wealth. This will include assessments of: (a) health, housing and nutrition; (b) the adequacy of social and physical infrastructure including such things as recreational facilities; (c) income distribution, the incidence of poverty, etc.

4. Demographic and human resource analysis

This includes population, its size, age/sex composition, location and growth rate.

- The labour force, employment and unemployment (sectorally and geographically), the nature of both employment and unemployment.

- Productivity.
- The other aspects of the human resources problem.

5. The physical context

The physical and geographical context must also be analysed and assessed. This assessment considers topographical characteristics, size, geography, the state of the country's infrastructure and capital stock, etc. Some aspects of this assessment will also reappear at a later stage of the planning process.

6. Non-economic factors

It is also extremely important to take into account certain sociological, historical, cultural and psychological factors. These make an enormous difference to the outcome of efforts at planning and development.

In national level planning, it is also necessary to systematically study the international environment in which the planning is taking place, and its dynamics. This involves at a minimum a focus on the international economic situation, international political developments, technological changes, etc., especially where certain key countries or blocs are concerned. The point is that in planning the path of a particular system, one cannot ignore its relationship to other systems and the implications of such relationships. At any juncture the international situation may impose constraints on what may be attempted or it may provide opportunities. It therefore must be taken into account.

The precise set of studies done in this first step varies, as stated above, with the particular situation. In any given case, some of the areas outlined above will command more detailed attention than in other cases. Sometimes too the planners will perceive the need for assessment and analysis of still other factors apart from the ones outlined above. There is therefore some scope for flexibility, and discretion and judgement have to be exercised in determining exactly what, out of the welter of detail, attention should be focused on.

Essentially what this approach involves is identifying the critical elements of any concrete situation, unearthing the mechanisms of their interaction and studying the dynamics of the situation. Obviously enough the success of the future action it is decided to take as a result of this first step, depends crucially on how well, how imaginatively and with what insight this first step in the planning procedure is carried out.

This is one of the reasons why no guarantee could ever be given that the mere use of a methodology will automatically make planning successful. Method is just a tool. It has to be wielded by human beings. That means its effectiveness depends on its interaction with the perspicacity, creativity and skill of the practitioners who use it. At the same time however, a systematic method of proceeding is an indispensable adjunct to intelligence, insight and skill.

The execution of this first step implies three things. Firstly, it is clear that the data requirements for thorough and comprehensive planning are enormous. In many underdeveloped countries, there are severe limitations as to data, availability, quality and timeliness. Since the quality of planning depends in part on the quality of the underlying information, the implication for planning in such countries is clear. Until better, timelier and more comprehensive data is provided, it is impossible to do really good comprehensive planning at the national level. Planning, for this reason, as for others, therefore needs to be seen as a process which develops and grows over time, improving in sophistication, quality and comprehensiveness as its data base, inter alia, improves.

Secondly, it is also clear that there is little chance that the range of studies, information and expertise required in the assessment of context can be generated and deployed in a single, small centralized planning agency or ministry. The efforts and co-operation of many people and institutions are vital. This is only the first of several reasons why good planning has to aim at ultimately being conducted on a decentralized, but centrally co-ordinated basis.

It is quite apparent that in any modern, complex socioeconomic system there has to be an appropriate mix of centralization and decentralization. It needs to be also appreciated that the mix ideally varies over time moving more and more towards the decentralized end of the continuum. Therefore while in a new, simple and rather primitive economic system a fairly centralized type of planning mechanism and organizational structure may be both necessary and effective, as the system grows, diversifies and becomes more sophisticated, the quantum of information increases exponentially and the span of expertise required to interpret it and make decisions becomes steadily broader.

For this reason (and for others), centralization quickly becomes inefficient and leads to system breakdown and irrationality. It becomes necessary to move towards greater decentralization of decision making while improving the capability at the centre for system co-ordination. In planning the development of the planning and the political system, this fact needs to be taken into account.

Thirdly, it should also be clear that this aspect of planning is not simply the job of the economist. The services of the sociologist, the anthropologist, the psychologist, the engineer, the philosopher and the artist, to name a few, are every bit as important as the economist's.

Out of this first step emerges a list of problems and considerations which will immediately signal to the planners what some, at least, of the objectives and priorities ought to be. It will also usually become clearer what kind of time horizon should be chosen for the planning exercise. A final decision on this will emerge out of the conduct of subsequent steps in the planning procedure.

Step No. 2 - Forecasting

The second set of tasks that may be identified in the process of drawing up and executing a plan are those connected with the business of forecasting. Planning involves the assessment of two contexts: (a) the present (and the past as relevant); and (b) the future. In Step No. 1, the planners engage in the study of the present and past. In Step No. 2, the job is completed by a complementary study of future.

Once again, the necessity for forecasting appears obvious when stated. But again, it is amazing to observe how in practice the centrality of forecasts to the planning process, and the importance of attempting it systematically and over many different areas has not been recognized. Approaches to planning which neglect the business of forecasting are inevitably doomed to ignominious failure, since planning is in its essence about the future.

Planning may be described on one level as a choice of futures. When we plan, what we are basically doing is trying to choose or shape a particular future. In forecasting we attempt to get some idea of the future context as a necessary preliminary to shaping the future as best we can.

This is important for at least four reasons. First of all, part of the business of choosing or shaping the future is avoiding undesirable futures. This is the first way in which forecasting can help. For example,

a projection of forecast of unemployment levels fifteen years hence, which suggests that if present trends continue unemployment may be at socially unacceptable levels at the end of that time horizon, signals us to deploy remedial measures or policies to prevent such a course of events.

Another example of this point is the use of forecasting to try to spot bottlenecks that may arise because the different trajectories of interrelated events or phenomena, as in the interrelations between demographic trends and the provisions of housing, or the implication of major new industrial projects for the transportation system.

Secondly, choosing a future really means setting objectives that we want to attain. Forecasting is important in helping us to set the objectives and also in suggesting strategies to follow. For example, a projection that technology and the development of certain indigenous technological capabilities will be increasingly critical for economic success, may lead to educational reform becoming a major objective of plan policy.

Thirdly, forecasting aids in choosing a future through its use in assessing the possible impact of certain policies. Such tools as macroeconomic and econometric forecasts and simulations are important here. For example, these forecasting tools may be used to study the likely impact of proposed changes in taxation on such variables as consumption, wages, investment, labour productivity, etc.

Fourthly, the future is shaped not only by the planners and their desires, but by other variables, some of which may be outside the control or influence of the planners. For example, the policies and programmes of other countries will impact on our own. Therefore there is a need for assessing future trends and developments in certain areas and in other countries. Forecasting comes in here again.

It is clear then that efforts at forecasting span a wide variety of areas. Planners seek to project or forecast in the areas of demographic changes, the labour force, unemployment, various aspects of social welfare -housing, health needs and nutritional needs. Another set of forecasts relate to infrastructural needs -the provision of water, electricity, road systems, port facilities, communication systems, etc. Still others focus on population movements and location, urbanization patterns and migration. Attempts are made too, using a variety of methods, to forecast technological changes and their impact, economic growth, market demand for various commodities and several key macroeconomic magnitudes.

Finally, there are efforts at social forecasting and whole-system forecasting -what is sometimes referred to as futurology. Here, key 'axial principles' which determine the general direction of the whole socioeconomic system are sought. The best example of this is of course the work of Marx, who sought to lay bare the direction of development of society using the axial principles of historical materialism and the Hegelian dialectic. But there are other well-known, 'lesser' attempts -for example, the work of such analysts as Toffler, Kahn, Bell and Samir Amin.^{7/}

The actual amount of forecasting attempted in development planning tends to be determined by the availability of time, expertise, data, finance, and the sophistication and experience of the planners. There is a wide range of methods in use. Sometimes several may be used simultaneously. The quality of forecasts varies considerably. This is due in part to the differences in 'tractability' of the particular variables we

^{7/} See Amin ^[1], Bell ^[2], Kahn ^[13] and Toffler ^[18].

are interested in. For example, demographic forecasts particularly for medium-term planning, are among the easiest to make. On the other hand, forecasts of the long-term impact of technological change are perhaps among the most difficult.^{8/}

One important issue which frequently arises in this regard is whether forecasting is not in general a waste of time since man, it is argued, cannot foretell the future, and so many forecasts are so regularly falsified by the actual out-turn of events. Such arguments are often quite simplistic. First of all, the success achieved in forecasting varies. In some areas, the track record of forecasts is dismal. In others it is poor but improving. In yet others it is quite good. An example of this last is the track record of some macroeconomic forecasts of GNP in the United States. Much seems to depend on precisely what it is that is being forecast, how wide the variety of influences to which it is subject, and the degree of control that human intervention can bring to bear on these influences.

Next, it is important to understand that the purpose of some forecasts is to be falsified through stimulating policies designed to prevent the projected or predicted outcome. Thirdly, some confusion is occasionally generated by lack of clarity as to what forecasting really means.

The term forecasting is really a generic term. It covers on the one hand projections, and on the other predictions or forecasts where the latter is now used as a specific term. All forecasting is done on the basis of some set of assumptions. It is possible, and indeed sometimes desirable, to use different sets of assumptions. Each set of assumptions gives rise to a specific projection. That projection which is based on the set of assumptions the analyst judges as most realistic may be deemed a forecast or a prediction.

Sometimes then when it is claimed that certain forecasts have been falsified, what is actually meant is that certain projections have failed to eventuate. None of these may have been deemed a prediction. At any rate the failure of a projection to be realised with pin-point accuracy may or may not mean anything. In fact in some cases the purpose of the projection might be to stimulate action which would ultimately have the effect of disproving the projection.

Finally, it is true that forecasting is imperfect. However this does not obviate the need for it. It is virtually a sine qua non that good planning demands forecasting.

Step No. 3 - Resource evaluation

Next in the series of studies on which plans are worked up and carried out, comes an evaluation of available and prospective resources. From the point of view of development planning resource evaluation divides into three broad categories: (1) evaluation of natural resources; (2) evaluation of capital/financial resources and (3) assessment of human resources.

Natural resources can in turn be subdivided into four types:

- (a) Atmospheric (air, space, weather, climate);
- (b) Hydrospheric (water resources);
- (c) Lithospheric (land and soil, fuel and non-fuel minerals and other physical matter);
- (d) Amenity resources (including beaches, panoramic views, natural wonders, etc.).

^{8/} See Drucker [3] for an example of the results of early forecasts of the impact of the computer.

Natural resource evaluation entails drawing on the knowledge and skills of a wide variety of specialists. It also presents peculiar difficulties and requires considerable imagination.

Difficulties arise for several reasons. Among the most important is the fact that what is a resource is not a straightforward matter. What is considered a resource or not a resource changes over time, often drastically. For example, at one time guano was an important resource. Today it is not. At one time uranium was not a resource. Today it is.

Resources cannot be evaluated independently of economics, technology and time. Economics determines whether there is a sufficiently strong demand for a material to justify its development and production given the relevant cost configurations. It should be noted that 'demand' is a key word here. It is obvious, but frequently forgotten or ignored in underdeveloped countries, that whether a material or a physical artifact has any value as a resource depends on whether there is a demand for it. Peat was at one time a significant resource. There was a strong demand for it as a fuel. Today there is virtually no demand for it. So peat is hardly a resource worth bothering about currently. (This may change again. Who knows? Similarly oil or gas are today important resources because there is a strong demand for them. But the time may come when neither oil nor gas would be worth counting as a resource.)

This caveat is important for development planners since there appears to be an unfortunate tendency to insist on considering as a resource, and attempting to develop, things which people no longer want. A prime example is sugar-growing lands in the Caribbean territories.

Technology also plays a role in determining what is a resource and what is not, which resource can be deemed economically available or unavailable at any point in time, and how much of it there is. Technology may throw up substitutes for example, which relegate a previously important resource back to being just another internationally ignored material, or one whose importance is considerably diminished. Examples are the development of nitrogenous fertilizers at the expense of guano, the substitution of plastics for many metals and the increasing relegation of coal to a back-seat role in the pre-1973 world due to the tremendous development of oil and gas.

Technology also determines in part economic availability. New techniques for example may make the development and production of lower grade ore commercially feasible. Technology even plays a role in determining exactly how much of a resource we can count ourselves as having. For example, by raising quality, or by techniques for recycling scrap or producing lower grade or previously inaccessible materials, the quantity of a resource can be 'stretched'. An example here is the way in which the development of technology to economically produce oil from shale could one day dramatically increase North American oil reserves.

Finally, time has to be considered in determining when and how much of a given resource will be available. Reserves are a stock. But the production or exploitation of a reserve is a flow through time. It is necessary to be able to estimate the size of the flow per period of time in planning.

The complexity of natural resource evaluation is further increased by the fact that imagination also enters. For example, the perception that a wilderness, or some unusual vista or other natural phenomenon might be

ped as a tourist attraction is an exercise in imagination. Similarly, perception that some familiar but long ignored material has new potential is also an exercise in imagination.

What is a resource, it cannot be stressed too much, depends very heavily upon need. Therefore planners should expect that at a later state of the planning it might be necessary to order up a reconsideration of the country's resource potential when certain needs or goals become clearer and when certain difficulties, bottlenecks or constraints seem to loom ahead. At this stage, resource evaluation may proceed in a relatively conventional fashion, focusing on well-established resources (oil, gas, bauxite, copper, arable land, etc.). But already, from assessing the context, the identification of problems that will require solution, and from simple formal assessment of what the country's resources really are, new ideas are likely to begin to spring up.

It is important for planners not to wear blinkers where resources are concerned. Indigenous or regional availability is not the beginning and the end of everything. Most resources can be obtained through trade. The problem may be on what terms. But the essential point is that the possibilities of trade should not be ignored or forgotten, especially at the later stages of the planning process.

In development planning, one is also going to need a preliminary assessment of available human resources. Now the evaluation of human resources is a very tricky business. What is a 'human resource' is not a simple question to answer. At this stage however, the planners are usually mostly interested in getting some idea of the actual and potential supply of labour, its current geographical and sectoral distribution, a breakdown by occupational categories and an estimate of some of the most important skills and capabilities (e.g., the number and type of engineers, doctors, economists, nurses, tool-and-die makers, etc.).

Detailed human resource planning is tackled at a subsequent stage. In the resource evaluation stage, we are more or less gathering basic data which will give us a clue as to what objectives are feasible, and what constraints may exist.

Finally, while from the economic theoretical point of view we may focus much of our attention on 'real' as opposed to financial resources, nevertheless from the operational standpoint we need to also assess financial resources -that is, the finance capital that provides a claim on real resources. Of particular importance in this regard for most underdeveloped countries is the assessment of foreign exchange reserves. This has to be done only in a most preliminary fashion at this stage, since the quantum of foreign exchange and financial resources that will become available for use over the plan period depends in part upon the plans that are made and their execution.

Step No. 4 - Setting objectives

In the process of carrying out the first three steps of the planning process, many ideas will automatically be thrown up as to what the society and its planners should aim for. From a study of whether and how well the six preconditions listed for effective national planning are fulfilled, it may be decided that among the first set of objectives for the new plan would be to find ways of satisfying these preconditions so that subsequently, really good effective planning may be undertaken and the scope of the plans broadened. Some ideas on the appropriate time horizon for the plan are also likely to emerge from this first assessment. From assessing the context and from forecasting, systematic information will be generated on

the problems, current and expected, facing the society. At least some of the bottlenecks lying ahead will have been spotted, constraints and opportunities will have been identified. From a preliminary consideration of the resource situation, as we have seen, certain possibilities virtually suggest themselves, and certain implications fall out. In short, it is impossible to perform the first three steps of the exercise thoroughly and conscientiously and not have a pretty good idea of what the set of goals and objectives ought to be.

It ought to be clear by now that housing is or will be a major problem for example, or that employment will need to be expanded by 3 or 4% per annum over the designated time horizon if unemployment is to be eliminated. It may become clear that there are possibilities for the development of hydroelectric power, or that the education system will need to be drastically overhauled, reformed and expanded if the country's need for skilled manpower and people's demand for education are to be met.

Furthermore, possible conjunctures that might be made between problems, needs and resources would have suggested themselves. The wise planner will systematically record these ideas as and when they occur, at whatever stage of the process. After all, many minds do not work in a highly formalized and strictly linear fashion, and the purpose of a methodology is as a guide and a check, and not as a straitjacket to creativity.

At this present stage however, a first attempt is now made to formally set out the list of possible goals and objectives, assign priorities and consider possible conflicts and difficulties. What kinds of goals and objectives will the planners usually be concerned with? At this stage, one is dealing with broad, aggregative, general type goals and objectives. These are usually related to the factors which combine to delineate development and underdevelopment.

Nine broad categories of objectives are usual:

(a) Objectives related to the population's welfare -housing, health, nutrition, etc.;

(b) Objectives related to the size, composition and rate of growth of total output;

(c) Objectives related to the degree of equity in income and wealth;

(d) Objectives relating to the society's utilization of its resources. These include on the one hand the utilization of natural resources, measures to protect the environment, etc. On the other hand, there are objectives relating to the utilization of the society's human resources, unemployment, under-employment, job satisfaction, productivity, etc.;

(e) Next, there is usually some concern for goals relating to education and educational levels in the society;

(f) Relatedly, there are objectives relating to technology and the development of certain technological capabilities;

(g) Seventh, there are objectives relating to the provision and amount of socially available capital;

(h) Other objectives relate to the problems of structural transformation in the economy, the development of new sectors, the elimination of dying or decaying ones, the diversification of the economy, the fostering of sensible linkages between productive sectors, etc.;

(i) Finally, there is a class of objectives which is basically non-economic. This includes objectives related to the desire for national control (an essential ingredient of which is the society's ability to determine its response to events affecting it). Also included are goals with respect to cultural development, the quality of life, the development of democracy and participation, the freeing of creativity, etc.

Formal and explicit goal-setting is important for several reasons: (1) it clarifies the business of choosing and evaluating strategies; (2) it is important for evaluating and monitoring subsequent performance; (3) it is important for motivating and organizing people, and (4) it is useful in the early identification of conflicts and contradictions.

Now it will usually be the case that more goals or objectives will be suggested than can in fact be met within any reasonable kind of time horizon. It is therefore necessary to rank goals and objectives accordingly to some rough notion of priority. There is currently no way to rank or weight objectives except by value judgements. Therefore, such a ranking is clearly a political matter. This should not, however, be taken to mean that it is only the business of the politicians.

Goal setting is a political process which should ideally involve broad popular participation. One need have no illusion that a political process can be devised which would reliably and consistently produce total social accord on the ranking of preferences. The best that one can achieve is a reasonable degree of consensus on the most important goals suggested by the 'elite' (politicians and planners) running the system. Nor are mathematical models which purport to set up objective preference functions to be maximized or optimized of very much use. The range of objectives is not only too broad, and it is not only that a social welfare function is not feasible, but there is the fundamental problem that certain goals are simply not quantifiable in any meaningful way -e.g., the development of culture.

Therefore in development planning, what one can reasonably expect, in the present state of the art, is to propose a complex of objectives, have them widely debated and discussed, generating as much popular awareness, participation and opinion as possible, with the aim of arriving at some 'broadly acceptable' social consensus. In other words, there is no escaping from the fact that to date planning and setting objectives is 'politics'. However, the situation may not be as gloomy as it appears. Experience suggests that it is quite feasible to obtain widespread social agreement on a list of desirable social and economic goals and objectives -housing for all, the elimination of unemployment, reducing inflation, curing the balance-of-payments deficit, and so on.

Where the problem usually arises is in the trade-offs that achieving some goals imply in terms of others, and even more critically in the means of achieving them, and the implications of deploying the particular strategies. So everyone may agree on the need for a new airport for example, but the residents who are chosen to be displaced for it or those who lie in the flight path of the incoming aircraft would very likely prefer that the problem be solved at somebody else's expense, though they agree with the basic solution.

The setting of objectives will create certain problems familiar to the students of public policy and its theory. Some objectives will turn out to be interrelated. They may be either positively or negatively correlated. Where objectives are negatively correlated or in conflict their clearly have to be trade-offs made. Here again, value judgements enter and often play the decisive role. It is necessary for the planner to recognize that some desirable objectives may not be attainable quickly, easily or at all. For example, it might be quite hopeless to identify as an objective the creation of a heavy industry based on a small Caribbean island such as St. Kitts or Montserrat. But of critical importance in the process of shifting through objectives and firming up a preliminary listing into something more concrete

is the business of deciding how the possible objectives might be achieved. This raises the question of strategy.

Step No. 5 - Identifying and enunciating strategies

Setting objectives naturally raises the question of how are they to be achieved, at what cost, and even whether they can be achieved at all. There is also the question of in what time frame they can be achieved. This raises the issue of the time horizon for the plan whether short, medium or long term. Decisions have to be made on all these matters.

At this stage we have before us a range of possible objectives. For example, eliminating unemployment, improving access to education, providing water and electricity to all, organizing an efficient transport system, etc. How do we proceed? In what follows, we shall draw heavily on the conceptual apparatus developed by Tinbergen in order to explain the next steps. This apparatus should be regarded as conceptual and heuristic. The aim is to provide a conceptual understanding of how we proceed and what the issues and problems are. It should not be thought that actual strategies or policies are necessarily arrived at in this way.

The broad objectives we have arrived at are what may be called ultimate objectives or ultimate targets. However we will discover that in many cases to attain these ultimate targets, it is necessary to attain certain proximate targets, either because these act as proxies for the ultimate variables or because their attainment is a necessary and/or sufficient condition for attaining the ultimate targets. For example, we may have an objective for providing good quality housing for all in ten years. Let us suppose this means building 20 000 new housing units a year over the time horizon. This is the ultimate target -housing for all, provided at such and such a rate. But to do this we may need to attain a three-fold expansion in the construction industry. This expansion then is a proximate target. It is not an end in itself. It is a necessary precondition for attaining our real ends.

Ultimate and proximate targets together may be classified as our target variables. Attaining certain levels of these variables is the object of our economic and other policies. Our first step here then is to distill our proximate targets from our previously set out list of ultimate targets where this distillation is necessary. Now there are particular variables which affect these target variables. For example, the weather, credit policies and the availability of land are variables which affect agricultural output.

The variables which affect our target variables may be classified into two broad types: (1) those variables which are subject to the control, manipulation or influence of the planners and policy makers. Examples here are tariff policies, directives to State enterprises, budgetary policy, the control of crown of State lands, etc.; (2) secondly, there are those variables which are not controllable by the policy makers. Examples here would include the policies of other countries and natural phenomena such as earthquakes, climatic changes, etc.

The first category of variables here constitute our instrumental variables. These are variables which are manipulable endo-systemically -i.e., from within the system. This category further subdivides into two -those instrumental variables which are actually controlled by the policy makers, and those which though controllable or manipulable are not controlled or manipulated for one reason or the other. The second category of variables are autonomous variables. Some of these are exo-systemic controlled. They

are controlled by entities outside our own system. We may call the instrumental and autonomous variables together the action variables.

The action variables affect our target variables. But that is not all that they affect. There are actually three kinds of variables which are affected by the action variables. First of all, there are our target variables. These are the objects of policy. Secondly, however, there are variables which the action variables affect within our system but which are not target variables. For example, people's sexual practices or their religious beliefs may not be regarded as an object of policy. That is they are not target variables. Nevertheless urbanization policies (an instrumental variable) which may impact on the pattern of urbanization (a target variable) may also impact on sexual practices or religious beliefs. These variables so affected can be classified as 'other Affected Variables'. They may be very important but for one reason or another they are not deemed objects of policy.

Thirdly, our instrumental and autonomous variables may affect yet other variables, but unlike those in the previous category, these we may not care about. These are the 'irrelevant variables'. An example is the impact of our tariff policy on a smaller, distant trading partner. These three categories of variables affected by the action variables may be denoted as the 'Impact Variables'.

The business of choosing strategies essentially involves working out which target variables can be affected by which instruments, and with what effect on the whole system. The impact of autonomous variables also needs to be calculated. (Risk and uncertainty figure prominently here.) Out of this an identification is made of how targets may be attained. The choice of instrumental variables is predicated first of all on an accurate understanding of how the instruments are related to the target variables and how the proximate targets relate to the ultimate. Secondly, the choice of instruments is constrained by certain boundary conditions. The boundary conditions specify for example minimum levels for the use of instruments or for targets to be attained. They may also forbid or dictate the use of certain instruments or the attainment of certain levels of the 'other Affected Variables'. For example in a capitalist system wage-price controls may be ruled out as an instrument for tackling inflation. Or in another system, physical coercion may be ruled out as an instrument for attaining certain targets.

There are several essential points which need to be made about the business of choosing strategies, that is, selecting the right instruments to achieve desired targets:

(1) The same instrumental variable may affect several different target variables and also other impact variables. It may affect them in different, even contradictory fashion (from the point of view of desired policy results). In other words, instrumental variables are like drugs. Every doctor or pharmacist knows that drugs have side-effects, sometimes negative ones. Contraceptive pills, to give a well-known example, prevent unwanted children but may cause cancer.

The manipulation of instrumental variables has similar results. For example, a tariff may serve to increase government revenue but at the same time may alter the pattern of consumption to the detriment of the welfare of many people. Or a highly protective tariff may help to improve the balance of payments but at the same time may reduce government revenue and worsen the income distribution or general economic efficiency by fostering domestic monopoly.

(2) Any given target variable may be affected by more than one instrument. (In general, any impact variable may be affected by more than one action variable.) Thus the distribution of income may be affected by policies on progressive taxation, or by policies on transfers or by wage policy. This raises the problem of choosing the most effective instrument.

(3) The influence or impact of an instrumental variable on a target is not an all or nothing business. That is, there are degrees of influence or effect. For example, tax policies may have some effect on the local retention and disposition of the profits of a transnational in a country's key export sector. It is simply that the effect may well be small.

(4) Instruments are not always transposable across national boundaries and different economic structures. Thus Keynesian deficit-spending policy will fail to cure Caribbean as opposed to metropolitan unemployment essentially because of the balance-of-payments bottleneck. In the same way, the boundary conditions for strategy differ between countries.

(5) Some targets, it will be found have to be achieved simultaneously. For example, the elimination of structural unemployment may turn out to be related to structural transformation. This in turn may turn out to be related to the dismantling of foreign control over key economic sectors and the achievement of genuine economic independence.

(6) Instruments when identified need to be grouped together into categories -e.g., tax, commercial policies, credit policies, direct intervention, etc. These groups have now to be studied (both intra and inter-category) to spot conflicts, contradictions, side effects, etc.

(7) When the set of strategies needed or feasible for attaining the complex of objectives has been identified, it will generally become quite clear that this set or series of strategies are related to, or depend on some major, broad over-arching strategy. This is reinforced by the fact that usually one or two major objectives tend to dominate all the other objectives, and the strategies necessary to achieve these are consequently the dominant ones.

For example, in Soviet Russia, the primary objective set in the 1920s and 1930s was the building of a strong socialist State militarily capable of withstanding hostile capitalist encirclement. This dictated the basic industrialization strategy, the emphasis on heavy industry and the treatment meted out to agriculture. The essence of the development strategy chosen can be summed up in six words - "Build heavy industry at all costs".

Another example of an over-arching strategy related to the attempt to attain one or two prime objectives is the use of the Lewis strategy in the Caribbean and elsewhere. Here the key goals were the generation of economic growth (increased output) and the elimination of unemployment. The essence of the strategy was to invite in foreign capital since when the context was assessed, it was noted, *inter alia*, that these countries lacked entrepreneurship, capital, markets, technology, etc. It was assumed that foreign capital would provide the missing ingredients.

Now the Lewis strategy and its effects point up an important lesson for planners. The choice of a 'correct', effective basic strategy, is absolutely critical to the attainment of one's goals. If the basic strategy is erroneous or ineffective, the objectives will not be attained. Much of the blame assigned in the recent past to development planning for failing to really solve the problems of underdeveloped countries is wrongly attributed.^{9/} The fault has lain not with the idea of planning but with the

^{9/} See the paper in Faber and Seers [4].

choice and implementation of misguided, erroneous and ineffective strategies. The Lewis strategy is a classic example of this.^{10/}

Is there any technique which guarantees that a good, workable strategy will be chosen? I do not think so. Certainly, a thorough careful and objective assessment of the critical factors identified in step one will help enormously. But psychological factors play a crucial role here -i.e., such factors as the dominance of traditional ways of viewing the world, the problem of the colonial and neocolonial mind in the underdeveloped world. It is easy to say that a correct strategy will naturally be evolved from a 'correct' understanding of history or imperialism or the international economy or whatever. In practice, it is quite clear that people's willingness to see the world in one way or another is not simply the result of intelligence or intellectual exposure. Subtle, often intangible factors are also at play -class background, personal history, temperament, cultural conditioning, etc.

Here then is one of the pitfalls of national planning especially where it is organized on a highly centralized basis. For in a decentralized system (for example some market systems), the same factors alluded to here operate and impact on the success or failure of the plans of individuals or enterprises. But misjudgements in one place are sometimes counterbalanced by accurate perceptions and brilliant strategies conceived in another. On balance therefore, the system may move forward, failures in some areas being outweighed by success elsewhere. But in a highly centralized system misperceptions by a small group of planners and the construct of erroneous strategies may bring to ruin the entire system. This is one of the most powerful reasons for planning to be open, relatively decentralized and generating as much participation as possible. Even this, however, will not guarantee that the strategies chosen are necessarily correct.

Step No. 6 - Fleshing out the implications of the strategy

The strategy or strategies devised are usually fairly broad or general. For example, it may have been decided that the key to economic expansion and the elimination of unemployment in a small, underdeveloped economy lies through the development of a sophisticated and competitive export sector. Again, it may have been decided that providing adequate nutrition and adequate housing for all the people are major goals to be achieved, and the strategy to achieve these involves organizing and harnessing domestic resources now lying idle.

The goals and strategies have to be operationalized. They have to be broken down and detailed into specific tasks for specific areas of economic activity and related to definite geographical locations. Furthermore, the resources needed to achieve specific plan targets have to be spelt out in some detail. Therefore the planning process, which has moved from an approach based more or less on what is specific and on disaggregation (in steps 1, 2 and 3), to a somewhat more general and aggregative set of considerations (in steps 4 and 5), now becomes more disaggregative again. At this stage then we move into sectoral level planning, urban and regional planning, and the planning of certain critical macroeconomic categories (e.g., consumption, investment, the public finances, foreign trade and the balance of payments, etc.). We will also need to plan for certain other specific areas or issues -e.g., technology, education, sports, the arts, etc.

^{10/} See Farrell [7] for a case study assessment of the impact of this strategy.

It is perhaps wise to enter a note of clarification at this point. The above paragraph should not be taken to mean that sectoral studies, and sectoral and area planning only begin at this point in the planning process. Far from it. In our very first step assessing the situation, we saw that one begins by carrying out, or ordering up, a range of sector studies, area studies, and issue studies. Therefore work at the sectoral level has really already begun.

In fact what we are really involved in is a mixture of "top-down" and "bottom-up" planning, and this is both increasingly desirable, and increasingly feasible, as the country's experience with sophistication in planning grows. In this type of system, when operated in its most mature form, planning is really begun and carried out at several levels simultaneously. "Bottom-up" planning is necessary because at the operational level, 'on the line', in the various areas of activity, one will find certain information that is important and even indispensable to sensible decision-making. One will also find there important knowledge and understanding of what the problems are, ideas on how they ought to be tackled, and expertise that may not exist at the centre. The role played by the lower levels of the system in planning their activities is also crucial to the functioning of real democracy.

At the same time, "top-down" planning is important because the centre has certain vital inputs to make. The centre has an important contribution that it can make to the pool of information and knowledge necessary for the proper planning of each specific sector, region or area of activity. Its job involves, inter alia, the collection and dissemination of extra-systemic information, and it also has or can generate information on what is happening in other areas of the system, what the problems there are, and given its broader perspective, what the overall priorities seem to be. For example, knowledge of new technological developments -internationally or trends- in international demand which may affect a particular domestic sector significantly may be obtained first by the central planning agency, especially in backward countries.

The centre's monitoring of global trends may also alert it to the need for major strategic shifts in the structure of the domestic economy, the establishment of totally new sectors and the elimination of old ones. The need for this kind of broad strategic shift may not be perceived as readily, or at all, if planning is simply the summation of bottom-up sectoral or area plans, conceived and drawn up without the leavening of an over-arching perspective on the direction of the system as a whole. In other words, the centre has, or ought to have, a sense of the desirable direction of the system as a whole, which is not likely to be found at the sectoral or area level. These levels tend to be actuated to a greater extent by more parochial considerations.

At this stage there is an interactive process which takes place that involves a dialogue between the centre, and the sector and area organizations in the system. These organizations would include government ministries or directorates, the actual enterprises comprising the various sectors and industries (or industry-wide bodies representing the firms), the municipalities, county, or other local government authorities, trade unions, professional bodies, citizens associations, etc.

The process cannot be a 'one-way' business with the centre simply issuing directives. While at some point decisions must be formally taken, choices made and orders given, there ought to be initially a considerable amount of two-way information flows, debate, discussion and bargaining. Out

of this a broad consensus may well emerge. Conflict and even acrimony, are neither unexpected nor unhealthy at this stage. There may well be some further modifications to the previously arrived at set of objectives and strategies, as a result of the response of the various subordinate bodies to the demands, arguments and proposals of the centre.

It ought to be stressed that in even moderately complex systems one need have no illusion that the centre can in fact come up with plans for the various sectors, regions and other areas of the activity all by itself. The range of expertise required, the information, the intimate familiarity with the problems and the issues, and the interest in and concern with the various problems and issues, cannot usually be found in a simple ministry or agency.

The trick is to organize effective planning in the specialized agencies and enterprises responsible for the other areas of activity. The central agency will of course need to have people or sections with the specialized knowledge required to understand and liaise with the various sectors or areas. However a few such people in each area do not represent a technical capability to plan for those sectors or areas, completely apart from the politico-organizational problems that will arise if they try.

National planning involves a careful mix of centralized co-ordination and decentralization, and the mix itself will vary somewhat over time as the system becomes more complex and sophisticated. But it is important to spend much time and care considering the division of tasks and decision-making between the central bodies and the organizations in the system. A broad rule of thumb is that just from the point of view of technical efficiency alone, the more complex the system the greater the need for decentralization of decisions and responsibilities, and, at the same time, the greater the need for central co-ordination and harmonizing of the system as a whole.

Sectors and regions will be delineated on the basis of certain criteria which make sense in the specific situation. For example, the sectoral breakdowns chosen will involve a consideration of the importance of particular areas of activity to the country, data availability, people availability, the size of the activity and of related activities, and the number of organizations involved.

In Cuba, it makes sense to have a Ministry in charge of sugar, and to designate sugar as a specific area of activity distinct from the rest of agriculture. This is because of the importance of sugar to Cuba. In the same way it makes sense to treat oil and bauxite separate from the other areas of industrial activity in Trinidad and Tobago and Guyana.

It will also often prove necessary to sequence the planning of various sectors. This is because the activity of some sectors are derivatives of others, and their levels cannot be specified without a prior specification of the demands made by these others. For example, energy and manpower cannot usually be planned without reference to the levels of planned activities in other sectors of the economy.

The choice of sectors too cannot be based simply on what has existed in the part. Our efforts at forecasting and setting overall strategy may lead to the setting up of brand new sectors, and the liquidation of existing ones.

The planning of each sector involves the setting of targets for it, the specification of the resources, including manpower, necessary to achieve the targeted levels, the elaboration of the strategies necessary to achieve the goals, and the delineation of the organizational systems necessary.

New projects will usually be involved as well as the continuation of old activities. It is here that the techniques of project design, project planning and project evaluation play their role in the overall planning process.

It will also be important in this detailed planning to consider the sequencing of the activities in the sector or region over time, for example year by year. Each time period would demand particular amounts and configuration of resources depending on precisely what stages the various activities are at. The demands for manpower in the construction sector will look very different if studied in a year by year sequence in a five year plan, as compared to if studied as aggregated demand over all projects for the five years. Time phasing is therefore important.

Finally, the socioeconomic system which is being planned does not exist in a vacuum. There are other entities outside of it, which both affect, and are affected by, the system being planned. The plans and strategies that are drawn up will impact on other bodies and other systems, whether these be rival, opposing, fraternal or neutral. They may be expected to react. It is as important, as it is neglected, to do anticipatory planning. Possible exo-systemic reactions need to be assessed, and strategies to deal with these reactions devised as part of one's regular planning.

For example, it may have been decided that the development of some key sector of the economy in certain new directions would necessitate its being brought under national control and direction. If this sector is controlled by foreign corporations, and especially if it is viewed by them and their home governments as being of strategic importance, and plans for it, made in our own national interest, may well be viewed as not in accord with corporate and foreign interests, and therefore deemed undesirable. Consequently these entities may be expected to react and react negatively. This must be anticipated and options for dealing with their response identified. In other words, one-punch planning will not do. Planning which proceeds by ignoring the fact that other people beside the planners can affect the target variables is usually disastrous in practice.

Step No. 7 - Calculation of balances

By the end of the previous stage, we will have a clear idea and a detailed listing of the objectives, plans, projects and actions necessary for achieving the overall goals of the plans. The original broad aggregative objectives have given way to highly specific and detailed, disaggregated goals and objectives. From our sectoral and regional plans, and from the projects planned and evaluated, we will have made estimates of the resources necessary to achieve the various goals of the plans. It is now time to bring some consistency between the plans of different sectors and areas, and between the various demands for resources and the total quantity of resources likely to be available. It is also necessary to check that the overall plans for the economy and society are really feasible, and are based, on realistic assumptions.

At this stage therefore a whole set of balances have to be calculated. These balances first of all match up demands for resources from various sectors and areas with the estimated supply of resources that are expected to be available. And naturally this matching up has to be time phased -i.e., the calculations have to be done for each successive time period over the time horizon for the plan.

Several balances need to be calculated in detail. Among the most important are the labour and manpower balances, foreign exchange balances

for key raw materials and other intermediate inputs, and the financial balances. It is also necessary to carry out impact analyses of the overall and the subsidiary plans on key variables (e.g., the environment, the economic infrastructure -e.g., transport systems, telecommunications, unemployment and so on). Impact analyses of the likely effects of the plans on various geographical regions are also important. It is also useful to attempt to evaluate and forecast how the overall plan aggregated from its components is likely to function in practice, and to check the implications for certain broad macroeconomic magnitudes (consumption, investment, public expenditure and revenue, projected rates of growth, etc.).

These emphasize the co-ordination that is one of the major advantages that comprehensive national planning offers. They are among the most crucial tasks that the central planning agency has to undertake and are furthermore tasks which can only be performed by such a central agency. It is here at this stage, that the apparatus of mathematical programming models, input-output tables, macroeconomic models, and econometric forecasting and simulation models should logically be deployed.

Some approaches to planning begin with the construction of macroeconomic models of the economy. Then several, more or less arbitrarily chosen growth rates are selected, and the implications of these for the economy as represented by the model are investigated. These implications are usually detailed sectorally, as well as in terms of the major macroeconomic magnitudes. Some growth rate which appears both feasible and desirable is then chosen as the crucial target for the plan, and the plan itself more or less consists of what policy makers must do to achieve this targeted rate of growth over the plan period.

While quite popular as an approach, this type of procedure is most decidedly not recommended here for underdeveloped countries. The logic for setting up some growth rate as a desideratum is at best dubious. Any given growth rate for an economy need say nothing about how people are fed, or housed, or clothed, how the society's technological capabilities are developed, what is happening to distribution, or the extent to which structural transformation is taking place. And it is these factors which are, or ought to be the real objects of concern for policy makers.

Nor should it be believed that a decent rate of growth, if achieved, would bring all the other objectives we are really interested in, in its train.^{11/} There has now been an abundance of experience in a number of countries that testifies to the falsity of such a proposition. The rate at which the GNP of a country grows is not a good proxy for indicating the level of welfare of the masses of its people, or how it is developing. Its use as the target of development planning, and the key factor governing the approach to planning is therefore to be eschewed.

In our approach here, the use of macroeconomic models, the estimate of the growth rate that our plans imply and the calculation of the broad macroeconomic magnitudes such as consumption, investment, etc., are mostly done as broad checks on the consistency and feasibility of our plans, and not because the variables thusly estimated are regarded as either proximate or ultimate targets.

^{11/} In other words, this notion implies that the rate at which an economy grows is a proximate target variable, the attainment of which is at least a sufficient condition for the achievement of the desired levels of the ultimate variables (re - our real development goals).

These techniques are also useful for providing valuable information on certain policy measures that would need to be taken to achieve plan targets, for example with respect to what they may imply about taxation, government expenditure, desirable savings rates, etc. But planning ought not to start with model-building exercises.

The other quantitative tools that may be deployed here serve additional functions as well. Input-output tables are one of the most useful planning tools. They can be used to provide panoramic views of important resource balances throughout the system, as well as inter-industry transactions. Consequently, they provide important information on what gross as opposed to net sectoral outputs will have to be if plan targets for final consumption and exports are to be met. These tables need to be supplemented, however, by the calculation of more detailed resource balances for important resources such as labour, foreign exchange, etc., which cannot only be more detailed, but can be calculated for each year, or even each quarter of the plan period.

Mathematical programming models, though really still in their childhood, have the potential of being used for providing indications as to how the plan can be 'perturbed' to achieve a greater degree of optimality. Contrary to many of the claims made for them, these models do not really offer the possibility of optimal planning unless one is only concerned with output, output mixes, or growth rates as the only important targets of the plan. From the time planning is admitted to be concerned with a multiplicity of objectives, including several that are abstract and non-quantifiable, these techniques, cannot be held to provide a method for deriving the optimal plan.

Checking balances is like a pilot's final check before take-off, except that in development planning it will usually be found that this check reveals problems which require a return to the shop. It will often be found that the plan is too ambitious in the light of reasonable judgement as to resources. It will sometimes be possible to alter the plan to produce more of certain resources (e.g., foreign exchange, energy, or labour. This last may mean programmes to import skills or to encourage immigration).

What this means is that the initial set of objectives will have to be revised somewhat. It is always the case that there will be some need for scaling back and re-juggling of objectives, resources and subsidiary plans.

In the application of the planning method therefore, it should be recognized that one has to loop or iterate between steps 7 (checking balances) up to step 3 (resource evaluation) and down to 7 again. This iteration may have to be performed several times. It is highly unlikely that the planners will get it right the first time.

Unfortunately it is also often true that planners, after a great deal of work the first time around, are reluctant to go back and re-do many studies and estimates, or they feel that time and cost is against such a procedure, however desirable it may be. This decision has in turn as its consequence the generation of chaos and horrendous bottlenecks when what is essentially the first draft of a plan is put into execution.

Ideally, after successive iterations, satisfactory balances would be attained. It is now desirable to work out the precise time-phasing of the plan over each period of the plan horizon -that is, what is to be done in year 1, what in year 2, the flow of resources that will be required in each period, and so on. This really involves the calculation of balances for each successive time-period of the plan. This is necessarily detailed, and

can be tedious, but it can help to avoid bottlenecks and crises when we come to execution.

Step No. 8 - Execution

It is wise to consider execution as an integral part of the planning process. This encourages the planners to consider how execution is to take place and to 'plan' for it, rather than stopping at simply producing plan documents. Planning is of little use or relevance if the plans never get implemented, or even attempted.

Key to both planning and implementation is people. Plans are, or ought to be, for people and about people, and it is people who have to execute them. Part of planning strategy then is a consideration of how people will be persuaded to attain the objectives agreed on. From the point of view of development planning there are essentially two methods - coercion, or persuasion by some incentive or combination of incentives.

With respect to the latter method, there has been a long debate on whether moral or material incentives should be chosen. A study of the relevant literature and of the experience of several countries strongly suggests that persuasion is most effective through a combination of moral and material incentives on the one hand, and through engendering widespread participation at all stages of the planning process on the other. Broad participation is desirable both for successful execution and for help in providing the information and expertise necessary for national planning.

For example, centrally concocted plans for agriculture, which fail to involve the farmers and the Ministries of Agriculture, often fail for these reasons. The centrally set plans are often quite ignorant of basic realities on the one hand. On the other, considerable hostility is generated towards them on the part of those who are supposed to execute them, but were not consulted. This hostility, reinforced by cognition of the plans' lack of realism, leads, in the absence of effective coercion, to the systematic sabotage or ignoring of such plans.

For successful plan execution, in the absence of serious physical coercion, it is desirable that (1) there be widespread popular participation in the planning process; (2) that a reasonable degree of consensus be achieved; (3) that an effective system of incentives, both moral and material, be devised, and (4) that those who are to execute the plan participate in devising it.

During execution, it will usually be found necessary to alter or adjust the plan, and in some cases even to abandon it altogether and work out a new plan. It should not be thought that altering or even abandoning a plan means that planning is a failure or does not work. Planning is imperfect. Necessarily so. We do not have control over all the variables which affect our target variables. We do not have all the information we would need about the present and the future, for perfect planning. Risk and uncertainty exist and sometimes things work out in fashions contrary to our desires.

Planning always proceeds on the basis of a set of assumptions. The validity of the plan depends in part on the validity of the assumptions. If the assumptions are rendered invalid, then the plan should be altered. Far from being a weakness of planning, this situation is in fact one of its strengths. Planning does not absolve us of the repercussions, consequences or ill effects of the unexpected event. But it enables us to better cope with such events and their effects. We have the advantage, in contrast with the non-planning of being able to quickly recognize and

appreciate the likely implications and ramifications of the untoward event, and respond intelligently. This is a major strength of the planning process.

One of the devices sometimes suggested to cope with the problems of uncertainty, the likely advent of the unexpected event, and the discovery of errors in our assumptions or estimates, is to use rolling plans, rather than fixed period plans. Here if we are using say a five-year plan period, as each year is completed and experience and information accumulates, as well as various unexpected events occur, we alter or adjust our plans, adding in the process one more year at the end to the plan period. Thus in 1980 our five-year plan period may be from 1981-1985, in 1981 it would be from 1982-1986 and so on.

Rolling plans can help in coping with the untoward events, the recognition of mistakes, lack of realism in our plans and so on. This is because it formally introduces a procedure for bringing flexibility into planning and goal setting, and permits an institutionalized response to changes in the environment as they occur.

However, rolling plans have a major disadvantage. They tend to result in a loss of the organizational discipline that planning provides through its setting of firm targets that must be achieved. If the targets are going to be changed frequently, then it proves difficult to convince people to take them seriously and make an effort to realize them. This is why one finds that many of the socialist countries, with the greatest experience in planning reject the use of rolling plans.

Cuban planning officials, to give just one example, argue that they find it preferable to let a plan fail, in the sense of the targets not being fulfilled, and have officials explain why they were unable to fulfill them, rather than change the targets whenever something untoward occurs. Even if the reasons for non-fulfillment are 'force majeure', and everyone knows this, is felt to be a better system for keeping up the motivation to carry out the tasks laid down in plans.

This is clearly an important point. But it is equally clear that keeping up the fiction of trying to attain the targets of a plan that some major event (e.g., the 1973-1974 oil crisis) has rendered invalid, or frequently abandoning a plan totally and starting over when such crises occur can have similarly disastrous effects on discipline and morale. This seems to be a case where what you gain on the swings, you lose on the roundabouts. My own cautious (and tentative) opinion would be that rolling plans can be usefully advocated especially as understanding of planning increases in the system since the net advantages seem to outweigh the net disadvantages.

Step No. 9 - Review

It is probably useful then to monitor a plan as it proceeds and adjust accordingly. At the end of the plan it is necessary to have a review. A review is an analysis of the plan's successes and failures. If experience of the past is to serve as a guide to improve practice in the future, a formal review is very important. It should of course be noted that in reviewing a plan, the simple study of whether the objectives were attained or not is not enough. The achievement of the targets or their non-achievement has to be assessed in terms of some analysis of why the particular goals were or were not attained. From a review, we distil useful guidelines for improved practice in the future. Thus even with a system that

uses rolling plans, it is desirable to call a halt at some stage and have a formal review.

CONCLUSION

AFROSIBER is not a methodology or set of steps to be applied mechanically. It in no way absolves the user from the need to use imagination, creativity, intelligence or judgement. On the contrary, study of the method and attempts to systematically apply it in practice show that it emphasizes the role of and the need for these factors. What it does do is provide us with a detailed and comprehensive methodology with which we can tackle the problem of planning, and it is also useful as a check that in planning we have considered all the various aspects of the process that need to be considered. It is also useful in terms of indicating the organizing of the planning effort through indicating what needs to be done.

It should be stressed once again that in applying it, strict linearity is not necessary, and may at times run counter to the needs of the situation. So that steps 1-3, for example -i.e., assessing the context, forecasting and resource evaluation- may proceed simultaneously. Similarly steps 4, 5 and 6 -setting objectives, generating strategies and detailing their implications- may proceed in an intertwined fashion.

The precise application of this methodology varies somewhat depending on the particular circumstances in the country we are planning for. In some cases, for example, in a new country now starting planning, or in a country that is both new to the game and poor what the method would lead us to do, is to emphasize in the first couple of plans efforts to fulfill the pre-conditions necessary for subsequent more comprehensive planning, and to increase the resources available for development. The range of studies done, the level of detail gone into, and the quality of information used would be significantly different (i.e., less) than in a better organized and more developed country.

In other cases, for example a country just emerging from the devastation caused by some natural disaster, a major war, or civil commotion, the application of the method might result in a distillation of one or two very clear precise and critical objectives, just from step 1. Here little forecasting may be done, and even the international environment may not at first be assessed in any great detail. The methodology then is flexible enough to allow particular circumstances to influence how it is used, and what steps are stressed while at the same time providing clear guidelines on procedure.

Finally, it is perhaps useful to warn that there should be no illusion that in practice plans ever work out precisely as they are laid down. Perfection is not possible, and faithful use of this or any methodology will not provide it. Fortunately, it is usually not necessary that plan targets be achieved with pinpoint accuracy for us to deem planning worthwhile or successful. If methodical and sophisticated planning helps us to achieve the advantages of better co-ordination of activities with the consequent reduction of waste, crises, bottlenecks and mistakes, if it allows intelligent setting of priorities after careful consideration of all our needs and problems, and if by the use of systematic forecasting and scanning of the environment, it helps us to make 'strategic shifts' in the system as necessary, then planning would have done its job and its benefits would have been successfully realized.

REFERENCES

1. AMIN, Samir Accumulation on a World Scale, Sussex, England: The Harvester Press, 1974.
2. BELL, Daniel The Coming of Post-Industrial Society, USA: Penguin, 1973.
3. DRUCKER, Peter F. "Business and Technology: Partners in Progress", Economic Impact No. 9, 1975.
4. FABER, M. and SEERS, Dudley (eds.) The Crisis in Planning Vol. 1, London: Chatoo and Windus for Sussex University Press, 1972.
5. FALUDI, Andreas (ed.) A Reader in Planning Theory, Oxford: Pergamon Press, 1973.
6. FALUDI, Andreas (ed.) Planning Theory, Oxford: Pergamon Press, 1973.
7. FARRELL, Trevor M.A. The Economics of Discontent, San Fernando, Trinidad: Supaprint, 1975.
8. FARRELL, Trevor M.A. "Unemployment, the Human Resource Problem and a Perspective Approach to Manpower Planning" in Jack Harewood (ed.) Unemployment, Journal of Caribbean Issues, August-December 1977.
9. FARRELL, Trevor M.A. "The Multinational Corporations, the transfer of technology and the human resources problem in the Trinidad-Tobago petroleum industry" CTPS Studies on Technology (forthcoming).
10. FEDORENKO, N.P. (ed.) Economic Development and Perspective Planning, Moscow: Progress Publishers, 1975.
11. FRISCH, Ragnar Economic Planning Studies, Dordrecht, Holland: D. Reidel Publishing Co., 1976.
12. HEILBRONER, Robert "National Economic Planning: The Need", Economic Impact No. 15, 1976.
13. KHAN, Herman and WIENER, A. The Year 2000, New York: MacMillan, 1967,
14. LEWIS, W. Arthur Development Planning, London: George Allen and Unwin, 1966.

15. SPULBER, Nicolas and
HOROWITZ, Ira Quantitative Economic Policy and
Planning, New York: W.W. Norton and
Co., 1976.
16. TINBERGEN, Jan On the Theory of Economic Policy,
Amsterdam: North-Holland Publishing
Co., 1966.
17. TODARO, Michael P. Development Planning - Models and
Methods, Nairobi: Oxford University
Press, 1971.
18. TOFFLER, Alvin Future Shock, London: 1970.

SCOPE, OBJECTIVES AND SPECIAL PROBLEMS OF PLANNING FOR
AGRICULTURAL DEVELOPMENT WITH REFERENCE TO BARBADOS

Barbados, Agricultural
Planning Unit *

Introduction

Barbados is a small island. Its area is only 166 square miles or 40 500 hectares and 77% or 24 300 hectares are available for agricultural purposes. During the last decade, there was an annual average of approximately 28 000 hectares cultivated and about 18 500 hectares of these were planted in sugar cane which is the predominant and traditional crop of the country. The remaining 91 500 hectares are shared by such crops as yams, sweet potatoes, onions, vegetables and others. It has been estimated that there are about 800 hectares in vegetables with approximately half of this area under irrigation and 800 hectares in citrus, mango, avocado, bananas, coconut and other fruit trees scattered throughout the island, and about 10% of the remaining land of poorer quality is in pasture. Around 80% of the sugar cane and 75% of the rootcrops are produced on the large estates and the rest on small or medium size holdings. Most of the vegetables have been traditionally produced by small or medium size farmers. However, a few plantations have, within recent years, been increasing their production of vegetables. The yields on small holdings are lower by about 20-30% than those on the plantations. It is apparent that, with the exception of sugar cane and a few other crops, the yields of most farm crops are well below the potential standard, which suggests the need for organization and technical efforts.

It is only within recent years that livestock, especially poultry production, has developed on a commercial scale. The poultry, egg and dairy industries are, to a large extent, concentrated in the hands of the medium and large scale producers. Yet, over 70% of the cattle, 80% pigs, 90% sheep and goats are on the small farms.

Water resources for irrigation are limited and a significant increase in the irrigated area is not expected in the near future. However, with different and more modern techniques and a higher level of education, it is possible that a wider area than at present could be irrigated from the same amount of water currently used. Approximately 400 hectares are irrigated at present and this is mainly by small and medium size vegetable producers. The average annual rainfall is about 150 cm and favourably distributed. However,

* The Agricultural Planning Unit, Ministry of Agriculture, Food and Consumer Affairs.

a high degree of technical skill is required to retain soil moisture during the dry season. Most of the soils are shallow but of fair quality and suitable for cultivation of a variety of crops. Drainage is also a problem, especially in the Scotland District area during the rainy season.

The population of Barbados is estimated at 250 000 persons and about 25% of the working population is employed in agricultural and related occupations. It is reported that over 98% of the population is literate and primary and secondary schools exist all over the island.

Though the techniques employed in agriculture are fairly advanced on the large farms, there is still need for improvement in productivity especially of vegetables, food crops and livestock. This is particularly so among the small farmers. There is need for better production practices and the application of more effective farm management in order to obtain greater output from the land, water and labour.

The Ministry of Agriculture and its Services

The Ministry of Agriculture, Food and Consumer Affairs assumes a wide range of responsibilities in the field of agricultural development, planning, research and extension. In 1965, the old Department of Agriculture was renamed the Ministry of Agriculture, consequent upon the introduction of Ministerial Government. It was also in that year that the post of Deputy Chief Agricultural Officer for Research was established with responsibilities for non-sugar crops and livestock production. This was seen clearly in support of Government's policy to diversify agriculture and to show some regard for the development of the small farm sector, for it must be pointed out that prior to this time the staff of the old Department of Agriculture had represented only the needs of the sugar and plantation sector.

It is now regarded that the Ministry of Agriculture, Food and Consumer Affairs is the governmental organization with total responsibility for fostering, guiding and monitoring the development of the agricultural sector. This Ministry must therefore formulate and implement those policies and programmes which are consistent with the stated objectives of Cabinet. It is in fact the main governmental contact with the general public in matters related to agricultural development and policies. In order to formulate and implement the agricultural policies and programmes, the Ministry is subdivided into functional units and employs about sixty technicians and a larger number of persons in the related fields.

The major areas (or departments) through which the Ministry functions and has its outreach are as follows:

- (i) The Extension Services Organization
- (ii) The Research Services Organization
- (iii) The Planning Unit Organization
- (iv) Other Support Institutions
 - (a) Barbados Marketing Corporation
 - (b) Agricultural Development Corporation
 - (c) Barbados National Bank

The Agricultural Planning Unit in the Ministry of Agriculture, Food and Consumer Affairs has the responsibility for agricultural planning. It must submit its sector plan to the National Planning Division in the Ministry of Finance and Planning which incorporates the plan into the National Plan. The latest plan to be published is the Barbados Development Plan 1979-1983 and the Sectoral Plan on Agriculture and Fisheries is attached as an appendix II to this paper.

In addition to the Agricultural Planning Unit, operating units under the Chief Agricultural Officer may formulate and implement programmes without going through the Agricultural Planning Unit. Further efforts of the Planning Unit are aimed at developing a more co-ordinated planning mechanism within the Ministry of Agriculture.

Other Government controlled agencies such as the Marketing Corporation, the Agricultural Development Corporation and the Agricultural Credit Bank form part of the planning machinery. In addition, there are privately controlled agricultural organizations which play a role in the planning process.

I. Current Patterns of Agricultural Planning

During the past two decades, national planning for economic development as one sector of the overall plan, has become widespread. Mellor in his book "The Economics of Agricultural Development" states that "the purpose of planning for development is to achieve greater efficiency through co-ordination. Effective co-ordination is based on an overall view of the development process. Plans may concern themselves with direct provision and allocation of resources through the manipulation of market forces and incentives. Resources to be allocated include not only traditional forms of capital but administrative talent and skilled manpower necessary to develop new institutions".

The literature contains several good summary statements -almost idealized models of agricultural planning. These reflect the current concern with the place of agriculture in economic growth, the concern with food supplies, and the concern that vigorous programme action is necessary if agriculture is to grow at an acceptable pace. Szeze Panik of FAO presents a brief outline of the common steps in agricultural planning, dividing the process into formulation of objectives and preliminary targets, research, formulation of development policies and measures, formulation of investment schemes and projects, programming, implementation and evaluation.

II. Objectives of Agricultural Plans and Policies

The fundamental purpose of development planning is to promote human welfare and growth. Increase of national income or the rate of economic growth is only the means to this end. Within this broad aim are always certain specific objectives, e.g. to maximize employment, to diversify the economy, or to deal with problems of balance of payments. To these may be added many more objectives which may be partly economic and partly social. Thus the long term development strategy in recent years for Barbados has been the diversification of the agricultural sector, expansion of tourism and development of industrial exports.

In recent years Barbados Development Planning has attempted to come to grips with the pre-eminent economic problems of its agriculture: an over dependence on one single crop -sugar. Although sugar cane is well adapted to the natural environment of Barbados the essentiality of agricultural diversification is recommended for the following reasons:

1. To overcome the structural rigidity of the agricultural sector due to its heavy dependence on sugar.
2. To overcome a growing deficit in the balance of payment on current account resulting mainly in increased quantities and costs of food imports.

While it is recognized that sugar is likely to remain the principal generator of foreign exchange in the foreseeable future, a hedge must be established against potential problems whose exact nature cannot be analysed now. The obvious remedy lies in a greatly increased emphasis on programmes for modernizing and expanding the production of non-sugar agriculture.

The years to come, must see an increasing emphasis on the positive contribution of agriculture to the overall pattern of economic growth and with it, a considerable change from planning for agriculture as a kind of welfare sector to a new emphasis on seeing agriculture as an essential, fully economic sector of a growing economy. Lewis notes, "if one were asked to pick a single factor as the most common cause of a low rate of economic growth it would have to be the absence of a vigorous agricultural policy". He goes on to say that agricultural stagnation is the main constraint on the rate of growth... It contributes to a shortage of foreign exchange, either by failure to earn more, or by failure to supply the growing urban demand for food and raw materials, which must then be imported. Except for countries which have rich mineral resources, no underdeveloped country can grow rapidly in which farm output is stagnating. "Hence a vigorous agricultural policy must head the list of developing measures." Much of the recent work of development economists focuses on the interrelationship between agriculture and other sectors, with significant implications for agricultural planning. Much of this new concern for agriculture has grown from the fact that countries like Barbados are losing the capacity to feed themselves, evidenced by the growing food import bills. In addition foreign exchange earnings which chiefly come from agriculture have been declining at an increasing rate.

III. Plan Strategy Outline

Goals

The goals for the development of the agricultural sector in Barbados, which may be achieved by the implementation of an integrated production and marketing system, are to:

1. Increase sugar and non-sugar agricultural exports and import replacement.
2. Improve the standard of living of the agricultural community and the nutritional status of the community at large.
3. Maintain an adequate agricultural community.
4. Minimize the fragmentation of agricultural land.
5. Conserve land and bring under-utilized land into cultivation.

Resources

1. Land
 - (a) Erosion in the Scotland District.
 - (b) Idle and underutilized lands.
 - (c) Uneconomical use of land.
2. Water
 - (a) Underdeveloped irrigation facilities.
 - (b) Absence of dams to conserve run-off water in the Scotland District.
3. Manpower
 - (a) Undertrained agricultural labour force.

- (b) Shortage of technical and professional skills in research, administration and management.
- 4. Physical capital
 - (a) Inadequate stock of farm equipment.
 - (b) Poor infrastructure in the Scotland District.
 - (c) Underutilization of existing equipment owing to poor distribution of services.
- 5. Finance
 - (a) Low retention of earnings in sugar industry.
 - (b) Inadequate credit facilities for small-scale farming.
 - (c) Inadequate funding for agricultural support schemes.
- 6. Management
 - (a) Adherence to outdated and ineffectual management methods.
 - (b) Poor managerial performance in key statutory institutions.
 - (c) Inefficient extension and other farmer services.

IV. Special Problems of Agricultural Planning

Planning for agricultural development in Barbados presents a number of special problems and difficulties. Unless these are clearly understood and adequately provided for in policies and measures for the implementation of plans, the objectives sought are unlikely to be attained. This is the more serious since a shortfall in agricultural production can seriously hamper and dampen the growth of the whole economy where agricultural exports (sugar) is a major source of foreign exchange, where food is a considerable item of consumer expenditure and where a rise in food prices therefore gives rise to grave inflationary pressures. Among the more important of these special problems are:

(1) The need to establish a pattern of land use, cropping and animal husbandry which will conserve or increase our very scarce soil and water resources.

(2) The large seasonal and year to year fluctuations in output. These coupled with the low price elasticity of most farm products largely account for the great instability of agricultural prices. While the importance of price stability at the consumer level is generally appreciated, the serious disincentive effect on production of low and unstable farm prices appears to be of secondary importance.

(3) The seasonal peaks of demand for labour tend to reduce farm productivity and make it more difficult to shift manpower to other occupations. This imposes the triple problem of finding systems of farming with more steady labour requirements, of finding ways of usefully utilizing underemployed farm labour during slack periods and of substituting mechanized systems for labour intensive systems without the resultant retrenchment of labour.

(4) The need to rationally transfer capital from agriculture to finance investment in other sectors, without at the same time checking the growth of agricultural production or making the farm sector unduly unprofitable. Much more research is needed to reach a better understanding how agricultural taxes in general and land taxes in particular can be used to provide compulsory savings for economic development on the one hand and how tax incentives can be used to bring about increases in agricultural production, to give some indication of the net fiscal burdens on agriculture, relative to other sectors and to show how administration of agricultural taxation may be improved.

It seems worth emphasizing that by no means all the transfers of resources from agriculture take place through the medium of taxes. If agricultural land prices are too high and are unable to give a return consistent with the level of investment, if the cost of credit to the farmer is too high in relation to the returns to the farm investment, then in effect resources are transferred out of the agricultural sector. If because of defects in the marketing system, the producer must sell at low prices and in the end get a very small share of what the consumer paid, again there is effectively a transfer of resources out of agriculture. Perhaps the best recent general discussion is that of Stephen Lewis, in his paper "Taxation of Agriculture and Economic Development" -who reviews the main trends in post-war professional thinking about agricultural taxation and non-tax policies in the context of their possibility for resources transfer from agriculture to other sectors.

(5) A characteristic of investment in agriculture of considerable importance in planning, is that to an extent greater than any other major sector, the bulk of the capital needed to raise agricultural productivity is not fixed capital but short term working capital. This applies particularly to the purchase of fertilizers, pesticides, improved seeds, animal feeds, etc. Because of the quick turn over of such inputs, conventional national accounting methods may miss changes in their use. They do not figure in capital output ratios, and this may lead to an underestimation of the real capital needs of agriculture. This gives the impression that capital output ratios in agriculture are very low and may lead to an underestimation of total investment requirements by leaving out the particular need for short term credit.

(6) The presence of outmoded institutions in agriculture which until remedied will effectively block rational development. This applies especially to land distribution and condition of land tenure, of credit and marketing.

(7) The small scale, the dualism and dispersed nature of agricultural production. Since the course of production depends on the independent decision of thousands of small and scattered producers who cannot be effectively coerced, it is essential to enlist their co-operation if plans are to be effectively implemented.

(8) The dispersed nature of agricultural production makes it very much more difficult than in other major industries to obtain reliable statistics or to implement measures (e.g., of land reform, credit or price stabilization) designed to increase incentives to expand production.

(9) The dualistic structure of agriculture and the pre-eminence of part-time farming in Barbados are important considerations. A further dimension to the planning process is the thousands of landless farms that form part of the agricultural sector.

(10) Then there is the "specialness" to agriculture as a production process that differentiates it from other forms of production. It is a biological process and is characterized by heterogeneity in its physical inputs and climatic factors. The time span required in agricultural production involves a large number and wide variety of decisions. Agricultural production involves a "crop cycle" or time lag between planting and reaping and the decisions to be made throughout this gestation period are many and require different skills and knowledge; which crop to choose, which variety, when to plant, when to weed, when to fertilize and when to harvest.

(11) There are key identifiable factors that are essential to agricultural growth and will accelerate it. Mosher in his book "Getting Agriculture

Moving" has identified five (5) essentials: (1) Transportation, (2) Markets for Products, (3) New Farm Technology, (4) Availability of Purchasable inputs and (5) Incentives; and five accelerations: (1) Education, (2) Production Credit, (3) Farmer Association, (4) Improving or expanding land base and (5) Planning. The relative importance of one or more of these factors must be based on the unique agricultural problem situation and, most important, each problem situation must be studied in totality. It is vitally important to recognize that uniqueness and totality are essential preconditions to the formulation of successful programmes for agricultural development in Barbados.

V. Decentralization of the Planning Process

A major weakness in agricultural planning to date has been the failure to decentralize the planning process further. The weight of opinion in the literature is that more decentralization is necessary if agricultural planning is to enlist the support of cultivators, local agricultural leaders and government administrators. As Waterston says: "The Planners task becomes a matter of trying to reconcile, or at least to strike a workable balance between a whole series of divergent interests. This can best be done by making the preparation a plan combined operation in which everyone and every group likely to be affected by it - government authorities and administrators, legislative and other representative bodies, the private sector and the public is involved in the process in some appropriate way".

"A number of analysts feel broad support for planned programmes and participation in the development effort can come only if there is more public debate about planning policy and subsequent programme formulation. Effective agricultural planning calls for a national seminar on development where the plan designers, the programme formulator, the programme implementers and those affected by the programme have, in a sense, an equal responsibility in the formulation of policies and programmes. The best way to ensure acceptance is to bring into the implementation of the plan representatives of those who have to carry it out."

An agricultural planning is basically a political process and should embody and express the consensus of the society in terms of the strategy for agricultural development. Accordingly the preparation of a plan for agricultural development should provide the occasion for the Minister of Agriculture to exchange views with the Nation's agricultural leaders and scientists. Technically sound development programmes which fail to take political realities into account are destined to fail. By the same token, political plans which ignore the technical facts of agricultural science and economics are unlikely to accelerate agricultural progress.

Price Gittenger of the World Bank submits that "developing countries with the best economic growth records are those where national development objectives are widely discussed, where programmes are argued over and formulated throughout the society, and where everyone from the Government Minister to the lay worker understand the harsh realities of economic growth".

VI. Organization for Planning

The type of organization for economic planning (including agriculture) naturally depends on the traditions, the political structure and other special circumstances of the country. But normally provision has to be made, however simple or elaborate the form of planning, at three levels:

1. Determination of broad policies, such as the main objectives of development, and of the plan, the overall level of investment, the balance between different sectors of the economy, etc.

2. The more technical aspects of planning including the analysis, comparison and co-ordination of proposed development projects and programmes, reviews of trends and prospects on world markets for those commodities of economic importance to the country, formulation of targets, etc.

3. After the plan has been finalized, implementation of the individual projects and programmes which make up the plan.

The main point for emphasis here, is the great importance of close consultation and co-ordination at all stages and levels if economic planning and development are to be coherent and effective. A plan for one sector, such as agriculture indeed becomes fully meaningful only within the framework of an overall plan.

By far the most extensive and best work dealing with general organizational problems of development planning is Waterston's which draws on the planning experience of virtually every country in the world. After reviewing the experience in a number of countries Waterston recommends a Central Planning Agency or Ministry with rather aggregative responsibilities and establishment of "programming units" in the operating Agencies or Ministries.

Based on Waterston's model of plan organization in his "Development Planning - Lessons and Experience", and adapted to meet the specific needs of agricultural planning in Barbados, an organization plan structure is conceived of in the following ways:

(1) A Central Planning Unit residing in the Ministry of Finance and Planning which has the responsibility for general economic analysis policy formulation and review and integration of sector plans. To this Unit obviously falls the task of estimating gross domestic product, balance of payment, ordinary government expenditure and revenue and similar national aggregate indicators, the articulation of national economic development objectives, the establishment of target rates of growth, and the integration of sectoral proposals into the final plan. To encourage co-ordination of sector plans the central planning agency must exercise a general administrative function of establishing deadlines and criticizing the programme submitted for individual sectors.

(2) Programming Unit (Agricultural Planning Unit) residing in the Ministry of Agriculture, Food and Consumer Affairs adequately backed up by the various operating units, (crops, livestock, extension, fisheries, co-operatives, soil conservation, marketing credit, etc.).

The primary function of the Agricultural Planning Unit would include (1) the combining of projects and proposals of the operating units in the Ministry of Agriculture into agriculture sector programmes; (2) submitting and defending them before Central Planning Unit; (3) recommending policies, instruments of economic policy, administrative or other measures and machinery required to implement the Ministry of Agriculture's programme; (4) reviewing and evaluating agriculture sector projects and programmes; and (5) co-ordinating the Ministry's demand for, and the use of technical assistance. From time to time the Agricultural Planning Unit would be required to undertake special assignments, such as drafting loan application for projects, preparing project reports for foreign aid missions and international agencies, or assessing the impact of a specific project or programme.

To permit the preparation of the required studies and reports, the Agricultural Planning Unit would need to collect, record, process and

analyse relevant statistical data provided by the operation units and from elsewhere. A desirable way to organize the Agricultural Planning Unit would be to set up two loose, flexible sections. One of these would be concerned with general analysis, research and statistics; the second with programming, progress reporting and evaluation.

The Agricultural Planning Unit should occupy a crucial position in the agricultural planning process and should be the main channel of communication between the Central Planning Unit and the Ministry of Agriculture. It should receive information from central planning about planning objectives and directives which will permit the Ministry of Agriculture to prepare projects and programmes for incorporation into the national plan. In turn the Agricultural Planning Unit should act as an agricultural information reservoir for central planning. An agricultural plan prepared by the Agricultural Planning Unit is necessarily tentative until central planning reconciles it with other sectoral plans and available resources.

The Agricultural Planning Unit should not prepare or execute projects, since these are properly the functions of the operating units in the Ministry of Agriculture. It should however set up forms and standards for the various operating units to follow in the preparation and execution of projects. These should provide among other things for (1) feasibility and engineering studies, and cost-benefit analyses; (2) the identification of "milestones" in executing projects which permit the setting up of realistic work schedule and phasing of a project with other related ones; (3) building into the project suitable means for determining, on an up-to-date unit with other costs, as well as physical progress during the execution of the project; (4) assigning responsibility for each task; (5) training programmes required to produce personnel qualified to operate a project when completed; and (6) the creation of a suitable organization and management cadre to run the finished project.

Because the Agricultural Planning Unit transcends organization lines in a Ministry of Agriculture and because it must transmit certain guidelines and directives to which operating units must conform in preparing and executing their projects, it is desirable that an Agricultural Planning Unit be established as an independent staff unit reporting directly to the Minister through the Permanent Secretary.

The Agricultural Planning Committee should be made up of the Minister of Agriculture, his Permanent Secretary, the Chief Agricultural Officer, the Deputy Chief Agricultural Officers, and the Head of the Agricultural Planning Unit as standing members and the Heads of the various operating units to be co-opted as needed. Such a committee would constitute the planning group for the Ministry of Agriculture and as such should review policy proposals which the Ministry's Agricultural Planning Unit has prepared for consideration for the Minister or Permanent Secretary, and where appropriate for Cabinet or Central Planning Committee. This planning committee should also endeavour to evolve means for achieving economy avoiding waste and ensuring efficient execution of projects.

It is further desirable for the Ministry of Agriculture to have an advisory body (National Advisory Council) composed of persons outside the Ministry to participate and help in the process of preparing and executing the Ministry's programme. Representation on this committee should be as wide as possible and should aim at covering the range of problems that impinge on agricultural development, institutional, production, marketing, financing and credit and manpower. The size of this council should be determined on the basis of compromise. Such an advisory body would be

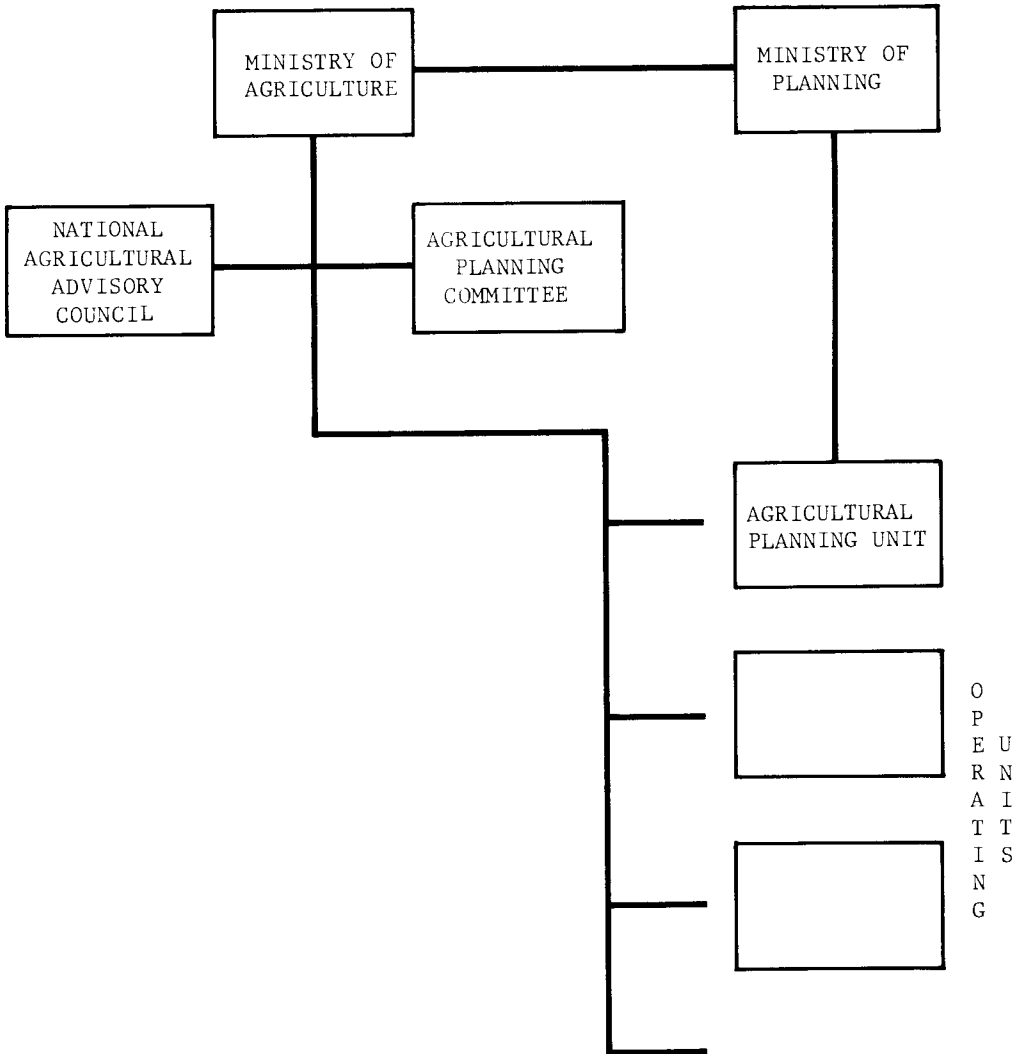
composed of representatives of important producer groups, of the processing and distribution trades of consumers, of agricultural co-operative organizations, technical staff of other Ministries, outside experts and the like.

The National Agricultural Advisory Council not only should prepare policy suggestions for the Minister, but should also act as a sounding board for contemplated policies. It should perform an educational and extension function as well, since the Minister should call upon it for co-operation in disseminating information about adopted policy. The council's suggestions should be studied and analysed by the Agricultural Planning Unit and submitted to the Agricultural Planning Committee for consideration.

To summarize therefore the simple outline of the planning machinery (see Agricultural Planning Organization chart) thus identifies five important components: the central planning branch whose main function would be to undertake the considerable task of co-ordinating and integrating all sector programmes in an overall national development plan, providing advice and guidance for the Ministry of Agriculture on general resources distribution and broad economic objectives: an Agricultural Planning Unit to work in close co-operation with appropriate operation units and other departments in the assessment of agricultural resources, the preparation of development projects and programmes, the economic appraisals, policy alignments and identification of priorities, as well as in the implementation of schemes and the evaluation of results: the operating units which will prepare and execute their individual projects following guidelines and standards set up by the Agricultural Planning Unit: the Agricultural Planning Committee, concerned with broad formulation of development policy and with the general shape of the overall national development programme, and the continuous direction and adjustment of agricultural planning activity: a National Agricultural Advisory Council composed of outsiders to recommend policies and otherwise to assist in preparing and executing the Ministry's programme.

APPENDIX I

AGRICULTURAL PLANNING ORGANIZATION CHART



THE GLOBAL DEVELOPMENT PLAN, 1980-1982 (Synopsis)

Mexico, The Ministry of Programming and Budget

PRESENTACION

President José López Portillo has promoted a social reform that updates and extends the basic principles of the Mexican Revolution. This reform has been undertaken in three distinct directions: the political reform which has opened up the path for greater participation to all currents of national opinion, broadening the system's bases by exposing it to ideological debate; the administrative reform that is updating institutions to modern times, enabling them to better serve the objectives of an integral development policy; and, the economic reform which, through the concerted efforts of the country's real factors in a National, Popular and Democratic Alliance for Production, seeks to promote, within the context of national independence, a high and sustained growth in order to provide all Mexicans with employment and minimum welfare levels in education, nutrition, health, social security and housing –which every well-organized nation is able to provide– so as to advance more decisively toward an egalitarian society.

One fundamental instrument for this reforming process is the planning of development. The stage of development which the country has attained, its problems, as well as the mechanisms and measures that have been adopted to deal with them, propelled the Executive Branch to undertake an effort of rationalization, in order to organize the government and make it capable of leading and guiding the course of the Republic in a more precise way and in accordance with its collective aspirations.

Since his electoral campaign, President López Portillo took on the task of gathering information, analyzing proposals and prospects, and confirming values in an intense exchange of ideas with the different representative groups of the population.

The definition of a political stance was followed by a programmatic methodology and by an overall scheme for all the States' actions and all its possible relationships with society, which in turn has served to integrate these viewpoints and demands into a government program that, when submitted to the electorate, was approved by the majority.

On the basis of this general scheme, several sectorial and state plans were drawn up, that have made it possible to guide the economic and social

policy with greater certainty, and to take on commitments with the Nation's different sectors.

Worthy of special mention in this respect is the elaboration and publication of: The National Plan for Urban Development; the National Plan for Industrial Development; the National Plan for Fishery Development; the annual plans of Agriculture and Stock Raising and the Forestry sectors; the National Employment Program; the National Plan for Tourism; the Urban Development Plan for the Federal District; the National Plan for Science and Technology; as well as the progress made in the National Plan for Commerce, the Program for the Educational Sector, the National Communications and Transportation Plan, and in the Plan for Agrobusiness.

The Plan also embodies the main concepts and intentions of the Mexican Food Supply System (Sistema Alimentario Mexicano, SAM), which firmly proposes a profound change in inter-sectorial strategy designed to provide for the basic nutritional requirements of the country's population and lays out the guidelines to achieve self-sufficiency in basic foods production, as well as the design, development and utilization of technologies that will increase output, and the organization of distribution systems that will allow the conveyance of food supplies to the country's majority groups.

Equally important are the advances achieved in building up the National Planning System, that has been enriched through the significant contribution made by the states of the Union, which have participated with their own plans.

The initial basic design as well as the experiences in sectorial and state planning have been systematized in this 1980-1982 National Development Plan (Plan Global de Desarrollo 1980-1982), which the Administration presents before the national community.

The Plan reflects the current degree of progress achieved in the integration of a National Planning System. It contains the main conceptual and instrumental elements which are part of the planning process, it profits from the improvements made in the use of diagnosis mechanisms, integrating sectorial and special aspects as well. In addition, it shows what has been achieved through the sectorial and state plans, the influence of which has already been felt in the definition and implementation of the development policy.

The Plan proposes goals that cannot be reached if they are left to the forces of inertia. It points out the elements that need to be further developed in order to make the National Planning System operative in all its aspects. Therefore, the process of building up a National Planning System does not end merely with the presentation of this overall proposal.

The Plan is called National because its sphere of action covers the entire society. It is based on a concept of integral development that requires the conjunction of economic political and social forces set within the framework of the Mexican people's political decisions. The economic model presented in the Plan results from, and is presented within, a political model. The existence of a development strategy as well as that of institutions to carry it out, are possible because there exists a solidly structured political system that springs from our Revolution. Technique is, in this way, used to the benefit of our National Project,^o whose restoration and validation is to be found in that social movement.

This document is composed of three parts –political, economic and social. The first part consists of the set of political-philosophical concepts asserted by our National Project, which emerges from the Mexican Revolution and the Constitution of 1917. The model of country we aspire to, is presented as the expression of this project, reflected in the country's political, economic and social systems, and in its public administration. The objectives of the Plan were set up on the basis of the principles of political philosophy and on the model of the country we aspire to be, both referred to the diagnosis of the current situation.

The second part of the Plan deals with economic aspects. There, the development strategy for structural change and for modernizing the country is presented –the modernization process which the country has pursued since President López Portillo took office.

This strategy takes into account the proposals of organized labor for the stepped-up transformation of the economy, in order to attain new stages of productivity and social justice. It is based on the strength of our people and on the wide range of natural resources the country is endowed with. In addition, it rests on the challenges of a world in continuous change, subject to uncertainties difficult to foresee.

The strategy is directed fundamentally, toward job creation. This aim to grow and to generate sufficient employment for the country's population, offering at the same time, worthy living conditions and the progress made in this respect, during the present Administration, are the basic differences

^o The "National Project" concept compounds the basic principles of political philosophy –emerged from the ideals of the Mexican Revolution and which are embodied in the Constitution of 1917–, the government structures and the relationships between such structures and society. The existence of a national project is only possible in countries in which an ample consensus prevails concerning the orientation to be followed by the nation in general terms; and in which the State can interact with society in order to reinforce its own validity and feasibility, and advance on the orientation agreed upon. Each of these elements is related with the whole of the compound which itself relates with its parts, in a historical sequence that successively defines the character and contents of a nation.

between our growth process and that of the previous decades. The basic guidelines for the use of the economic policy instruments at the State's disposal are also presented in this part.

The third part of the Plan is referred to social matters, and it shows how economic and social policies that have been implemented are chiefly directed toward transforming economic growth into social development. If economic growth is both a prerequisite and a platform for generating social change, it is also true that social change configures economic processes. Hence, the provision of minimum levels of welfare for all Mexicans is an indispensable factor in the context of increasing employment levels and productivity. At the same time, the achievement of material objectives must be subordinated to the development of the human being in an ambience of individual dignity and social responsibility.

The Plan also includes a chapter concerning the prices, wages, profits and fiscal revenue policy. In it, the actions that may promote and increase the real share of wage-earners in the national income, are presented. Lastly, a section on prospectives, analyzes the evolution that can be expected of the Mexican economy over the next twenty years, if the country, as a whole, maintains its efforts and unified action in the pursuit of the objectives and strategies outlined in the National Plan.

Miguel de la Madrid H.,
Minister of Programming and Budget
Mexico, April 1980

1. INTRODUCCION

The present Administration took on the commitment to undertake a systematic effort that would strive for coherence between its actions, its political philosophy and the model of country aspired to. This is embodied in a unified planning system that endeavors to give prestige and establish itself as a style of government –as a fundamental factor of economic and social development, and as an instrument for accumulating programmatic information so as to rationalize decision-making, as well as the participation and commitment of the country's different sectors; it also assures realism to the extent in which goals are attainable, and means are feasible.

Planning requires time to assert itself and to become a style of working in the nation's every day life. Up to the moment, the progress attained in this respect is systematized in the 1980-1982 National Development Plan (Plan Global de Desarrollo 1980-1982), which, taking advantage use of the previous planning experiences, emerges now as a structure drawn from the model of country which is aspired, as well as from the set of policies and sectorial plans set in operation during the present Administration. The Plan attempts to be a globalizing effort. It encompasses the fundamental assumptions that give it validity, as well as features of sectorial policy. It attempts to cover the propositional as well as the operational, to provide the necessary elements to advance in making state and sectorial planning consistent; to support, combine and make better use of the economic policy instruments; and to lay down the basis for concerted action among the nation's different sectors.

By seeking to determine the organized action needed for economic reform, the Plan proposes a methodology and, at the same time, the recognition and application of a series of qualitative and quantitative criteria. Therefore, the Plan seeks to confer normativity to the procedures in order to derive strategies of action out of the aims; policies out of priorities; and commitments out of alliances.

The National Development Plan (Plan Global de Desarrollo 1980-1982)

pretends to be not only a government plan but also a national one. That is why it is based on concerted action between all the nation's sectors. Moreover, it is flexible and realistic: it endeavors to conciliate what can be foreseen with the contingencies that may arise and, by so doing, to revitalize the economic policy instruments.

2. POLITICAL PHILOSOPHY

The Constitution contains a national project which defines political and social directions that mirror the best in our history, as well as the aspirations of the great majority of the country's population. It establishes, as well, the bases supporting government structures, and proposes the ways in which the State may interact with society, in order to lead the way toward democracy.

The National Project has taken the fundamental political principles that shape it from the country's major social movements. From the Revolution of 1910 it took a new concept regarding the aims of the State: the mandate to create the material conditions to make freedom effective, the bases for the establishment of a mixed economy, and, the ultimate stress on the liberating capacity of nationalism.

Mexican nationalism gives support to the permanent struggle for the economic, political and cultural independence of our country.

Liberty and justice define the basic trend of the National Project. The balance between liberty and justice reflects the struggles undergone by the Mexican people during the course of the country's history; they are values that must be accomplished.

The National Project establishes a relationship between the State and society, in which it is acknowledged that all rights come from the people.

The proclaimators of the Constitution designed, out of necessity, a vigorous State of Law, and empowered it to advance toward national integration, to guarantee political independence and consummate the economic one.

The National Project is democratic, representative, and of the people. It defines the concept of democracy in all its dimensions –as a juridical structure, as a political regime, and as a lifestyle, founded on the uninterrupted economic, social and cultural improvement of the nation.

Because of historical reasons, our democracy is linked to federalism. This has been the political way, by means of which authorities have interacted with people, and one which has enabled us to maintain national unity and preserve the Nation's territory.

The existence of a mixed economy is one of the basic assumptions of the

National Project. The 1910 Revolution transformed the concept of ownership, preserved economic freedom, and bestowed upon the state the responsibility of economic regulation and promotion, all of it subjected to the precise criteria of the Nation's interest.

The Constitution guarantees economic liberty of profession, industrial activity, commerce, and occupation, as long as rights of third parties are not attacked or the rights of the people transgressed. Likewise, the National Project establishes the social rights that allow the creation of the material conditions for social justice to prevail. Firstly, it establishes the right to work, social ownership, and the organization of agricultural production. It also determines the precepts that protect the worker with an advanced legislation, as well as those which define basic education as gratuitous and mandatory.

Within the National Project, it is the State's competence to manage and rule over the economy by conferring it the right to impose on private ownership the modes it deems convenient for public interest, to regulate the social use of national resources, and effect a fair distribution of public wealth.

Mexican nationalism expresses itself without hostilities or exclusions, and projects an international spirit that directs us toward international solidarity, within the context of fraternity and the equal rights of all men, without distinction of race or creed, group or individual. It advocates principles that pursue the establishment of an authentic international democracy –political as well as economic.

Our historical project is legitimate. Few programs and documents in the contemporary history of events have the concurrence of such an ample diversity of elements of political legitimacy, such as the revolutionary, the formal, the democratic, as well as that which makes it a social transformation project.

The philosophy sustaining our National Project must be viewed as a whole, in which all parts are inter-related. What is required, then, is to start with this whole and develop an exercise that matches our basic axioms to public action and civic conduct. The National Plan endeavors to be such an exercise.

3. SOCIO-ECONOMIC DIAGNOSIS

During the first government administrations after the Revolution, socio-economic strategy was directed toward solving critical problems such as maintaining territorial unity, reconstructing the country and laying down

institutional bases for subsequent growth. The constitutional principle of State dominion over natural resources was consolidated, and decided progress was made in the processes of agrarian reform and in the organization of both rural and urban labor, and of other social groups.

Beginning in 1940, the economic strategy was based on a scheme of development steered in the direction of substituting consumer goods imports. The supporting of industrialization –which endowed the country with an industrial infrastructure, a system of highways, airports, a telephone network and means of mass communication– was accompanied by an agricultural policy that constructed vast irrigation works and opened up new areas to cultivation, and provided them with credit and fertilizers.

This pattern of development represented an adequate strategy for the epoch in which it was launched. With the passing of time, however, it began to show signs of insufficiency –sharply heightened by demographic pressures– which showed up mainly in the stagnation of agriculture.

As years went by, social deficiencies worsened; financial, technological and food dependency became more pronounced; the lack of competitiveness in industry worsened, and bottlenecks appeared in key sectors. The inefficiency and unfairness of the marketing system became gradually evident; the concentration of personal, sectorial and regional income grew more acute; the shortfall in public savings reached serious levels, and the bureaucratic apparatus no longer responded to the country's requirements.

By the end of 1976, the development strategy that had been followed up to then, had exhausted itself, and evidence of the fact was apparent everywhere. The combination of a severe inflationary process and recession was the most evident expression of the crisis.

4. ACTIONS AND RESULTS IN 1977-1979

In the face of the prevailing economic situation toward 1976, the current Administration proposed a new development strategy that would make it possible to reconstruct the economic base –as a necessary and urgent requisite for solving the problems and shortages that had been accumulated.

The strategy sprung from the principles of political philosophy and from the definition of the model of country we aspire to be, which includes: an effective and efficient productive system; a distribution system that would allow the achievement of equilibrium among the different factors; a political system that would draw strength from the majorities, but would make room for the minorities; and, a public administration capable of directing economic development.

Starting with and derived from this model, bases were established for the qualitative change of development. Thereafter followed: the Political Reform; the Popular, National and Democratic Alliance for Production; and, the Administrative Reform. Three biannual stages were then defined within the context of the socio-economic strategy, namely: a stage to surmount the crisis in its most serious aspects; one in which to undertake the consolidation of the economy; and, one of access to a high, sustained, and qualitatively different growth, with controlled and decreasing inflation, while maintaining, throughout these stages full respect of public liberties.

Two priority areas were determined: the agriculture and stock raising sector, in order to meet the demand for food supplies; and energy resources, which constituted a new and important source for solving the crisis, and an opportunity to propel profound social transformations.

The revision and strengthening of economic policy instruments was initiated in order to stimulate output, investment, and employment; advance toward putting public finances on a sounder footing; initiate the reconstruction of the financial system; improve the debt profile; adapt the system of incentives to the new conditions; and, rationalize the tactics of protectionism.

Within the sectorial sphere, progress was made in the reorientation required by the new strategy. The decentralization of industrial activity was initiated, directing it toward the country's coastal and border areas, giving priority, at the same time, to the production of socially and nationally needed goods. In the agriculture and stock raising sector, support was given to the development of rainfed regions; better and greater utilization of the installed capacity was stimulated; producers were encouraged to organize themselves; and, the price structure was revised in order to foster food production.

In addition, greater attention has been paid to the fishery sector, with the idea of converting it into an integral part of food self-sufficiency, through the improvement of catch programs and of its construction, rehabilitation and industrialization projects.

Action in the commercial sector has consisted of assuring efficient distribution of massive consumer articles at accessible prices, and furthering the modernization of marketing systems; likewise, legislation was revised in order to curb speculation and hoarding.

In the tourism sector, services have been expanded in order to increase the possibilities of accomodating social tourism, and meet additional demands from foreign tourists.

Measures were taken to encourage the coordinated operation of transportation and communication services, and to develop a balanced infrastructure that might allow advances in gradually removing bottlenecks.

In the social aspect, minimum levels of welfare were determined and population growth control, health, social security and housing policies were implemented. Various programs directed toward poverty stricken areas were also coordinated, and, in as far as food supplies are concerned, the efforts of the public sector have been directed toward increasing the output of basic foodstuffs, expanding their distribution to a wider range of population at the regional level, and fostering a more appropriate consumption.

As a result, and thanks to the solidary effort from all sectors, the crisis was overcome in its most critical aspects, and what was achieved then, is now in the process of being consolidated. Certain problems have persisted, however, such as inflationary pressures, bottlenecks in key sectors and, chiefly, the challenge to transform the growth that has been attained into social development.

Bearing this in mind, there has been a change in the emphasis in the established priorities for the second of the three biannual periods. Using resources from domestic savings and oil exports, priorities now are: the agriculture and stock raising sector and rural development in general; social welfare, emphasizing education; and, the strengthening of the communications and transportation infrastructure.

5. NATIONAL OBJECTIVES

The strategy decided upon and followed by the current Administration has been directed, from the outset, toward attaining four major objectives, which arise from our National Project, and mutually reinforce and support one another, being each of them indispensable for the success of the others. These four national objectives are:

- To reaffirm and strengthen Mexico's independence as a just and free democratic nation—in economic, political and cultural terms.
- To provide employment and minimum welfare levels, for the population, conferring priority to food, education, health and housing requirements.
- To encourage a high, sustained, and efficient economic growth.
- To improve the distribution of income among individuals, the factors of production, and geographical regions.

6. POLITICAL AND JUDICIAL BASES

The foregoing objectives have been shaped on the basis of our political philosophy and the diagnosis of current realities. To make them feasible, it is necessary to link such proposals with the political, judicial, and administrative bases that serve as a foundation for the State.

In this respect, it is deemed that the proposals and actions of both domestic and external policies, national security, and the imparting of justice, contribute decisively to the feasibility of the actions proposed and, above all, to their proper orientation.

Mexico's domestic policy evolves within a framework of democratic institutions which, in turn, are reinforced by the Nation's political life. The permanence of the institutions; the respect for constitutional regulations; the organized and conscious participation of citizens and social forces; the fulfillment of electoral legality; the effectiveness of the federal pact and the juridical order; the reinforcement of legislative and judicial power; the existence of fluid social communication; population policy; and, the modernization of public administration, are the components and objectives of a feasible political system in the process of democratic innovation.

Mexico's foreign policy is directed toward preserving its sovereignty; confirming its independence in the face of other countries; practicing international solidarity; supporting domestic development efforts; and, participating in shaping a world order that guarantees these aims and allows all countries to evolve in the same international sovereignty, equality, security, and justice that we seek for ourselves.

The Mexican Armed Forces are organically linked to the institutions of the political system. Their revolutionary origin is a hallmark that shapes their doctrines and their internal organization, as well as their relationship to other institutions of the Mexican State. In Mexico, the effectiveness of a Constitution that determines the means to attain justice through freedom, through the innovation of political institutions and the responses of the State, as a whole, to the needs of a nation in the process of accelerated change, makes it possible to adapt our military institutions to the philosophical principles of our National Project.

The imparting of justice contributes to the realization of our National Project and to the development of the country, by guaranteeing liberty and social peace. Security and justice are not tangible commodities yet, they form an unquestionable part of the level of development attained by a country. Therefore, we are endeavoring to update and revise the juridical and administrative instruments that regulate the activities of the institutions that are part of the country's judicial system, substituting compulsory

notions with the concept of social right; encouraging the examination and study of the structures and procedures of judicial institutions, stressing innovation and expediency in agrarian cases; strengthening administrative justice; juridically implementing measures for the administrative reform of the system, and encouraging their dissemination so that they become known; rationalizing the use of the material, physical and human resources of the system; promoting the incorporation of appropriate administrative and personnel development procedures in the competent institutions; giving impetus to the program for territorial decentralization of the administrative units of the judicial system; and, transforming the right of recurring to the courts into a veritable social protection with a humanistic sense.

7. OVERALL STRATEGY TOWARD EMPLOYMENT

The strategy of the Plan represents all the articulated actions that are required to reach the four major overall objectives, as outlined in Chapter 5. The strategy springs from the basic axioms of Mexico's political philosophy and the specific conditions determined by our historical process, our geographical location and our political system, namely: a mixed market economy; a complete set of individual and social rights; political pluralism; an institutional tradition, and a political system with a nationalistic vocation and characterized by the participation of all the Mexican people; and, freedom of exchange.

The strategy takes into account the proposal of organized labor in terms of achieving an accelerated transformation of the economy, so as to attain new stages of productivity and social justice, and recognizes the strength of the population and the richness of the Nation's physical resources. The strategy is directed fundamentally toward employment. For this reason, growth at any cost is not what is being pursued; but rather one whose rate, although high, does not jeopardize its permanence and equity. What is sought is growth that, even though perceiving and acknowledging the uncertainties of the international situation, will nevertheless maintain equilibrium between sectors and regions, and set into motion all the potentials of the country. It is based on the sectors that produce socially and nationally necessary goods and is hinged by the capital goods industry, giving priority to activities that have the greatest potential for generating permanent and productive employment.

Oil is closely linked to the feasibility of the strategy. Therefore, its exploitation and exportation will be conditioned by the domestic needs, specified by the strategy, and in accordance with the absorptive capacity of

the Nation. In addition to oil revenues, the strategy proposed for financing development is based on the expansion of public finances, the generation of domestic savings, and capital formation. A development policy is being implemented that will make use of oil –not an oil development policy.

In short, the strategy is the path through which the country seeks to achieve modernization and overcome the challenge of social marginalization with a model of its own. The strategy simultaneously supports the four major objectives of the Plan. To attain this purpose, the Plan identifies the variables closely linked to the objectives, and sets targets for these variables. Similarly, macro-economic, sectorial, regional and social policies are determined, which, when managed in a coordinated way, lead to the attainment of the targets set.

The strategy pre-supposes the concerted utilization of all the instruments and means at the public sector's disposal, and it is made up of twenty-two policies, namely:

1. To strengthen the State.
2. To modernize the economic and social sectors of the Nation.
3. To generate employment in conditions that are both dignified and just, as the basic proposal of the strategy.
4. To consolidate economic recovery.
5. To reorient the productive structure toward the generation of basic goods, and the creation of a national capital goods industry.
6. To rationalize consumption and to stimulate investment.
7. To step-up the development of the agriculture and stock raising sector, in order to push up rural standard-of-living levels and meet the food needs of the country's population.
8. To impulse the Mexican Food Supply System (Sistema Alimentario Mexicano, SAM).
9. To foster priority spending and reinforce public enterprises, eliminating excessive subsidies.
10. To use the country's oil as leverage for our economic and social development, channeling resources thus obtained to the priorities established by the development policy.
11. To stimulate a productive policy and a proper distribution of its benefits among rural and urban workers, and society as a whole.
12. To allocate more resources to the provision of minimum welfare levels particularly for the rural and urban marginated population.
13. To induce, with full respect for individual rights, a reduction in population growth, and to rationalize territorial distribution of human settlements.
14. To attain an improvement in the standards of living of the country's

population by means of a substantial increase in consumption, brought on by productive employment.

15. To broaden and upgrade basic education for children and adults.
16. To link terminal education –both middle and advanced– with the needs for skilled workers, technicians and professionals derived from the Nation's productive system.
17. To encourage training and social organization of workers.
18. To decentralize-centralizing economic activity and human settlements in a new regional scheme, stressing coastal and border areas.
19. To control and reduce the rate of inflation.
20. To advance in the strategy of new forms of financing development.
21. To establish an efficient linkage with other countries, such that will stimulate modernization and efficiency in the productive apparatus.
22. To expand concerted action between the country's public, social and private sectors within the framework of the Alliance for Production.

8. MACRO-ECONOMIC FRAMEWORK

In overall terms the Gross Domestic Product (GDP) is foreseen to grow at an average annual rate of no less than 8%; imports of goods and services will continue growing at high rates, but will register a downward trend growing on the average at 20.8%, while exports of goods and services will increase at an average rate of 14.4% annually, with the manufacturing sector following an upward trend.

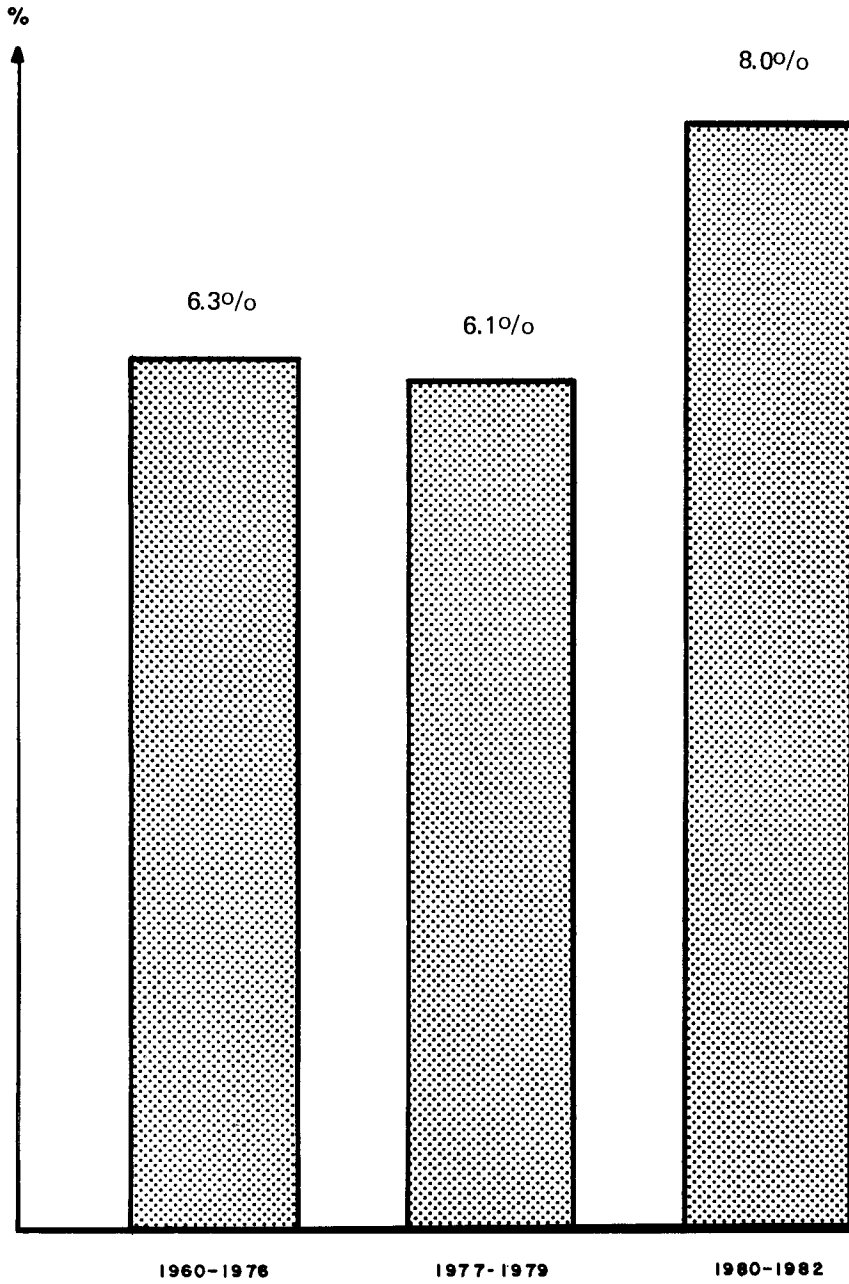
The evolution of current account revenues and outflows will result in a deficit slightly below 1% of the GDP. Excluding net factoring payments, a surplus will be registered during the three-year period that will fluctuate between 1 and 1.5% of the GDP.

The target for public investment has been set at an average real growth rate of 14% annually, in accordance to the priorities the strategy establishes. Thus, allocations to the agriculture and stock raising sector, and to rural development in general, will rise by 22% annually in real terms; investments in the transportation and communications sector will be increased by 18% annually, while those going to the social sector will be upped by 21%; and, resources channeled to the industrial sector, excluding oil, will expand at an annual rate of 17%. This, plus a real growth in private investment spending of 13%, would result in an investment-output coefficient of around 27% at the end of 1980-1982.

Per-capita consumption will register an increase of approximately 4.5% annually during the next three years –a rate which, if sustained, would mean

GROSS DOMESTIC PRODUCT

(Annual average rates of real growth)



that the per-capita consumption level will double in the course of the next 15 years. The public consumption growth target has been set at a rate of 2.5% annually in real terms, which would result in an increase of public savings of 3.1 percentage points of GDP, as compared to the 1979 level.

In accordance with the strategy priorities, the various economic sectors will evolve, as follows: agriculture and stock raising, forestry and fishery activities will expand at an average annual rate of 6.3% in real terms, surpassing population growth, and making it possible to improve both rural employment and standards of living; industrial GDP is estimated to experience a combined real annual growth of 10.8%. In as far as the sector's components are concerned, mining will expand at a rate of 6.8%, manufacturing 10.0%, capital goods 13.5%, growths which will pave the way toward a better integrated and more advanced industrial structure; the socially necessary and customary consumption goods industry will grow at a rate of 8.0% which doubles the growth achieved between 1970 and 1978; chemical industry will expand at 9.7%, and the energy sector at 13.1%; a 6.7% annual growth is estimated for the service sector as a whole, with a 9.5% for the communications and transportation sector, 7.8% for tourism and recreational services and 5.7% for commerce.

Employment is foreseen to expand in 2.2 million new jobs, amount which implies a 4.2% of annual growth in employment, and which will allow the country to absorb the 3.4% increase in the labor supply. At this rate of absorption, open unemployment will decline, as will the relative weight of underemployment, thus initiating a process to solve the occupation problem.

Reaching the foregoing targets will require a coordinated effort in managing the instruments the State has at its disposal for the orientation of development. It will also require the responsible and joint action of all the Nation's social sectors.

If this is achieved, domestic output will have managed to sustain itself within a level of expansion well over 7% in real terms for five consecutive years (1978-1982), thus establishing what would be a record high growth span.

At the end of the current six-year period, the agriculture and stock raising sector would record increases of 3.1% annually, while those registered by the industrial sector as a whole would maintain themselves at 9.7% annually.

During the same period, employment would increase in approximately four million new jobs, which would represent a figure higher than all the jobs generated during the 20 years prior to 1976.

GROSS DOMESTIC PRODUCT BY ECONOMIC SECTOR
(Average rates of real growth)

	1960-1976	1977-1979	1980-1982
Gross Domestic Product	6.3	6	8.0
1. Agriculture and stock-raising	2.9	2.6	4.0
2. Forestry	2.9	5.9	5.6
3. Fishery	3.0	6.1	9.4
4. Mining	2.7	2.3	6.8
5. Petroleum and petrochemicals	9.0	4.9	4.0
6. Manufactures	7.7	7.0	10.0
6.1. Socially necessary goods of customary consumption	6.2	5.1	8.0
6.2. Chemicals	10.4	3.6	9.7
6.3 Durable and capital goods	10.5	11.4	13.5
7. Construction and inputs	7.9	7.5	11.1
8. Electricity	11.7	8.8	10.7
9. Commerce	6.1	4.7	6.7
10. Communications and transportation	7.5	8.1	9.5
11. Tourism and recreational services	6.8	5.5	7.8
12. Other services	6.0	5.5	6.0

9. PUBLIC EXPENDITURE POLICY

The basic propositions related with the public expenditure policy consist of a sectorial and regional reorientation of expenditure toward priority sectors and regions; encouraging the highest possible growth that is compatible with decreasing inflation; acting as a vehicle for speeding up job creation, within a framework of greater rationalization and efficiency in spending; and, directing capital expenditure toward the elimination of bottlenecks and the motivation of strategic productive activities.

In face of the need to count on the availability of sufficient amounts of resources, in order to back up economic recovery, generate employment, and assure the energy supply, during its first years of office this Administration was obliged to allocate an increasing proportion of total investment to the growth of the oil sector, concentrating investments in it.

The success achieved in well drilling has enabled the Nation's oil complex, PEMEX, to be ahead of production goals. This means that investments in petroleum sector, although of continued importance, will not show the high growth rates observed in the three preceeding years. This will enable us to direct more attention to other sectors of the economy. As a result, investment in the agriculture and stock raising sector, and in rural development in general, will increase its share of total public investment to 25% in 1982; the communications and transportation sector, to 15%; and, the social welfare sector, which includes both health and education, to more than 16%.

Public expenditure targets to be attained during the 1980-1982 period are the following: to achieve, in the short run, a suitable degree of efficiency in the budgetary cycle; a real annual growth of 12% in net budgeted expenditure from 1979 to 1982; an average annual rate of increase of 14% in capital spending, so that rural development, the agriculture, stock raising and fishery sectors, on one hand, and the social and the communications and transportation sectors, on the other, will register real annual increases of 22%, 25%, 21% and 18%, respectively; public investment will grow rapidly in areas other than energy, given greater impetus to the capital goods industry; and a 20% average annual rise is also expected, in regional allocation of spending through the Integral Program for Rural Development (Programa Integral de Desarrollo Rural, PIDER), the Master Coordination Agreements^o (Convenios Unicos de Coordinación, CUC), and the General Coordinating Commission of the National Plan for Depressed Areas and

^o Master Coordination Agreements are established between each state of the Union and the Federal Government, and constitute a mechanism to support and develop Mexican federalism and thus, redistribute progress among all the country's regions.

Marginated Groups (Coordinación General del Plan Nacional de Zonas Deprimidas y Grupos Marginados, COPLAMAR).

Public consumption expenditure will expand at around 7.5%, with priority on social welfare services, such as health and education. Current operational expenditure of State enterprises, which have a direct productive impact, will increase at a rate of more than 11% annually. The real annual increase in total budget spending for both health and education will be of 9% respectively.

In order to attain these targets, disbursements will be more expedite and more timely; controls will be improved through better normativity standards and accounting methods; more rationalization will be exercised in purchases; efforts will be redoubled to refine legal mechanisms in order to wipe out corruptive practices, and determine responsibilities in accordance with the law; the excesive fragmentation of public works will be discontinued; current expenditures will be adjusted to the basic principles of the administrative reform; unnecessary subsidies will continue to be eliminated; the process of binding sectorial and state programming will be encouraged; mechanisms supporting federalism will be integrally coordinated and programmed; special attention will be paid to the purpose of increasing the effectiveness and efficiency of public expenditure, through the program-budgeting mechanisms, under the express responsibility of the federal government's sectors; and, lastly, the restructuring of services and institutions will be continued in order to improve the efficiency of State enterprises providing public services.

10. GENERAL ECONOMIC POLICY

Even though public expenditure is one of the major instruments at the disposal of the State, the successful attainment of the established targets and objectives requires the coordinated management of all the instruments of economic and social policy which the government has at hand. In what follows, the proposals, targets and actions of some of these instruments –related with the rest of general economic policy– are presented.

The state enterprises policy proposes to base the operation of these entities on greater productivity levels of their human elements and on increasingly efficient management of their physical and financial resources. Targets set in this respect are, among others, to achieve a generation of savings of around 3% of the GDP; and, with the exclusion of PEMEX, expanding resources by 26%, which implies the adoption of a more effective price and rates policy.

The tributary policy by continuing the efforts already started, is aimed at making progress in the achievement of a fairer tax assessment among individuals, factors, sectors and regions; reducing distortions and increasing efficiency and output; stimulating savings; promoting the rationalization of foreign trade; neutralizing the effects of inflation on taxation, specially, in the case of low-income sectors of the population; modernizing and simplifying the mechanisms used in collecting revenue; endowing the State with more resources; and, updating the rates of nontaxable income.

The fiscal incentives policy will be maintained within the scheme along the lines already proposed, and which is directed toward fostering capital formation and generating employment, acting directly on incremental amounts of investment and employment. Incentives will be granted according to predetermined regionalization, giving priority to small and medium industry, and to the capital goods and basic commodities producers.

The public debt policy assumes that to determine the amounts of external debt the inter-action between the different policies and the need to finance the required imports must be considered, to free sufficient amounts of resources for the private sector, to reduce the current account deficit, and to regulate domestic liquidity. Priority will be given to the use of domestic resources over those coming from abroad, and ways will be sought to diversify domestic financing sources and avoid those which are inflationary, as well as generating sufficient funds for other sectors, with the purpose of attaining the proposed rate of investment.

The financial policy will continue reinforcing the country's financial system; its main purpose is to maintain a flexible interest rates policy, endeavoring to keep up domestic and foreign competitiveness, and reward the permanency of savings. Likewise, institutional instruments for attracting deposits and government securities will continue to be diversified, and the securities market will be reinforced. Increasing non-monetary deposits in around 4.5 points of the GDP; increasing selective credit toward basic sectors; and avoiding that monetary supply which provokes redundant liquidity, are some of the major targets of this policy.

The foreign trade policy seeks to establish an efficient linkage between the domestic and the international economy, to rationalize protection—considering not only the producer but also the consumer—and to continue advancing in gradually opening-up the economy, according to internal objectives; to foster exports and their diversification through permanent programs; to implement an international strategy for foreign trade; and to stimulate the development of border areas and free zones. The principal target sought is to maintain the current account deficit at levels below 1% of the GDP for 1982.

The employment policy is a foremost priority in the strategy of the

National Plan. The current Administration has conferred a Constitutional stance to employment, thus making it a right, which the Plan endeavors to make valid and effective. The National Plan is directed toward accelerating the creation of productive and permanent jobs. Likewise, care will be taken to see that the centers of employment that are created, as well as those already in existence, represent an environment that propels and favors the necessary justice toward workers –as manifested in their working relationships–, safety conditions, personal dignification and development; –an environment that will, at least, assure each worker the access to minimum levels of welfare for himself and his family.

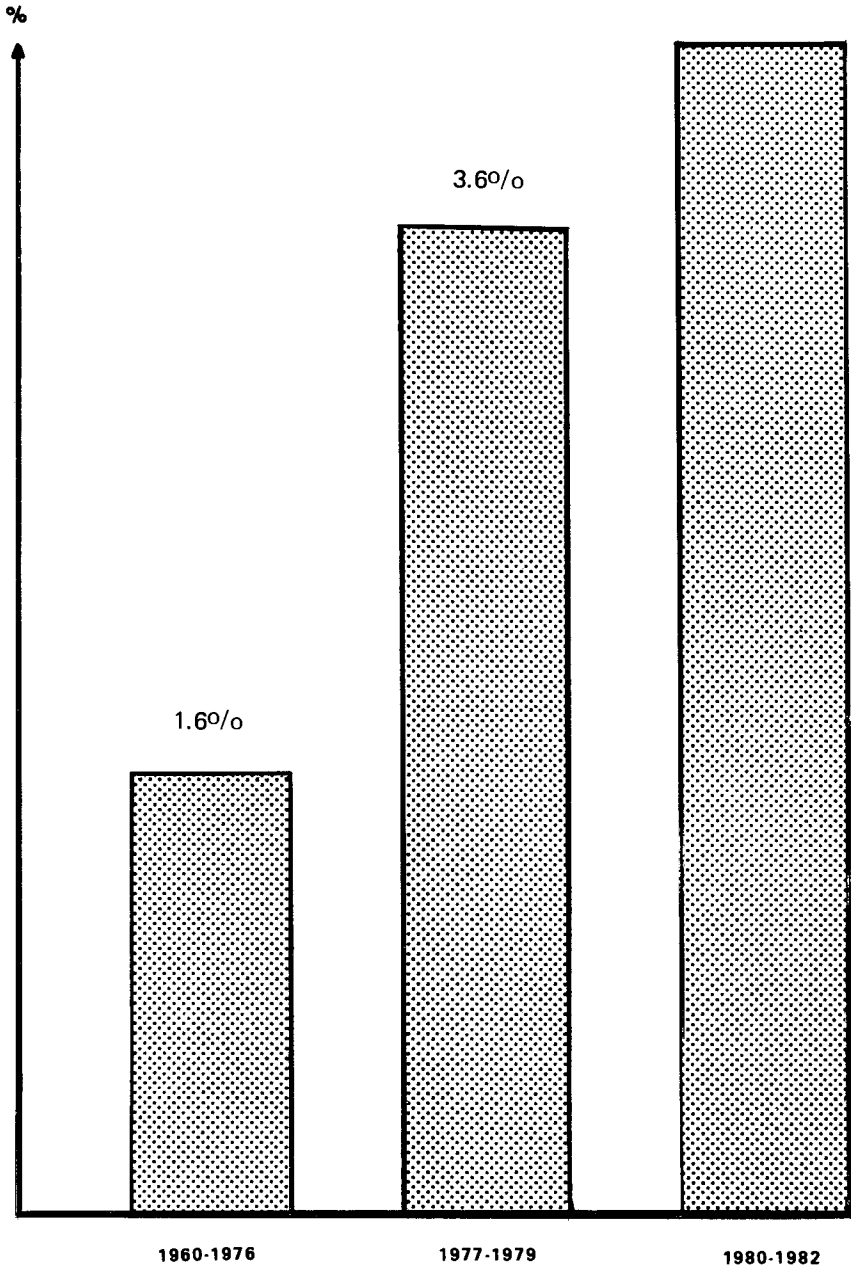
Employment policy is not only directed against open unemployment but also toward abating levels of under-employment. To accomplish this, targets, to be achieved in the medium run, have been set within the general development policy. The attainment of such targets will be possible through the reestablishment and consolidation of high growth rates of the GDP, and through stepped-up development of those sectors that generate the most jobs. Concurrent with expanding the capacity of the productive apparatus in order to efficiently absorb the working force, a labor policy will be developed to give all workers the opportunity to obtain some sort of technical formation so as to facilitate their access to employment, meeting the present and future needs for skilled workers.

For the 1980-1982 period, a target has been established in terms of attaining an average annual growth of 4.2% in employment, generating in this way a total of 2.2 million jobs. This will enable the country to reduce open unemployment by 5.5% in 1982; to absorb the new workers entering the job market, and diminish the relative weight of under-employment. All the instruments of economic policy will be used to attain these goals; priority will be given to the attention of traditional activities carried out in the rural sector, and the marginated sectors of urban areas; stimulus will be given to enterprises with a high potential for productive employment, through the allocation of current expenditure and workmanship; special efforts will be made toward increasing productivity levels.

Inflation is one of the most complex problems which the Nation confronts. Its control is envisaged as both a means and an instrument, and not as an independent objective. As such, it functions so that the distribution of income does not deteriorate, in order not to interrupt economic growth and so that social demands do not go unheeded.

Anti-inflationary policy seeks to achieve greater control and a downward trend of inflation, through actions that will increase output –particularly that of basic goods– to solve bottlenecks, heighten efficiency and lessen costly and burdensome intermediation in the commercial sector, and

EMPLOYMENT CREATION
(Annual average growth rate)



through those that will adequate aggregate demand to productive capacity. Inflation can not be attacked by slowing down the economy and the generation of employment. On the contrary, it will be confronted with all the instruments the State has at its disposal. The main actions in this respect will include: the stimulation of domestic supply and productivity, by tuning-up and pacing the rate of growth of expenditure; implementing a commercial policy of strict measures to prevent and fight speculation; and, remedying regional and seasonal insufficiencies that might arise in the supply of goods. The strategy endeavors to propel a gradual downward trend in the rate of inflation. The ultimate target set for 1982 is to reduce the differential of internal/external inflation to a range of 4 - 5 percentage points.

The technology policy pursues the formation of scientific and technological foundations, solid enough to allow the country to meet the production priorities, set in terms of national and socially necessary goods, the development of strategic sectors of the economy and, particularly, of the Mexican Food Supply System (Sistema Alimentario Mexicano, SAM). Mexico's economic system is mixed, thus, the National Plan is indicative for and concertative with the private sector. General guidelines, specific policies, incentives orienting its activity, and agreements to commit it, are clearly defined for the private sector. To the extent to which the private sector's participation adjusts itself to the definitions of the development policy, adopted by the national community's legitimate representatives, the more fruitful will such a participation be in the attainment of national objectives.

11. THE ENERGY POLICY

The energy policy is a basic lever of support in the task of achieving the Plan's objectives. It is faithfully inscribed in the Mexican people's traditional struggle to regain possession over the Nation's natural resources; replevin that started with the Mexican Revolution, when the definition of its actions was done in strict adherence to the national objectives. In the international scenery Mexico's energy policy is expressed in the World Energy Plan, the fundamental objective of which is to assure an orderly, progressive, integral, and just transition between the era of hydrocarbons, and the era when new sources of energy will become available.

In the national sphere, energy policy serves as a principal support for industrial development. This is specially true of the capital goods industry, for fostering exports and decentralizing industrial activity. Domestic energy

prices will approach the international ones, in the medium-run, maintaining, however, a favorable differential for the domestic market in support of national industry. Efforts will continue to be made in the direction of locating primary energy reserves and resources –particularly from sources other than hydrocarbons; industrial plants will continue to be reoriented toward using natural gas; the financing development policy will be substantially strengthened through an appropriate domestic pricing policy, which should take care of the sector's financial requirements, shore up public finances and serve as a support for rationalizing consumption and fostering industrialization. Impetus will be given to the research and development of energy saving technologies, for both industrial and residential activities with special stress on their diffusion and implementation.

The rate at which hydrocarbons will be exploited has been determined in line with the national objectives, according to the needs established by the overall development policy, and on the premise of not surpassing the real capacity of the Nation to absorb the incoming oil revenues efficiently.

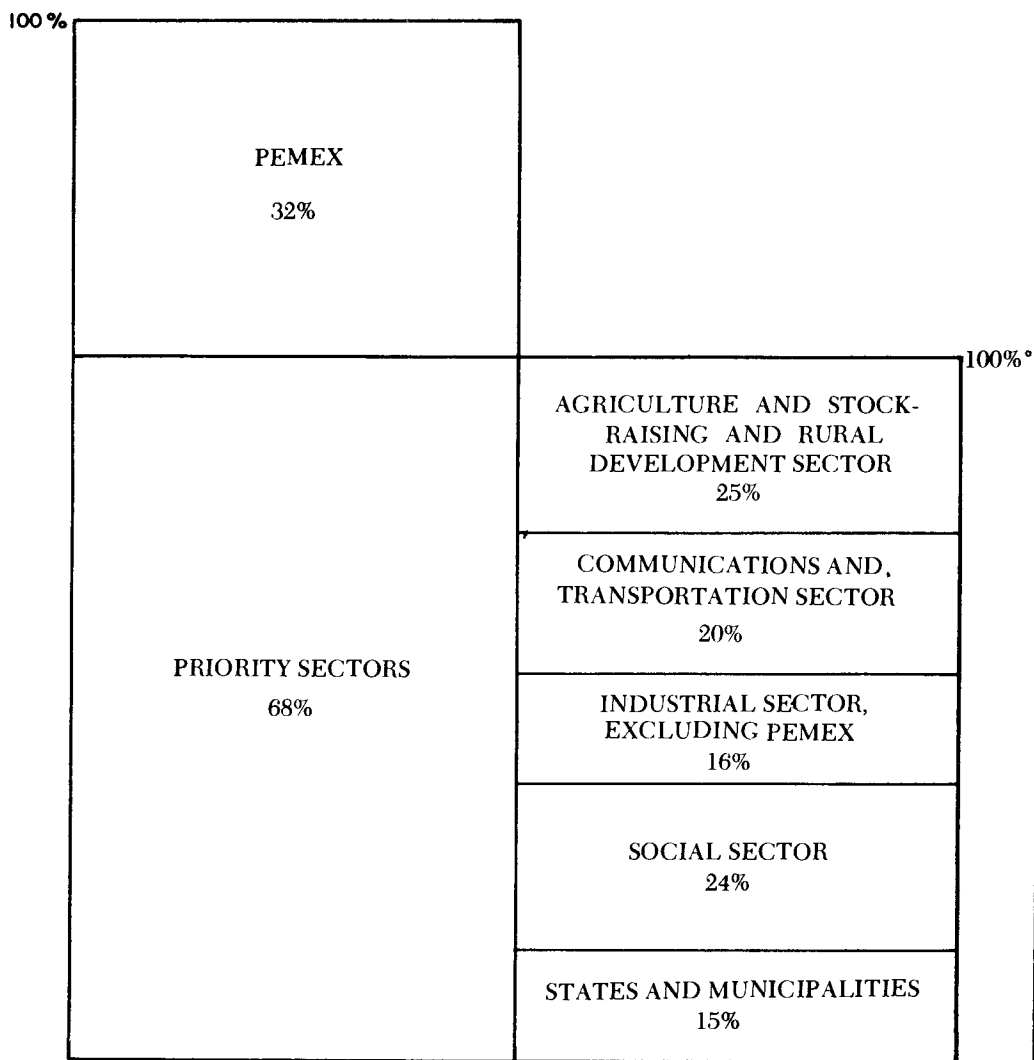
Endeavoring to reconcile the country's structure with its needs, its responsibilities and prevailing circumstances, the oil production platform has been fixed at 2.5 million barrels of crude oil per day, with a flexibility range of 10%, in order to guarantee domestic supplies as well as exports, but without exceeding the amount of 2.7 million barrels per day.

Mexico's development policy is based on oil; it is not, however, an oil development policy. This means, that a more balanced expansion of the economy is being sought, in order to consolidate a proportionate and balanced growth of the country's various sectors.

In order to let the whole Nation know where the oil money will go, the amount of resources, resulting from oil and natural gas exports, that the country will dispose of has been made of public domain and so has the use to which this oil surplus will be put. The total amount of oil resources usable for increasing national investment and development will reach the sum of 931.6 billion pesos during the 1980-1982 time span –resources which will amount to 22% of the public sector's total revenue at the end of the period.

Out of the mentioned sum, around 32% will be reinvested in PEMEX programs. The remainder will be destined to pre-established priority areas, the amount and growth rates of such allocations being estimated as follows: 25% will be allocated to rural development and the agriculture and stock raising sector, allowing a growth of public investment in this sector of an average of 22% in real terms; approximately 24% is destined to the social sector with a high proportion going to education; the transportation and communication sector will receive 20%; 16% will be directed toward the industrial sector (excluding PEMEX), making it possible for public inves-

ALLOCATION OF OIL RESOURCES 1980-1982



° Excluding the resources to be absorbed by PEMEX

tment to expand considerably in sectors such as electricity, steel, fertilizers and other basic industries; and finally, 15% will be used for supporting investment programs of state governments and municipalities.

12. SECTORIAL POLICY

Departing from the premise that all the social sectors interact and reciprocally influence each other, the Plan embodies policies of sectorial nature, contemplates intersectorial aspects as well as their regional expression, content and social value. It also provides guiding criteria so as to stimulate and generate programs designed to be undertaken with the participation of social and private sectors.

The intent is to restore the growth rate and volume of agricultural production and stock raising, emphasizing basic goods, with the ultimate purpose of achieving self-sufficiency in the key sub-systems of national food intake, and assuring that the benefits derived from this development strategy reach the neediest, that is, the rural population. The intent resides, chiefly, in achieving self-sufficiency in corn and bean production by 1982, and taking firm steps toward accomplishing the same with regard to other basic commodities showing deficits, toward 1985.

The Mexican Food Supply System (Sistema Alimentario Mexicano, SAM) will launch an intersectorial program that will link food production with its distribution and consumption, placing a basic recommended foods basket within reach of million of Mexicans whose nutrition is deficient. This System compounds a program that determines precise objectives, assigns responsibilities, agrees on actions, and establishes commitments. Efforts will be undertaken in the agriculture and stock raising area, in fisheries, food processing, and food technology, as well as in marketing and in educating consumers.

With the aim of bringing this effort to fulfillment, the Mexican State will revitalize its alliance with the rural sector and assume the risks in food production on a shared responsibility and solidarity basis. Technological change will be induced through actions such as providing resources, and fostering research and extension services, so as to achieve productivity increases. Likewise, it will promote a rural labor organization, in such terms that it allows and prompts the creation of productive dynamics. The development strategy includes actions to broaden the agricultural frontier, directing greater attention to rainfed zones, and fostering the integration of agricultural and industrial activities, through the development of "agrobusiness - food supply" systems.

The fishery policy has been directed toward the conversion of this activity into an important mile stone in the achievement of national self-sufficiency in the production of food for mass consumption, generating jobs and foreign exchange, and fostering regional development. Therefore, public investment in this sector will register a real growth of 25% annually during 1980-1982.

Industry will experience the most dynamic expansion, the bases of which will be the energy sector. It is reoriented toward the generation of a greater number of jobs and to the production of both social and necessary goods—specially foodstuffs—, and to give a substantial support to small and medium size industry. The strategy has the additional purpose of decentralizing the geographical location of industry, developing highly productive industrial branches and improving the integration of the industrial structure.

Commercial activity is a task of undeniable usefulness, closely linked to the success of new directions being taken in other activities. The policy for commercial promotion and development will continue to be of influence in creating an efficient marketing structure—one that eliminates unnecessary intermediaries, and is capable of attending the population's basic needs, through an integrated network for gathering, storing and distributing goods. The State will reinforce its role in guaranteeing the supply of basic commodities at reduced prices within the framework of the Mexican Food Supply System (Sistema Alimentario Mexicano, SAM) subsidizing, when justly needed, and encouraging dietary habits that improve the population's nutritional levels.

The tourism sector constitutes an important lever for development, mainly in what concerns its regional aspect. It not only produces employment and generates foreign exchange, but it also provides opportunities for recreation that fit into the objectives of social welfare. Touristic development will be guided to a greater extent toward fostering domestic tourism, without, however, neglecting programs that are designed to attract foreign exchange.

The Plan anticipates a rapid expansion of the transportation sector in combination with a sharp improvement in its operations. The highway infrastructure will be extended, and interurban connections will be developed. High priority will be given to mass urban transportation systems, in recognition of the importance of a socially necessary asset: time. The participation of railways in the transportation system will be reappraised, and both combined and collective means of transportation will be more intensively used.

From the quantitative viewpoint, the proposed rates of growth will propel economic activity beyond the historical growth rates of the past 30 years, and beyond those levels that would have been registered had the

economy's development guidelines not been modified. What has been here proposed, compounds a scheme that, although ambitious, is feasible. It will allow the country to amend the productive structure of goods and services, acting on the increments, by establishing bases to double the total current capacity of Mexico's economy, within a time span of eight years.

13. REGIONAL AND URBAN DEVELOPMENT POLICY

Regional policy is structured to provide an integral solution to problems caused by the mode and magnitude of the urbanization process, regional imbalances, and demographic pressures.

At present, economic activity displays an uneven profile of territorial distribution. Recent economic development has resulted in a polarized spatial organization, characterized by an excessive urban concentration around three metropolitan areas, and by a wide dispersion of rural population. In this sense, the guidelines of regional planning are directed toward controlling the unbridled growth of areas such as Mexico City, Guadalajara and Monterrey, on the one hand, and, on the other, toward strengthening inland intermediate cities and along the coastal and border zones.

The specific objectives of regional policy are: to promote a balanced regional growth by means of decentralizing activities and resources in favor of a more balanced and harmonious development of the system of cities; to strengthen federalism through wider participation of the states and the Federal District in furthering development, as well as to induce a more equitable relationship between the Federation and the different regions of the country by strengthening pacts between the former and its entities; to activate the growth of regions that require special conditions of development—in particular, those designated as future development poles; and, within a framework of unrestricted respect of individual freedom, to channel the migratory flows toward intermediate cities.

Various instruments can be used to attain these objectives: public investment, which endeavors to satisfy the minimum levels of public services that are necessary for the proper development of population centers in the country's most destitute areas, establishing regional priorities, through the allocation of resources that promote urban development and foster socio-economic decentralization; the fiscal incentives policy, which endeavors to relocate economic activities outside areas that are already densely populated; a pricing policy for energy, giving precedence to priority areas; a

transportation policy that supports the decentralization of economic activity by means of redesigning the physical system and restructuring its rates; and, lastly, undertaking an administrative decentralization, which can be used to decongest the country's major population centers.

Other instruments of regional policy are: the Master Coordination Agreements (*Convenios Unicos de Coordinación, CUC*), in which all the partial actions that each state can partake in with the Federation, are stipulated in a consistent manner, gradually turning them into veritable Development Pacts; state development planning, which seeks to guarantee that all actions carried out by the Federation have their equivalent counterpart at state level; an Urban Development Plan that renders the economy's sectorial objectives, into targets placed within a time and space framework, which will serve to regulate and control the growth and development of the country.

14. SOCIAL POLICY

The ultimate aim of the development policy as a whole is social development, conceived and understood as a process whereby national wealth is transformed into an agent of justice. Even though it is true that economic growth is a requisite and platform for generating social development, it is also true that social development is a conditioning factor of growth—to the extent to which it establishes certain guidelines and reorients growth toward meeting social needs.

The chapter on social policy is supported by the National Plan's different levels, rendering objectives and strategies into targets, guidelines and specific programs which, in turn, are supplemented by the actions prescribed by the expenditure, energy, sectorial, regional, and the general economic policies.

The most pressing concern of social policy is to achieve an effective and efficient mobilization of public, private and social resources so as to place within the hands of all Mexicans the opportunity to satisfy their needs—and, transforming these needs into effective demands, on the basis of attaining the social rights established by our laws. Employment—both purpose and result of the Plan—is a privileged link between the economic and the social, and a means for redistributing income, and acceding to social benefits. This brings into focus the inter-relationship that exists between satisfying essential needs and generating employment, which offers the possibility of growing and distributing simultaneously.

Based on an overall and sectorial diagnosis, it is acknowledged that

shortages are related with employment problems, income distribution and the geographical concentration and dispersion of population. Moreover, the uneven concentration of income has contributed toward deforming the structure of demand, in such a way that the domestic market has expanded, without sufficiently reflecting the needs of the majority of the population.

Within its objectives, the Plan includes minimum welfare levels. These are consumption levels that should be generalized to the entire population, in order to cover necessities. As the most pressing deficiencies are met, improvements can be made in a more uniform manner, broadening the availability of the basic goods and services that comply with these levels. What is proposed is to advance progressively toward balanced welfare levels for all Mexicans, making use of what has been accomplished up to now, and attending the community's most urgent welfare lags, with special emphasis on food and nutrition. With the Mexican Food Supply System (Sistema Alimentario Mexicano, SAM), once the specific nutritional requirements are defined, the basic goods and services that need to be stimulated and supplied will be identified, and therefore the most appropriate agricultural and fishery production, for fulfilling these needs will be organized.

The Plan establishes a close inter-relationship between satisfying essential needs and creating jobs. Thus, it offers the possibility of growing and distributing simultaneously.

The components of the social policy –such as population, education, health and social security, housing, food and nutrition, labor, social participation and organization policies, as well as those related with the attention to both urban and rural marginated groups –seek to satisfy the needs of a new employment and productive scale, and higher welfare levels for all.

The target of the demographic policy is to reduce demographic growth to 2.5% for 1982, and to 1% for the year 2000. The idea, naturally, is to achieve a more rational distribution of population throughout the territory, and to raise the quality of life. The 10th General Census of Population and Housing will be taken on June the 4th of 1980, and will provide us with a profile of the Mexican society, and with a greater and very important stock of information that will make it possible to continue advancing in the task of social transformation.

The education sector proposes to launch its basic universal education program of 10 grades in 1982, and link the educational system to the productive system's new requirements of basic and nationally necessary goods and services; likewise, it will up-grade the quality of education, improve the country's cultural level, and increase the efficiency of the education system.

The role of the health and social security policy in the Plan, is to extend

coverage to marginated sectors of urban and rural population, to consolidate the progress made in life expectancy, and to preserve and improve the quality of the environment. The housing policy has reinforced the organizations and institutions that deal with the problem, and it is creating facilities so that all the country's sectors can increase their participation in the construction of housing and the provision of services. Emphasis has been placed on self-construction programs, standarizing and legalizing property ownership, and promoting works of basic infrastructure.

The nutritional policy is guided by the Mexican Food Supply System (Sistema Alimentario Mexicano, SAM), in so far as it is a program for the integral planning of the country's food supply, that sets targets and proposes the undertaking of policy actions related with the agriculture and stock raising, marketing, and industrial as well as those involved with the consumption of basic goods, identifying the different food requirements of the poorest stratum of the population and promoting the provision of basic food baskets for the groups inhabiting critical geographical areas.

Labor policy departs from a unified concept of man as both author and beneficiary of his individual and collective actions; thus, the employment policy, guided by labor objectives, seeks to attain: worthy and just working conditions; protection for the purchasing power of wages, and mass costumary consumption items; to grant incentives to the formation of cooperatives; to promote social organization for workers; to establish an integral system for administrating labor policy; to prescribe recreational facilities; and, the opportunity for workers to raise their cultural level.

The Plan is fully consistent with and forwards the vigorous actions that have been undertaken to attend marginated groups in urgent need of attention. Broad programs have been implemented to improve rural health, supply basic goods to marginated areas, upgrade rural housing, construct country roads; provide education, food and training to children of isolated communities, and, create permanent employment through the project for reforesting the country, among others.

15. POLICY FOR WAGES, PRICES, PROFITS AND TAXES

Conceived as the distributive expression of the Plan, the definition of this policy hinges on philosophical principles contained in our National Project, the relationship between the State and society and its organized forces, and the instruments of economic and social policy that have a direct bearing on the distribution of public wealth, income and social benefits.

What is essential in the wages, prices, profits and taxes policy, is to mold

actions in such a way that they will lead to increase, in real terms, the weight and the share wage-earners have in national income.

The definition of principles is given within a political structure in which a highly significant alliance exists between political institutions and organized labor.

The policy proposes to achieve a balanced pattern of behaviour with respect to profits and wages, endeavoring to make increases in demand consistent with the impetus given to production, in order to reduce pressures on prices; to increase the purchasing power of wages; and, at the same time, to generate a sufficient stimulus for enterprises to turn out the necessary goods and services. Within this framework further progress will be made in adapting the collection of revenue to the criteria of fairly taxing the real capacity for payment of individuals and firms, without ignoring economic efficiency and fiscal incidence on wages, consumption, savings, investment and employment.

In this context, the policy will continue being directed toward achieving the objectives of better income distribution, and a declining rate of inflation, as well as stimulating the reinvestment of profits in the expansion of both productive capacity and employment. This implies reaching a delicate balance that will reconcile the interests of different production factors with the major national objectives and, at the same time, seeking to protect wages and regulate prices, and, through these measures, reasonably modulate profits.

There is no one instrument alone that can attain simultaneously all the outlined proposals; rather, it will be the joint result of a series of actions, with emphasis on:

Wage protection:

- Increases of income will be determined in such a way that the purchasing power of wages will rise, endeavoring to achieve that the benefits of economic growth and productivity reach the working class, in compliance with distributive justice.
- Providing workers with training programs.
- Controlling the prices of basic commodities and the cost price mechanisms.
- Strengthening and extending the establishment of union stores.
- Social benefits.
- Fiscal support.
- Profit-sharing.
- Loans for acquiring mass consumption items.
- Social organization.

- Increased supply of basic goods.
- Improvement in marketing systems.
- Orientation and protection of the consumer.

Modulation of profits:

- Increasing competitiveness through the gradual and selective opening up of the economy.
- Fiscal action.
- Reinvestment incentives.
- Avoiding speculative price rises.
- Controlling monopolistic practices.

Price regulation, reinforcing the anti-inflationary policy:

- Controlling prices of basic commodities to prevent unjustified price rises.
- Selective imports.
- Regulation through CONASUPO, ° in the marketing of basic commodities.

Fiscal actions:

- Supporting real wages by means of income tax deduction.
- Continuation of the program for revising State enterprises and organizations, with the purpose of raising efficiency.
- Redirecting subsidies in order to stimulate both the output required by the country and the consumption of those who need them.
- Continuing the revision and updating of public prices and rates.
- Programs to increase efficiency and productivity in public spending in general –in the centralized government, as well as the decentralized agencies and State enterprises.

16. PROSPECTIVES

The process of planning in Mexico does not begin nor does it end with this Plan. This is not a final stage; it is merely an intermediate step in a

° CONASUPO is a State entity whose basic functions are gathering, distributing, commercializing and, in some cases, processing basic customary consumption goods and the object of which is contributing to market regulation as well as supplying basic items at low prices for the poorest population.

toilsome and complex task that requires the active cooperation of the entire community. The National Development Plan is a cross section of such a process. The Plan deliberately limits its targets and action to the year 1982, because it expresses a government plan and, as such, it is placed within the temporary limits of the current Administration's responsibilities.

In 1980, the profile of the challenges the country will confront in the course of the next twenty years, is clearly sketched. Mexico is on its way toward becoming a country with a large population whose increasing needs must be met, with a predominantly industrial and urban structure, with a greater capacity for exchange with other countries, and with technological and organizational requirements that are increasingly complex.

If the community is able to involve itself in a rigorous and sustained exercise of work and productivity, Mexico can expect real growth rates on the average of 8% annually for the next twenty years. This would imply reaching a real Gross Domestic Product (GDP) five times greater than the present one in the year 2000, and tripling the per capita GDP during the same time span.

The relative size of the economy would change substantially. In 1978, Mexico's GDP was almost 23 times smaller than that of the United States of America, but, measured in constant prices, the multiple would be reduced to 10 times in the year 2000, if the expected trajectory is maintained. Compared to Canada and Italy, whose present GDP's are three times Mexico's, the gap would narrow to only one-third by the year 2000. In relation to Spain, whose economy is at present 50% larger than ours, within two decades it will be almost 20% smaller than Mexico's.

The change in the productive structure associated with this trajectory would mean that, by the onset of the next century, Mexico's industrial output will represent 45% of the total of goods produced domestically compared to 30% at present. This will clearly qualify the Mexican economy as an industrial one.

Maintaining economic growth at rates of around 8% will result in the creation of 20 million jobs by the year 2000. That would double the amount created up to now, and it would mean higher levels of welfare for increasingly broader groups of the population, thus fulfilling the expectations outlined in the National Employment Program.

With multisectorial action and the mobilization of the Nation's resources, the country's education system will be better integrated with the development needs, and illiteracy will have virtually disappeared; in health and social security, coverage will be extended to all Mexicans, and activities will be directed from only one organized structure; in housing, better working conditions and higher income will make it possible to cover the needs of each social group; and, in food and nutrition, the employment policy,

combined with a rural and agro-industrial development adapted to a demand structure more compatible with the basic needs of the people, will enable the country to eradicate malnutrition and improve the food intake of all Mexicans.

These are not utopic forecasts; they are projections of real possibilities for the Nation. They fill us with optimism and confidence in the face of a demanding task that, with this optimism and confidence, takes on more meaning and places things in perspective. It affords the opportunity to weigh different roles for the economy so as to persevere on the basis of our own model, in the tasks of national strength and efficiency. The favorable prospects for Mexico are far-reaching; but, the effort required is also vast. A precise ratio, however, exists between what should be done, and what can be attained.

It is convenient to insist on the idea that we want to be more prosperous in order to be more just; but, we must not wait for the arrival of prosperity to start walking on the route of justice.

The 1980-1982 National Development Plan, which is presented today, is not a panacea, nor is it a precisely drawn map that will mechanically lead to the objectives sought –nor is it a catalogue where the answer to all possible questions can be found.

It is, however, a step in the right direction –the initiation of a new period that will require greater efforts.

It is essential to refine the techniques and the organization for planning; to determine the timing for implementing policies the Plan establishes; to make the different instruments more precise; to work out in detail the inter-relationship existing between the various programs and actions; and, to constantly upgrade the techniques for analyzing, forecasting and evaluating.

The main task now is to implement the Plan in the next three years. The responsibility of this Administration is over in that time. It is not possible to offer anything beyond what has been circumscribed to a specific period. But three years, added to the first half of this Administration, is time enough to leave the hallmark of a new direction in the country, and to leave behind a firmly established basis on which subsequent development may rest.

If, during the course of the present Administration, efforts are mounted to attain the Plan's objectives –with the discipline and persuasion demanded by this commitment– the confidence the Nation has deposited on this regime will be maintained. Moreover, society as a whole will give more credence to planning as a way of everyday life.

THE USE OF ECONOMETRIC MODELS IN DEVELOPING COUNTRIES *

Jere Behrman * *

&

James A. Hanson : * *

1. Introduction

The question of stabilization within a framework of national income determination models has not been the major concern of either empirical and theoretical macroeconomic analysis in the developing economies. In a recent survey of the state of the art regarding the use of economy-wide models for LDC's, for example, Blitzer et al. (1974) does not even include a chapter on macroeconomic income-determination models.

The dominant frameworks for macroeconomic policy analysis and policy recommendations, instead, have been provided by Harrod-Domar aggregate-growth models, static and dynamic linear-programming models and Chenery two-gap models. 1/ Assumptions which generally are made in the construction of these models include: (i) that the degree of capacity utilization, the rate of inflation, and the level of aggregate demand are not important considerations; (ii) that the financial constraints on government and central bank behavior (and, thus, the entire fiscal-monetary-income-international policy-inflation nexus) can be ignored; (iii) that short-run

* Paper presented at the Conference on Planning and Short-Term Macroeconomic Policy in Latin America, Isla Contadora, Panama, 31 October to 2 November 1975.

* * Department of Economics, University of Pennsylvania.

* * * Latin American Institute for Economic and Social Planning.

1/ Examples include Adelman and Thorbecke (1966), Blitzer, Clark, and Taylor (1975), Cabezón (1969), Chenery and Strout (1966), Clark and Foxley (1970, 1973), Eckaus and Parikh (1968), Manne (1974), UNECAFE (1960), and UNCTAD (1968).

flexibility is limited because elasticities of substitution between labor and capital are practically zero, because short-run price responses are very low, and because any responses which do occur are distributed over long time periods; and (iv) (at least for the programming models on which the greatest resources have been expended) that the most interesting question is "what could happen if socially optimal readjustment of the economy occurred in response to policy changes", rather than "what would happen if the independent economic units which make up the economy followed their traditional behavioral patterns in response to such changes" 1/. The resulting models usually include only real phenomena and are characterized by supply bottlenecks due to either foreign exchange or capital constraints.

Such an emphasis reflects two widely-held views. (1) Growth is a relatively more important economic objective (and stabilization less important) in the developing countries than in the developed countries. (2) Income-determination models are of limited value for developing economies 2/.

Some exceptions to the predominant view have long existed. The participants in the "structuralist-monetarist" controversy in Latin America, for example, have accorded significant importance to inflation and stabilization policies in the development process 3/.

These exceptions have been increasing in number. The recognition of considerable underutilized capacity, particularly in cyclical downturns, has increased interest in the use of national-income-determination models for stabilization purposes. Numerous partial-equilibrium econometric estimates have been made which imply significantly non-zero elasticities of substitution

1/ "Socially optimal" is used here not to imply that externalities are incorporated but to mean that which maximizes the objective function given the constraints imposed by the model itself, starting and terminal conditions, and exogenous variables. Some limited aspects of behavioral responses, of course, are incorporated in these studies, such as the sectoral pattern of income elasticities for private consumption.

2/ Rao (1952) presents an early statement of this view. Ranis (1974) gives a recent summary.

3/ For good summaries of the "structuralist-monetarist" debate, see Campos (1964) and Wachter (1974).

and significant responses in both capacity utilization and capacity creation decisions 1/. Even the strongest advocates of supply-oriented capital and foreign-exchange-constrained analysis seem to be having second thoughts about the importance of short-run factors and stabilization problems. For example throughout the above-cited survey by Blitzer et al. (1975), references to the need to treat short-run features (e.g., prices responses, capacity-utilization determination, aggregate-demand-related policies) are frequent.

Recently, because of this growing interest in stabilization and other short-run problems, a large number of Keynesian-based national-income-determination models have been constructed and utilized for the developing economies 2/.

A basic problem with the construction and use of these models for policy-making purposes in developing economies is the general lack of accurate, up-to-date information (for example quarterly information on output and its components and sectoral or cyclical indicators which are available with a short time lag). This is a gap which at present forces policymakers to act on incorrect or dated information 3/. It also means that income determination models of developing countries are annual, rather than quarterly. However in the developed countries such models have been

1/ Behrman (1968) summarizes many of these estimates which relate to agricultural supplies. Morawetz (1974) gives references for a number of studies of elasticities of substitution. Behrman (1971a, 1972a, 1972b, 1972c, 1973a, 1973b, 1973c, and 1975c) and Behrman and García (1973) present sectoral estimates for the Chilean experience.

2/ For example for developing economies in different parts of the world, see Acquah (1972), Bank of Korea (1971, 1972), Behrman and Klein (1970), Beltran and Klein (1971), Bhuiyan (1971), Corbo (1971) Dutta and Su (1969), Hassanein (1970), Islam (1965), Kim, Nam and Lee (1969), Krishnamurthy (1964), Mahertz (1971), Marwah (1964, 1969), Marzouk (1969, 1974), Naranjo (1972), Nugent (1965), Pandit (1971), Panlopulos (1966), Ramagkura (1971), Song (1972), UNCTAD (1968), Yoon (1971), and Yu (1970). Beltran (1974) summarizes the features of many of the Latin American models. Larry Lau has compiled a bibliography of 200 such models, of which 50 related to Latin America.

3/ For example R. French-Davies (1973) shows that the Klein-Saks stabilization program was originally thought to have failed when inflation doubled in 1958. Re-estimates of prices show the rate was approximately constant over the 1957-1958 period. While the social costs of this stability also may have been judged too high, the facts of the case were substantially different than those that went into the original decision.

"most successful" in predicting output in the next quarter or six months; over a nine or twelve month period simple trends are often as good 1/. Thus improvement in modelling may require an investment in improving the data base, an investment which has the additional payoff of providing more accurate and up-to-date information to policymakers 2/.

There remains the more philosophical question of our present ability to forecast and affect the very short run, and its corresponding effects on the long run. However political pressures force governments to accept some advice and take some action in the very short run, often to the detriment of the long run. Therefore it is probably best for economists to offer advice on the short-run and short-run/long-run tradeoffs, while specifying the fragile nature of the advice.

A second problem results from a simplistic transfer of aggregate-demand models of developed economies, with little or no adjustment for the special conditions in the developing countries. In consequence numerous shortcomings occur in the model's specifications, shortcomings which are perhaps not as important in the developed country context. For example: (1) National income is determined by aggregate demand in a Keynesian fashion, with no testing for the existence of possible constraints due to the stocks of capital or labor, the supply of foreign exchange, or supply limitations imposed by quantitative restrictions 3/. (2) Underemployed or surplus labor and dualism in the labor market are not explicitly incorporated. (3) Aggregation is so great that there is no possibility of capturing the impact of policies on relative prices, even though economists like Hansen (1973b) have maintained that policies in developing nations are primarily reflected in altered relative prices and Wachter (1974) has demonstrated,

1/ See Zarnowitz (1967).

2/ See Behrman and Hanson (1975) and Behrman (1975d) (1975a) for an attempt to develop such a data base and use it in constructing a quarterly model of a developing economy.

3/ See Barro and Grossman (1971) (1974) (1975) for a theoretical framework of supply as well as demand restraints which determine income for an economy is not in general equilibrium.

econometrically, the structuralist proposition that differing speeds of adjustment of relative prices may result in inflation. The possible importance of intersectoral flows, moreover, is lost by the high level of aggregation. On the other hand data problems are often cited as preventing disaggregation to any significant level, and there remains the question of whether disaggregated models provide more accurate projections of aggregate variables, and to what extent such models divert attention from more global problems, such as the financial-monetary-international-income nexus. (4) Potential variables are often overlooked. For example it is often assumed that an overvalued exchange rate will be maintained through a continuance of exchange control. (5) The significance of the foreign sector as a source of non-competitive, intermediate imports and of capital goods, as well as government finance and household asset holdings is not well presented. (6) The importance --due to fragmented and poorly functioning capital markets-- of direct flows and retained earnings in the real investment process is not explored. (7) The degree of endogeneity of fiscal, monetary and international variables and their interrelation in poorly functioning capital markets is ignored, with the result that policy options are overstated. (8) There is little attempt to integrate the short-run income determination model with long-run development models. In particular, though plant and equipment decisions are well treated, no attempt is made to study human capital formation, despite the growing evidence on its significance, in development, and the role of social overhead capital, long emphasized by such leading development economists as Rosenstein-Rodan (1961), is not explored 1/. (9) There is a tendency to ignore economy wide disequilibrium 2/.

At the same time that interest in and use of stabilization models for the LDC's has been growing, controversies have emerged over the specification of income-determination models for the developed economies. In the past decade, critics have claimed that deficiencies in the theoretical structure deficiencies which may be related to points 1-9 above, make any analysis of stabilization policies based on such models suspect. Recently, however, some convergence seems to have occurred at least in regard to the nature of the issues. Ando (1974), Blinder and Solow (1973), Hansen (1973a) and others have attempted to adjust the IS-LM model to explore these controversies.

1/ Many of the studies previously attempt to correct one or two of these shortcomings. Nevertheless, the list of shortcomings in any specific study generally is quite large. For example, one well-known study of Chile, Corbo (1971), considers the problem of an endogenous money supply and includes supply constraints, but does not avoid most of the other shortcomings listed in the text. Moreover in the simulations of that study, because of convergence problems, excess demand is exogenized so that there is no link between monetary and real variables or the money supply and prices.

2/ See Barro and Grossman (1971) (1974) (1975) and Behrman (1975c).

Given some convergence on the nature of stabilization issues in the developed countries and given the increasing preoccupation with stabilization problems in the developing countries, the time seems ripe to re-examine the applicability of modern stabilization analysis to the special situations of the developing countries. This paper begins such an attempt.

The strategy pursued in the paper is to examine briefly in turn, each of the components of recent models for stabilization in developed economies. Then the paper considers how they need to be altered for analysis of stabilization in developing economies. A recent model of one developing economy --Chile-- and a study in process of Panama are considered as examples with emphasis on the question of how successfully do these examples succeed in incorporating the important features of these particular developing economies 1/.

The prototype model for the developed economies used as a starting point combines the features of the closed economy model of Ando (1974) and the analysis of international capital movements of Branson (1974). This model is somewhat complex in order to incorporate a number of features discussed in recent controversies. Solution by differentiation does not lead to simple elegant expressions. For understanding of it beyond that provided below, the reader is referred to the papers by Ando and Branson.

The Chilean model which is used as an example is the 172 endogenous variable annual macroeconomic model for 1945-1965 presented in Behrman (1975c). It is a nine-sector model with capacity creation, capacity utilization, export, import, price and wage determination relations for each sector. Consumption-savings decisions are estimated for households and non-profit institutions, business, and the government. Many aspects of government fiscal and monetary policies are endogenous. In its specification the attempt is made to overcome the eight common shortcomings frequently encountered in Keynesian-based national-income determination models for developing economies which are listed above. For understanding of this model beyond that provided below the reader should consult the above-mentioned reference. Less explicit reference is made to a trimestral model of Panama, presently under construction.

1/ At least a paper, if not a book, could be written on data problems. In this presentation some allusions are made to these problems, but they are not treated systematically so that the paper can be kept of a manageable length.

Before proceeding to consider how the components of such a model must be modified in order to capture the features of developing countries a caveat is in order. The developing countries are far from homogeneous. In terms of almost any relevant feature the range across countries is enormous. In what follows below, therefore, the suggested modifications reflect characteristics not necessarily common to all developing countries but at least to a significant number of them.

2. Components of National-Income Determination Models

Table 1 presents the prototype model for the developed economies which is used as a starting point for the discussion of this section. Each of the major components of that model are now examined in turn with focus on how they need be altered for analysis of stabilization issues generally in developing countries.

2.1 Labor Market, Supply, and Determination of Prices and Wages

2.1.A The Developed Country Model

Equations (1) through (4) describe the labor market and the determination of prices and wages in a recent model for developed economies.

Equation (1) depicts the short-run relationship between output and the required manhours to satisfy demand. It is assumed that at any point in time the economy has a collection of machines whose labor-output ratio were determined by the technology and the expected relative prices at the time each machine was manufactured. Given the relative prices of the current period, machines and the labor associated with them are used in production in order of their efficiency until the desired output is produced. New machines may contain different technology based on expected relative prices. Thus producers' durable equipment takes the form of putty clay.

Equation (2) gives the unemployment rate as a function of manhours and population characteristics. It incorporates into one expression the determination of hours worked per person and the response of the size of the labor force to employment conditions and demographic features of the population.

Equation (3) is a Phillips-curve relation for the determination of the rate of change of wages as a function of the unemployment rate and price expectations. It may be considered a reduced form equation of underlying supply and demand relations in the labor market.

Equation (4) determines the price level of output under the hypothesis of a (possibly lagged) mark-up on minimized average cost. The price level should vary proportionally with the money wage level and reciprocally with long-run productivity. The mark-up factor is u . Since the mark-up may vary in the short run with the utilization of capacity, the unemployment rate is also included in this function.

2.1.B Wage and Price Determination in Dualistic Labor Markets

Most of the developing economies are characterized by dualism in their labor and product markets.

To capture the effects of long-run changes in sectoral distribution of the labor force, as well as the short-run problems of income determination, it is necessary to include explicitly this dualism.

In a dualistic labor market the modern sector is market oriented and pays wages approximately proportional to the value of the marginal product of labor. Its technology is fairly recent, and permits but limited substitution between primary factors 1/. In some countries unions are quite powerful in this sector.

The traditional sector is much less market oriented. In most countries a major component of this sector is non-commercial agriculture. For this subsector the marketed surplus often is a small part of total production and may be an inverse function of price. However analysis in Behrman (1968), suggests that these responses also may be positive and quite large. Factor substitution usually is possible, but the relatively high labor-to-capital ratio often results in disguised unemployment with marginal products substantially below those in the modern sector. Because of family and communal arrangements, the income of individual laborers is determined by tradition and is related to the average rather than the marginal product.

The dominant view of the impact of this dualism on the labor market is based on the well-known model of Lewis (1954). The average share of labor in the traditional sector, plus a differential for the costs of moving from

1/ The movement towards putty-clay considerations in the macroeconomic literature of developed economies lags substantially the emphasis on ex post fixed proportions for the modern sector of the less developed ones. Eckaus (1955) provides an early statement regarding less-developed countries.

the traditional to the modern sector, provides a floor for the wages in the modern sector 1/. The average share of labor in the traditional sector is assumed to remain approximately constant over a wide range of sizes for the traditional labor force 2/. It is therefore argued that a substantial range, the supply of labor for the modern sector will be quite elastic.

Using this approach equations (1) and (2), would refer to the modern sector (with all the included variables referring only to that sector). The traditional sector, would act as one residual claimant on labor and urban unemployment, open or disguised, as the other 3/. However in practice it might be necessary to aggregate these two residuals, given the problems of defining urban unemployment and to continual shifts in demand for "modern" goods, which affect both open unemployment and rural-urban migration in a complicated fashion.

Prima facie this approach might seem to lead to a something approximating a Keynesian case in the modern sector, with an "unlimited supply of labor" at a fixed wage, and employment in the modern sector determined by demand for modern sector goods. But this wage is fixed in real terms, so the situation is also classical in an important sense.

1/ The discrepancy between the marginal products in the two sectors obviously leads to static inefficiencies.

2/ The average share per laborer is generally assumed to be fixed by tradition until enough labor exits from this sector so that the marginal product of labor rises to this level and market prices begun to dominate (Fei and Ranis (1964)).

3/ Harris and Todoru (1970) attribute a certain minimum level of urban unemployment to the existence of government or unions which establish fixed wages. They claim that rural-urban migration occurs as long as the expected income (taking into account both the higher modern-sector wage and the probability of obtaining employment) exceeds the traditional average labor share. The result will be an equilibrium level of open unemployment or disguised unemployment in the cities which persists as long as government or unions maintain a differential between the traditional average labor share and the modern-sector wage.

If modern and traditional goods were good substitutes, so that we could treat them as one good, Equations 1 and 2 could once again apply to the economy and Equation 3 could be replaced by an equality between (expected) real wages in the modern sector and the exogenously-given, traditional labor income. Equilibrium employment and output would be unresponsive to changes in aggregate demand. Rather than wages determining the price level, as shown in Equation 4, prices (as determined by Equation 14, the demand for money) would tend to determine nominal wages in a more classical fashion 1/. These results hold in their essentials if the goods are not perfect substitutes, although a shift in demand patterns could alter the distribution of employment, and if directed toward modern goods, obtain some aggregate efficiencies.

The problem with this approach is that it does not cover the case of Keynesian unemployment in the cities, due to a shortage of aggregate demand. For a given fully employed labor force there is one and only one allocation of labor which equates (expected) urban wages with a given, traditional labor income 2/. To consider both dualistic labor markets and Keynesian unemployment the strict equality between labor incomes in the traditional and modern sectors must be replaced by a gradual adjustment process toward equality. In that case a drop in aggregate demand, assuming also a slow adjustment of prices, would lower modern sector output, cause urban unemployment and slow rural urban migration out of the growing population. The average rural income might fall below the (expected) wage for a time.

Over a longer period migration and human capital would alter urban labor supply substantially, and capital labor ratios would vary. Moreover changes in minimum as opposed to average, wages, may depend (inversely) upon (lagged?) urban unemployment. These factors would tend to narrow the relation between measured (expected?) urban wages and the average share of labor in the traditional sector, over the longer run.

The basic problem with all these observations, is the fact that Equation 3 remains a reduced form of the operations of the labor market in which the underlying supply and demand relations are not well stated or perhaps even

1/ Interest rates also enter so the model is not completely dichotomized.

2/ Suppose that production functions in both sectors are Constant Return to Scale and for simplicity that individual returns in the traditional sector are equal to the average product of labor. For given capital stocks in the two sectors there is only one labor allocation which equates marginal product in the modern sector and average in the traditional and "employs" all of the labor force. If unemployment in the urban sector is permitted, then a single "equilibrium" level of unemployment will be determined, unless the elasticities of labor "demand" schedules in the two sectors have a particular configuration.

understood. The explicit statement of these relations becomes very important in explaining wages in one sector of a jointly determined two (or more) sector model. In an explicitly two sector model wages in the urban sector are determined by the demand for labor which depends on nominal wages and prices of urban sector goods and the supply of labor which is dependent upon nominal wages and on prices in the two sectors. Far from being constant, rural supply, relative prices of rural goods and rural incomes may all vary inversely with the number working in the urban sector 1/.

The same problem of incomplete specification exists in the equation of price determination via mark-up, expressed in Equation 4, aside from the obvious point that short-run variations in mark-ups (and therefore their explanation) are much more important in countries where the industrial non-wage share reaches forty per-cent of value added, (see Michalopoulos (1969)) and some important items in the price index are produced by government factories or closely controlled by governments. At best Equation 4 could explain relative prices, in a two good model, but not their absolute level.

One alternative might be to treat the traditional sector, rather than its labor force, as a residual. The urban wage level could be related to the unemployment rate and some trend in rural incomes. The price index could be determined through a mark-up equation, with a non-unitary elasticity of the price index with respect to the urban wages. The difficulty with this approach is that it neglects the determinants of the intersectoral movements it is trying to model.

A second approach would be to retain the demand determined employment figure of Equation 1 and jointly determine the unemployment rate, the wage in the modern sector the (residual) labor force, output, and average product in the traditional sector, through a set of equations which require relative prices to adjust to equate demands and supplies for both traditional and modern products, and long-run equality between real labor earnings in the two sectors. This approach would obviously require a division of aggregate demands between the two sectors and an equation to determine the general price level.

1/ Fei and Ranis (1964) claims that it is difficult to use the rural surplus for development as rural labor incomes do not remain at the traditional level and prices of rural goods tend to rise. See also Hymer and Resnick (1971).

In the Chilean model (Behrman (1975c)) of income determination in an inflationary economy, the major determinant of the general price level was the rate of change of the money supply, with its impact distributed over a number of years. As described below, this money supply was determined by other factors in the system. Because of the distributed lags in the price-determination process, moreover, stemming inflation is quite difficult unless expectations about future price movements can be lowered drastically.

Non-monetary factors, also affect the general price level. Cost-push factors operating through intermediate inputs and unit labor costs are more important in transmitting overall inflationary pressures (including those which arise from the role of expectations in the wage bargaining process) than previous studies, such as Harberger (1963), have maintained. Real changes in per capita GDP (and other indices of current activity), in labor productivities, in demands (final and intermediate) facing sectors relative to capacity, and in the distribution of factoral income and of sectoral product have significant effects, as do foreign-sector policies. However government minimum wages, although widely discussed in Chilean circles, do not appear to have a very significant impact on wage changes once other prices are incorporated into the wage-change relations.

2.1.B.2 The Importance of the Foreign Sector

The foreign sector plays a much more important direct role in labor, production and price relations in most developing economies (and probably in most small open developed countries) than is indicated in the model of Table 1. Four modifications of the counterparts of Equations (1)-(4) for the modern sector need to be made to reflect the impact of the foreign sector.

(i) Some imported intermediate inputs and raw materials are critical in the production process. The elasticity of substitutions between such imports and domestic factors may be low or zero. Especially in the disequilibrium exchange rate system common for many developing economies, the constraint on production and employment may not be the putty-clay stock of machinery and equipment, but the availability of these imported inputs. Equation (1) may require modification to reflect this possibility.

(ii) The derivation of Equation (1) also needs to be modified due to the fact that technologies used in the modern sector are largely imported from developed countries with much different factor endowments. Very little choice may be available (or may be thought to be available) even ex ante for the capital-labor ratio of the developing countries. Therefore, the putty-clay response to expected relative prices is constrained to a choice among relatively capital-intensive technologies. What Eckaus (1955) calls

the "factor proportions problem" limits the absorption of labor by the modern sector.

(iii) The discussion in Section 2.1.B.1 suggests that for many developing economies Equation (3) should be replaced or modified by considerations relating to the real labor share in the traditional sector, government minimum wages and union pressures. If some version of Equation (3) remains, however, one further modification needs to be made. In many developing economies an important and easily available index of inflationary expectations is the rate of change of the exchange rate. In addition to the history of past inflation, therefore, this variable (or some function of past values of it) should be included for such countries.

(iv) In light of the widespread importance of intermediate and raw material imports, if a variant of Equation (4) is included, then it should be modified to reflect mark-ups on imports as well as on labor. Changes in the international prices or in import policies, therefore, have direct effects on the domestic price level.

2.2 Product Market and Aggregate Demand

2.2.A Developed Countries

Equation (5) is the definition of net national product.

Equations (6) through (10) describe the demand for real output.

Equation (6) is the consumption function. Real consumption depends upon expected real disposable income (approximated by a distributed lag of actual real disposable income) and net worth, in a variant of the life cycle hypothesis.

Equation (7) is the investment function. For the developed countries in which capital markets are well functioning so that the cost of capital is well identified, investment decisions are based on a comparison of the present value of the expected stream of income generated by the investment and the cost of investment. Simultaneous variables which enter into the investment decision, therefore, include the capitalization rate applicable to real assets and net national product in real terms. The appropriate tax rates also have a role.

Equation (8) defines total government expenditure as the sum of exogenous central government expenditures and endogenous local government expenditures. The latter respond fairly strongly to cyclical conditions of the economy.

Equation (9) is the import function and Equation (10) is the export function for developed economies. Imports respond positively to the level of income and the domestic price level and inversely to the exchange rate (defined as the number of units of domestic currency per unit of foreign currency). Exports are assumed to respond directly to the exchange rate and inversely to the domestic price level.

2.2.B.1 Consumption in Developing Countries

For the developing economies, several hypotheses about private consumption behavior have been suggested. (i) Because of the existence of a large number of individuals at or near a subsistence income level, consumption may not be proportional to income even in the long run. If true, the high marginal propensity to consume at low income levels, ceteris paribus, may imply a relatively high multiplier. (ii) Retained business earnings (although not necessarily from corporations) are a relatively important source of savings. Therefore, a division at least between labor and non-labor income might be desirable. (iii) The marginal propensity to consume out of the income generated in some sectors --especially those related to exports-- may be higher than elsewhere in the economy. The inclusion of a separate argument in the function for income from exports might be desirable. This modification would further increase the impact of the foreign sector on stabilization. (iv) If interest rates are controlled, then a policy oriented model would consider the direct effect of their decontrol on the rate of consumption. Controlled interest rates may also increase the substitution between foreign and domestic saving.

Finally, data problems may make it difficult to include non-monetary assets in the measure of net worth 1/. This distortion is not as great as it would be for the developed countries, because the stock of money balances represents a large percentage of privately held assets, perhaps as great as 40 per cent in nominal terms 2/.

1/ See Armando Gomez and Daniel Schlesinger (1971) for an attempt to estimate family net worth in Colombia.

2/ The question also remains as to whether privately held government bonds should be counted as private wealth. See Barro (1974).

2.2.B.2 Investment in Developing Countries

For some of the more advanced developing countries, evidence exists which supports the use of the same basic formulation (e.g., Behrman (1972b) considers investment by sectors). More generally, however, substantial modifications are needed to reflect special aspects of capital markets, social overhead capital, and international considerations:

(i) Domestic capital markets in developing economies often are not well functioning. Markets are very fragmented, especially between the traditional and modern sectors. In the modern sector legal limits on nominal interest rates frequently are effective so that credit rationing occurs in bank markets. Government planning organizations also often attempt to control the allocation of physical capital by non-market means.

The net result is that much of the domestically-financed investment does not pass through a capital market (or, at least not through "the" capital market). Instead it originates in retained earnings or in direct flows from the government. Government policy is often directed towards increasing the former source by changes in the terms of trade, by price ceilings, and foreign trade policies in favor of sectors in which investment is desired. Quite commonly industry is so favored over primary production, and import substitution or non-traditional exports are favored relative to traditional exports.

To capture these features, direct financial flows from the government and the results of quantitative allocation mechanisms need to be included in the investment function. To represent the impact of policies which work through altering terms of trade, a multisector model is required.

(ii) The development literature emphasizes repeatedly the role of social overhead capital in the development process. Because of externalities and increasing returns to scale over the relevant range Rosenstein-Rodan (1961) and others maintain that the government must increase such social overhead capital in order to induce private investment. Birnberg and Resnick (1973) show that social overhead capital was a historically important element in export growth. The role of social overhead capital in determining the stream of expected net income from investment therefore should be made explicit.

(iii) International considerations may enter into investment decisions in two important ways.

First, a considerable portion of the capital stock originates from direct foreign investment in the modern sectors of many developing economies. One implication of this foreign ownership is that for such investment the relevant cost of capital reflects the opportunity cost in the international capital market (modified by local tax, repatriation and earnings regulations and expected exchange rate movements), not in the domestic market. Another implication is that net factor payments abroad may have a stabilizing influence if they are determined as a residual. (See Reynolds, 1968).

Second, for many of the developing economies much of the machinery and equipment for investment in the modern sector is imported 1/. This point is related to the factor proportions problem referred to above because of the concentration on developing relatively capital-intensive technology in the developed economies. It related to the disaggregation of imports referred to below. It also means that exchange-rate policy and other import policies have important roles in determining the cost of capital. Finally, it is possible that the quantity of imported capital goods may constrain real investment, if the elasticity of substitution between domestic and foreign investment goods is in fact very low and quantitative restrictions are an important component of trade policy as in many developing countries. However, Behrman (1975a) evidenced that the availability of imported machinery and equipment constrained investment in Chile 2/.

1/ Díaz Alejandro (1972a) reports 75 per cent of investment of Colombian machinery and equipment was imported in 1975.

2/ If the availability of foreign capital inflows (both official and private), directly or indirectly affects investment (e.g., see Areskong (1974)), they should be included in the model as part of a reduced form of the investment equation and, through spillovers of frustrated demands, in the consumption-saving function. The theoretical framework for modelling such spillovers might follow Barro and Grossman (1975).

2.2.B.3 Government Expenditure in Developing Countries

For developing economies current government expenditure often (but not always) is more centralized than in developed economies such as the United States. Nevertheless there remains a large, effectively endogenous component. The government is a relatively large employer in comparison to total modern-sector employment, the wage bill makes up a substantial portion of its expenditure and cuts in this expenditure as part of stabilization policy would be extremely risky politically in most cases.

Government expenditures also generally are affected directly by foreign-sector conditions through the budget constraint. Taxes related to the foreign sector are a major source of variance in government revenues (see below). A further effect is through official capital inflows. The available evidence suggests (although not conclusively, see Mikesell and Zinser (1973)) that such flows are diverted partly to current government expenditures. These inflows may also lead to local inflationary problems, if they result in monetary creation instead of increased imports.

2.2.B.4 The Import Equation in Developing Countries

For most developing economies, as is noted above, imports play a critical role in the provision of non-competitive raw materials, intermediate inputs, and machinery and equipment capital goods for the modern sector.

Moreover, because many of these imports are non-competitive and because import substitution policies often have reduced competitive imports to a low level, the price and exchange rate elasticities usually are thought to be low, while measured income elasticities are high. However, for Chile estimated elasticities suggest that the 63 per cent drop in the price level deflated exchange rate (between 1946 and 1973) implied ceteris paribus increases in imports of 57 percent for secondary consumption goods, 88 percent for transportation related investment goods, 18 percent for intermediate goods and 50 percent for services (Behrman 1975a and b).

To capture the differential impact of the various types of imports on growth and stabilization, as well as these differential responses to different components of income and price indices, some disaggregation is necessary.

Policies to regulate imports are widely thought to be among the most potent available to the governments of developing countries in their quest towards growth, distribution and stabilization objectives. Among the policies often utilized are multiple exchange rate systems, tariffs, direct government imports, prior import deposits and quantitative restrictions 1/. Clearly in a policy oriented model these policies should be included explicitly in the import function.

Quantitative restrictions frequently are used to maintain a disequilibrium system with overvalued exchange rate(s) and severe foreign-exchange constraints. Disequilibrium is allowed to persist because of the perceived negative distribution, inflationary and political effects of devaluation and widespread convictions about inadequacies of allocation by prices. The existence of strong vested interests in the disequilibrium system (e.g., owners of factors in import-substitution subsectors, the recipients of import licenses, or the government bureaucracy) also help to perpetuate the continuance of these systems. Due to the apparently substantial excess demand, perpetuated in part by the control themselves, 2/ controls generally are relaxed when foreign exchange becomes available from export booms or increased capital inflows. The import functions need to be modified, therefore, not only to include the above-mentioned policy tools, and foreign prices, but also the availability of foreign exchange in a system of disequilibrium exchange control.

2.2.B.5 The Export Equation in Developing Countries

The correct specification of the export function, or functions, is a critical component of a stabilization model for most developing economies. Fluctuations in the value of exports from developing economies, according to the structuralists and a large number of others (e.g., Heller (1954) and Higgins (1968)), are a major source of instability

1/ In some developing economies considerable smuggling exists in attempts to avoid these policies.

2/ See H. Bruton (1969).
See A. Musalen (1971).

for these countries. Not only do such variations directly affect total aggregate demand; they also change aggregate demand through the government deficit because of the dependence of government revenues on international trade revenues. Furthermore, they may alter production in the modern sector because of the low elasticity of substitution for critical imported inputs and a short-run foreign-exchange constraint. The holders of this view conclude that general fiscal and monetary policy will not be very effective in stabilization attempts. Instead emphasis must be placed on exchange rate and tax policies directly related to exports. Some observers further conclude that movements towards less dependence on the foreign sector are desirable in order to lessen its destabilizing influence.

MacBean (1966), summarizes a variety of previous work on export-based instability and suggests that the above-hypothesized strong relationship between export instability and overall instability is exaggerated. Díaz Alejandro (1972a) reports substantially more variation in Colombian imports than in exports, and in exports than in GDP. Mathieson and McKinnon (1974) even conclude that there is some slight indication that "outward-looking" trade policies may increase stability. MacBean (1966) posits that two factors lie behind the lack of a strong relationship between domestic variables and export fluctuations: (i) the low value of the foreign-trade multiplier in part because of repatriation of factor returns to foreign owners and because of leakages into taxes on exports and (ii) the distributed lag nature of reactions to change in exports.

Such studies challenge the once-conventional wisdom about the destabilizing influence of international markets. The issue is far from resolved, however, because of the failure of such studies to specify adequately the structure (including the lags in responses mentioned above) of the developing economies. Even the strongest doubters of the importance of international market fluctuations moreover, grant that export variations probably are destabilizing in those cases in which exports are very concentrated in a few products.

To effectively capture the important, short-run role of exports, it seems best to divide them into two (or more) categories which differ substantially in exchange rate and tax-subsidy treatment: traditional (largely primary products) and non-traditional (often industrial products).

The traditional exports are often major sources of government revenues. In addition to their "world" price, some element of market power (perhaps within the framework of international commodity agreements) may need to be represented.

Far from being taxed, many non-traditional exports presently receive substantial subsidies in hopes of diversifying sources of foreign exchange and gaining entry into faster-growing markets, without causing a decline in "world" price. Many studies have shown a substantial positive response to these subsidies, and a corresponding decline in response to overvalued exchange rate. Referring once again to Chile, Behrman (1975a) and (1975b) shows that the 63 per cent drop in the price level deflated nominal exchange rate between 1946 and 1972 caused, ceteris paribus, drops in exports of 100 per cent from industry, 50 per cent from small- and medium-scale mining, 32 per cent from agriculture, 19 per cent from large-scale mining, and 13 per cent for exports from services. These results also suggest that the foreign-sector régimes increased dependence on the traditional exports (i.e., those from large-scale mining) despite a number of stated intentions to encourage diversification. The response to uncertainty in relative prices was widespread, although not generally large in magnitude, implying that there was a significant, but not substantial, payoff in terms of reducing balance of payments difficulties, to the sliding-peg exchange-rate policy of 1965-1970.

In the case of Colombia various studies show that "minor" exports, i.e., non-coffee, non-petroleum exports were extremely responsive to changes in the effective exchange rate (elasticities of 2 to 4 are reported in Díaz Alejandro (1972c), Musalen (1970) and Sheahan and Clark (1972)). The system of effective devaluations initiated in 1967 is generally considered responsible for the enormous jump in the proportion of minor exports in a much higher total export figure 1/.

1/ Non-coffee exports grew from \$117 million or approximately 25 per cent of exports in 1966 to \$671 million or 55 per cent of exports in 1974 or over 28 per cent per year. While Calvo and Escandón (1973) and Cabarroty and Spillane (1974) attribute much of the growth up to 1969 or 1971 as simple maintenance of market share, one must point out that market share would not be maintained without appropriate incentives to export, i.e., conversion of the world price into an appropriate local currency value.

2.3 Financial Markets and Assets

2.3.A A Simple Model of Financial Markets in Developed Countries

The financial market for the developed economies in Table 1 is patterned on the extensions of Tobin's portfolio equilibrium model by Ando (1974) and Branson (1974). Equations (11)-(14) are demand functions of private-sector asset holders for four imperfectly-substitutable assets: equities, government bonds, foreign securities and money. Equation (15) is the definition of the rates of return (with a fixed zero rate of interest for money) and income (with a transactions demand for money). The nominal supplies of money and bonds and the interest rate foreign securities of a given risk are assumed to be exogeneous.

All assets are gross substitutes. Domestic asset-holders must hold given quantities of equities and government bonds, which are not traded internationally. Domestic asset-holders face an elastic supply of foreign securities at an interest rate fixed internationally. They are free to trade between money and foreign securities. Any purchase of the latter implicitly reduces domestic foreign exchange by an identical amount, and its effects on domestic money supply are completely sterilized.

Equations (16)-(18) are relations between holding and capitalization, real and nominal, and holding and international rates for the three respective non-zero return assets. Equations (19)-(22) are simple hypotheses about the formation of expectations. Equation (23) determines the market value of real assets by capitalizing the expected stream of income from existing assets.

Branson (1974) analyses a similar model for developed countries. His main results are: (1) The inclusion of non-internationally-traded assets restores the effectiveness of monetary policy as measured by the possibility of altering rates of return on such domestic assets relative to foreign securities. (2) The relative impact of open-market operations on domestic-asset rates depends on which asset is the instrument of open-market operations.

The the developing economies a number of changes need to be made. As is discussed above, asset markets are generally fragmented, function poorly and are relatively unimportant in channeling investible funds. Dualism is a common feature, with changes in the organized market having but limited impact on the unorganized sector. Government-bond markets and private-security markets both generally are quite small.

Monetary policy usually is limited in scope, especially internally. Central banks are hesitant to undertake substantial open market operations in the very narrow bond market. In some cases the Central Bank does act as a development bank, making lines of credit available to favored sectors. The nominal money supply is not only dependent upon such credit or rediscount operations, but on de facto or de jure obligations to finance the government deficit and on foreign exchange movements. Among the monetary instruments which might be included in a complete model of the financial sector are marginal and average reserve requirements, rediscount rates, prior deposits on imports and exchange rate(s). Also important are interest rate ceilings, and quantitative restrictions on internal credit and on international capital flows. The use of this latter group of policies may require that relations in the model be modified to reflect rationing due to quantitative variables. Uncertainty about future quantitative policies also may complicate the formation of expectations in Equations (19)-(22).

The foreign sector impinges on the financial markets in a number of important ways. As is indicated in the previous paragraph, foreign exchange movements have substantial impact on the domestic money supply and the major discretionary monetary operations are in the foreign sector 1/.

With fixed, effective exchange rates it may be difficult to pursue an independent monetary policy, for domestic credit expansion will largely "leak out" via an offsetting drop in international reserves and money 2/. Money expansion may have to be linked with effective devaluation. Foreign direct ownership or domestic capital in the modern sector often is important, so Equation 22 or 23 must be modified so that only the value of the domestically-owned portion of the capital stock enter into domestic portfolio decisions.

In a few developing countries, such as Mexico, the interest rate in the international market may effectively create a liquidity trap for the organized monetary market. In general, however, the international interest rate does not peg the domestic rate for at least one of three reasons: (i) Quantitative restrictions on capital movements break the link between domestic and international capital markets. (ii) The existence of Bransonian internationally-non-traded assets which are not perfect substitutes for internationally-traded assets permits some independence in interest rate movements. (iii) Risk premia may be dependent upon the debt income ratio. (Hanson (1974)).

1/ This discretion may be limited to the short run, especially if the government attempts to maintain overvalued exchange rates.

2/ Borts and Hanson (1975) discuss the extent to which this view is correct.

While some of these features have been incorporated in various models of less developed countries, particularly the interrelation between money supply, the foreign sector and the government deficit, this remains one of the weak points of such model. Too little is known about the functioning of domestic capital markets to permit an adequate specification, though the information accumulated through the BID Capital Markets program may improve future models.

2.4 Identities and Miscellaneous Relations

Equations (24)-(28) define disposable income, private savings, income from capital and the balance of payments surplus. For the developed countries these definitions are basically self-explanatory. Note that capital gains on existing assets arise because of changes in the capitalization rate or changes in the expected stream of income from these existing assets due to varying economic conditions. They do not, of course, include additions to real assets from current net investment. For the developing countries the major special problem is the evaluation of capital gains because of the narrow markets for internal equities.

Equation 29 is the tax function (net of transfers). For developed economies the major complication behind this simple representation often is the treatment of the corporation income tax. Therefore income from capital is included as an argument in this function in addition to total personal income.

In developing economies conditions differ with regard to tax collections. (i) The traditional sector is not monetized. (ii) Within the modern sector wages represent a smaller function of output than in developed countries, making withholding difficult. (iii) Literacy is relatively low. (iv) Systematic accounting systems are not widely used. (v) The legitimacy of government revenue collection is less widely accepted and the tradition of voluntary compliance is less strong. (vi) Lack of resources, low civil service pay, and traditional social relations often make efficient and honest tax collection very difficult.

As a result, the relative importance of alternative source of tax revenues differ from patterns in developed countries. General personal and corporation income taxes are much less important. Instead dependence is greater on import and export taxes, indirect taxes and taxes on income generated by foreign-owned corporations. Taxes related to the foreign sector are much more significant because generally they are relatively simple to administer and more difficult to evade. This greater dependence on the foreign sector adds to the difficulties of stabilizing these economies because balance of payment considerations may conflict with the use of taxes for stabilization purposes. The more regressive nature of the tax

structures with its greater dependence on indirect taxes, moreover, implies less "automatic stabilization" from the tax system than in more developed countries. Thus it might be appropriate to disaggregate the tax system. (See Behrman 1975c for example).

Equation (30) is the government budget constraint which Christ (1968) and others emphasize repeatedly. In a closed economy or in an economy with balance of payments equilibrium, this relation need not appear explicitly. The model already contains the private sector accounts and a full recording of transactions between the private and government sectors. If the private sector accounting identities are satisfied, so must be those for the government sector.

2.5 Level of Aggregation

The model of Table 1 for the developed economies is presented on a very aggregative level. Actual empirical utilizations of such models often are on a more disaggregate level. The currently frequently-encountered hypothesis that a major source of inflation in the United States and in some other more developed economies is the combination of sectoral shortages with short-run rigidities points to the need for at least some disaggregation.

For the developing countries, we have already discussed the need to separate the labor market. In addition Hansen (1973b) argues that disaggregation is much more important than in developed countries since much of the direct policy impact is on relative prices. The estimation of Chilean sector relations (Behrman (1975) provides support for this claim. There is a great deal of heterogeneity across sectors in technological substitutabilities and in both the degree and the time path of behavioral responses to economic variables. Relative prices play major roles in both short-run and long-run resource allocation decisions. Both capacity-utilization and capacity-creation decisions respond significantly to these prices. Possibilities for substantial increases in capacity utilization and for factor substitution do exist ^{1/}.

^{1/} Estimated sectoral elasticities of substitution between capital and labor range from 0.0 to 0.9. The adjustment periods for substitution between primary factors are fairly long in several cases in which the long-run elasticities are high. For most sectors in the short- and medium-runs, therefore, the results provide some support for the assumption of limited flexibility which underlies Eckaus' (1955) technological explanation of the existence of under-or-unemployed labor, the structuralist analysis of inflation, and the use of fixed coefficients in input-output based models. Limited flexibility, however, is not the same as no flexibility. Some primary factor substitution apparently is always possible in response to relative price changes.

To ignore the role of the price system and these other characteristics when conducting analysis and giving policy presumptions, therefore, may be constly in terms of foregoing the use of some policy tools, overemphasizing the role of "key factors" and creating incentives for misallocations. And yet the dominant macroeconomic frameworks utilized for analysis of development problems for the most part do assume that these factors can be ignored. For example, in the Chilean case, ODEPLAN (Oficina de Planificación Nacional, National Economics Planning Office) has utilized relative rigid fixed-capital-coefficient and/or foreign-exchange-saving gap models as the basis for planning and prediction 1/. On the other hand, policy tools have included price ceilings, quantitative restrictions on international trade and on credit, and multiple exchange rates at overvalued levels.

2.6 The Effects of Macroeconomic Policy in Models of Income Determination

To explain how the developed country model works, as well as to obtain a qualitative simulation of the impact of policy variables, it is useful to perform two hypothetical experiments, an increase in the money supply and an increase in government spending, and trace out their effects on the major variables in the system.

In the developed country model a once and for all increase in the stock of money, realized through the open market purchase of government bonds (Eq. 30), tends to change interest rates (Eq. 14 and Eq. 16) and to the extent the holding rate falls, stimulates demand for investment goods (Eq. 7). (We neglect the foreign sector, changes in taxes and any possible wealth effects from a change in the ratio of money to bonds). Demand for labor and output rise, stimulating second round demands of households, government, and investors (taxes also rise, which may have second order effects on government bonds and private wealth). Unemployment falls (Eq. 1 and Eq. 2) and prices rise because of the direct effect of unemployment (positive in Eq. 4) and the indirect effect on wages (Eq. 3) and prices (Eq. 4). The extent of the price rise relative to the rise in output depends on the ratio (lagged?) of aggregate demand to the labor force.

1/ For example see Harberger and Selowsky (1966) or ODEPLAN (1970).

(5) Stabilization policies are limited by international creditors, by the lack of integrated and well functioning financial markets, and by the offsetting response of international reserves to domestic credit expansion. The last limitation is, of course, true only under fixed exchange rates, and monetary policy would be "more independent" under flexible rates, but exchange rate and aggregate demand policies are too often treated as independent policy investments.

(6) The partial equilibrium evidence of substantial technological and behavioral flexibilities suggests that models which assume too great rigidities (see the introduction) may distort the perceived choice set and over-emphasize the importance of "key" factors. The partial-equilibrium evidence of significant substitution possibilities and price responses suggest that macropolicies might have significant impact on aggregate variables. However, general-equilibrium simulations of the Chilean model indicate that these policies may have much less aggregate impact than partial-equilibrium analysis might suggest due to overall resource constraints and indirect effects (such as those transmitted through the money supply-foreign exchange-price nexus).

A great deal of the effect depends on the size of and behaviour within the traditional sector and its relation to the modern sector, and the difference between aggregate demand and capacity, factors which are not well described in existing models.

(7) Both the partial-equilibrium and the general-equilibrium analyses lend support to Hensen's (1973b) emphasis on the need for disaggregation to capture relative-price effects. The estimated partial-equilibrium relations are quite heterogeneous across sectors in regard to technological possibilities, behavioral responses, and patterns of adjustment. The general-equilibrium simulations suggest that policies may have much greater impact on the composition of aggregates than on their size especially when the economy is near its capacity, as defined by existing institutions and behavior. To what extent institutions and behavior of individuals and policymakers should be taken as given, remains a special dilemma for those who would venture into the tangle of income determination models of developing countries.

An expansion of government demand, financed through bond sales, raises demand directly (Eq. 8) and indirectly, (Eqs. 30 and 6) through the second round output - income effects. (We again neglect the foreign sector, changes in taxes and changes in wealth). The rise in bond sales raises interest rates and reduces investment, partially offsetting the increase in government spending. The fall in unemployment (Eqs. 1 and 2) has positive direct and indirect effects on prices (Eqs. 3 and 4).

In the developing country model it is difficult to separate monetary policy from government spending, as there are no organized financial markets in which to buy or sell bonds ^{1/}. Aside from the use of government spending, about the only practical way to increase the money supply is through changes in bank reserves or central bank credits. In all three cases the effects of changes in money tend to be concentrated in certain sectors and affect their second round spending directly, owing to previous credit rationing, as compared to the more general effects of interest rate changes in developing countries. The more general effects of monetary policy in developing countries occur through such second round spending of income recipients on local as opposed to imported goods and on local intermediate purchases by the favored industries. To the extent that the favored industries and their suppliers are close to "capacity", and that fixed exchange rates are maintained, relative prices will tend to change and/or imports and capital flows will tend to vary, weakening the general impact of monetary policy on domestic output. While coordinated variation in effective exchange rates would permit greater independence in monetary policy, their coordination with monetary policy reduces the number of completely independent instruments.

Fiscal policy in developing countries is closely related to monetary policy, again because of the narrow financial markets. Variations in government spending, financed locally through variations in bank holdings of government debt, tend to cause inverse variations in credit which "crowd out" other local credit demand and produce offsetting effects in investment. On the other hand, variations in government spending, financed

^{1/} The lack of markets may reflect government attempts to sell bonds at low fixed rates of return to banks, as well as causes due to the stage of development.

through foreign borrowing, have two pronged effects, through their indirect effect on reserves and money, as well as their direct effect on spending.

In developing economies both monetary and fiscal policy have their greatest effect on the modern sector. Their effect on the traditional sector occurs through variations in relative prices and in rural urban migration rates. The greater the gap between (expected) wages in the city and the average labor income in the country, the smaller will be the variation in relative prices and the greater will be the variation in migration rates. Thus, in a special sense, the rural sector also acts as a capacity constraint which affects the division of changes in aggregate demand between price and output effects.

2.7 Conclusions: Some General Points in Income Determination Models and Short-Term Policymaking in Developing Countries

While conditions vary substantially across countries and modelling of certain aspects of the developing countries remains rudimentary, several important general points or questions about income determination processes and countercyclical policy have appeared in our discussions.

(1) Supply variations in the traditional sector may cause cyclical variations, while countercyclical policies mainly affect the modern sector. More general policy tools must be developed.

(2) If the traditional sector determines the real wage for the modern sector and there is no money illusion, then the modern-sector labor market is very classical. Increased aggregate demand will not raise equilibrium in employment and production, although they will affect these variables when urban unemployment is abnormally high. Decreases in aggregate demand will lower urban employment and slow migration. However much research remains to be done on the determination of labor's income in the traditional sector and its relation to urban wages through migration.

(3) Changing international conditions and/or variations in government policy seem to be responsible for most of the cyclical fluctuations in developing countries, as opposed to the traditional view, expressed in developed country models that investment is the key.^{1/} In addition to the oft described direct and multiplier effects of changes in world prices of exports or imports, variations in world prices tend to have indirect

^{1/} See Friedman (1965) and Okun (1970).

effects, through variations in international reserves and, correspondingly, the money supply. Government policy may respond to reserve losses and variations in conditions in the export and import competing industries; in addition variations in external financing may force variations in monetary emission. Variations in prices of non-competitive raw materials and intermediate import may cause short-run fluctuations through either supply limitations or reduction of demand in other sectors. Finally, attempts to maintain disequilibrium exchange rates may lengthen the period of adjustment to external disturbances.

Given the importance of the foreign sector in generating cyclical fluctuations, some effort should be devoted to ensuring its correct specification in the income determination model. The various policies to reduce its impact should be closely studied and some effort made toward directing stabilization policies toward it. Some attempts have been made in the direction, both on the level of individual countries and in cooperation with other countries. However, stabilization problems often are viewed as less important than objectives such as growth and distribution. If a temporary foreign exchange surplus is available due to an export boom or increased capital inflows, for example, pressures are enormous to utilize it to alleviate other problems. Only rarely do governments find it feasible to conserve such an excess for use when the next foreign exchange deficit occurs. Only when such governments are convinced that the costs to these fluctuations are large or that there are gains in other policy dimensions of increased stabilization, are more resources likely to be utilized for stabilization purposes.

(4) The international capital market does not limit stabilization options in developing countries by fixing domestic interest rates 1/. This is so because of the existence of Bransonian non-internationally-traded assets, because of quantitative restrictions and exchange rate variations which break the link between international and domestic markets, and because of variations in risk premia as international debts vary, relative to national product.

1/ Macrotheory suggests that fiscal policy would retain its potency under fixed rates, it is only monetary policy which is questioned. See Mundell (1968).

Table 1

Macroeconomic Model for Developed Economies

I. Labor Market, Supply Price and Wages

Demand for Labor

$$E = E(Z) \quad (1)$$

Supply of Labor and the Definition of Unemployment Rate

$$u = u(E, N) \quad (2)$$

Determination of Money Wage Level

$$\frac{W}{P} = W(u, L \left[\frac{P}{P_{-1}} \right]) \quad (3)$$

Determination of Real Wage Rate and Price Level

$$P = W \left(L \left[\frac{E}{Z} \right], u, u \right) \quad (4)$$

II. Product Market and Aggregate Demand

Definition of Net National Product

$$Z = C + I + G + X - IM \quad (5)$$

Consumption Function

$$C = C(Y, A) \quad (6)$$

Investment Function

$$I = I(z, r_k, \mathcal{T}) \quad (7)$$

Government Expenditure

$$G = G_{ex} + G_{eod} (Y, N, r_k) \quad (8)$$

Import Function

$$IM = IM(ER, P, Y) \quad (9)$$

Export Function

$$X = X(ER, P) \quad (10)$$

III. Financial Markets and Assets

Demand for Real Assets

$$V = A \cdot f^V(r_k^h, r_b^r, r_s^h, Y) \quad (11)$$

Demand for Bonds

$$B/P = A \cdot f^B(r_k^h, r_b^r, r_s^h, Y) \quad (12)$$

Demand for Foreign Securities

$$\frac{S \cdot ER}{P} = A \cdot f^S(r_k^h, r_b^r, r_s^h, Y) \quad (13)$$

Demand for Money

$$M/P = A \cdot f^M(r_k^h, r_b^r, r_s^h, Y) \quad (14)$$

Definition of Net Worth

$$A = V + \frac{M + B + S \cdot ER}{P} \quad (15)$$

Relation Between Holding Rate and Capitalization Rate

$$r_k^h = r_k^r - \frac{r_k^e - r_k^r}{r_k^r} \quad (16)$$

Relation Between Real and Nominal Short-Term Interest Rates

$$r_b^r = r_b^e - \frac{P^e - P}{P} \quad (17)$$

Relation Between Holding and International Rate for Foreign Securities

$$r_s^h = r_s^e + \frac{ER^e - ER}{ER} \quad (18)$$

Generation of Expected Rate of Change of r_k

$$\frac{r_k^e - r_k^r}{r_k^r} = F^k \left(L \left[\frac{r_k^r}{r_k^r} \right] \right) \quad (19)$$

Generation of Expected Rate of Change of Prices

$$\frac{P^e - P}{P} = F^P(L[\frac{P}{P}]) \quad (20)$$

Generation of Expected Rate of Change of Exchange Rate

$$\frac{ER^e - ER}{ER} = F^{ER}(L[\frac{ER}{ER}]) \quad (21)$$

Expected Income from Capital

$$\pi^e = F^\pi(\pi, P \cdot L[\frac{\tilde{\pi}}{P}_{-1}]) \quad (22)$$

Market Value of Capital

$$P \cdot V = \frac{\pi^e}{r_k} \quad (23)$$

IV. Identities and Miscellaneous Relations

Definition of Disposable Income

$$P \cdot Y = P \cdot Z + r_b \cdot B - P \cdot T + r_s \cdot S \cdot ER \quad (24)$$

Definition of Savings

$$d(P \cdot A) = P \cdot Y - P \cdot C + d^*(P \cdot V) \quad (25)$$

Definition of Income from Capital

$$\pi = P \cdot z - W \cdot E - \tau_c (P \cdot Z - W \cdot E) \quad (26)$$

Capital Gains on Existing Capital

$$d^*(P \cdot V) = d(P \cdot V) - P \cdot I \quad (27)$$

Balance of Payments Surplus

$$H = P \cdot X - P \cdot IM + r_\xi \cdot S \cdot ER - d(S \cdot ER) \quad (28)$$

Tax Function

$$P \cdot T = T(P \cdot Z + r_b \cdot B + r_s \cdot S \cdot ER, \tilde{\pi}, \tau) \quad (29)$$

Government Budget Constraint

$$dM + dB = P \cdot G - P \cdot T + r_b \cdot B \quad (30)$$

V. Variable Definitions

- A : Net Worth of Consumers
- B : Government Debt Held by Private Sector
- C : Consumption in Constant Currency
- d^*PV : Real Capital Gain on Existing Real Assets in Current Currency
- E : Employment in Manhours
- ER : Exchange Rate in Domestic Currency per Unit of Foreign Currency
- ER^e : Expected Exchange Rate in Domestic Currency per Unit of Foreign Currency
- G : Total Government Expenditures in Constant Currency
- G_{ex} : Exogenous Government Expenditures in Constant Currency
- G_{eod} : Endogenous Government Expenditures in Constant Currency
- H : Surplus on Balance of Payments in Current Currency
- I : Net Investment in Constant Currency
- IM : Imports in Constant Currency
- L : Lag operator
- M : Money Supply in Current Currency (Currency Plus Reserves)
- N : Vector Expressing Total Population and its Structure
- μ : Standard Mark-up Factor (i.e., the Ratio of Price of Output to its Minimized Cost of Production Expected to Prevail Under Normal Employment Conditions)
- P : Price Level for Output

- p^e : Price Level Expected to Prevail
 π : Income from Real Assets in Current Currency
 π^* : Expected Income from Existing Real Assets in Current (not future) Currency
 r_b : Nominal Rate of Interest on Government Debt
 r_b^r : Real Rate of Interest on Government Debt
 r_k : Capitalization Rate (in real terms) Applicable to Real Assets
 r_k^e : Level of r_k Expected to Prevail
 r_k^h : Holding Rate (in real terms) Applicable to Real Assets
 r_s : Real Rate of Interest on Foreign Securities
 r_s^h : Holding Rate (in real terms) Applicable to Foreign Securities
S : Foreign Securities Held by Private Sector
T : Taxes in Constant Currency
T : Tax Rates (Subscript "C" refers to Corporations)
u : Unemployment Rate
V : Market Value of Existing Real Assets in Constant Currency
W : Nominal Wage Rate per Manhour
X : Exports in Constant Currency
Y : Disposable Income in Constant Currency
Z : Net National Product in Constant Currency

Bibliography

- Acquah, Paul Amdaful, "A Macroeconometric Analysis of Export Instability in Economic Growth: The Case of Ghana and the World Cocoa Market", PH. D. Thesis, University of Pennsylvania, 1972.
- Adelman, Irma and Kim, Mahn, J.E., "An Econometric Model of the Korean Economy", Irman Adelman ed., A Practical Approach to Development Planning, (Johns Hopkins University Press, 1969).
- Ando, Albert, 1974, "Some Aspects of Stabilization Policies, the Monetarist Controversy, and the MPS Model", International Economic Review (forthcoming).
- Areskoug, Kaj, 1974, "Private Investment and Capital Formation in Developing Countries" (mimeo, New York University).
- Bank of Korea, "Financial Econometric Model", December 1971.
- Bank of Korea, "An Econometric Model of the Korean Economy", Monthly Research, June 1972.
- Barro, Robert, 1974, "Are Government Bonds Net Wealth?", Journal of Political Economy .
- Barro, Robert and Grossman, Herschel, 1971, "A General Disequilibrium Model of Income and Employment", American Economic Review, 61, 82-93.
- Barro, Robert and Grossman, Herschel, 1974, "Supressed Inflation and the Supply Multiplier", Review of Economic Studies, 41, 87-104.
- Barro, Robert and Grossman, Herschel, Money Employment and Inflation, Cambridge, U.K., Cambridge Press, 1975.
- Behrman, Jere R., 1968, Supply Response in Underdeveloped Agriculture: A Case Study of Four Major Annual Crops in Thailand, 1937-1963. (North-Holland Publishing Co., Amsterdam).
- Behrman, Jere R., "The Determinants of the Annual Rates of Change of Sectoral Money Wages in a Developing Economy", International Economic Review 12:3, (October 1971a), 431-447. (Spanish translation in Cuadernos de Economía 9:26 (April 1972), 70-88).

- Behrman, Jere R., "Review Article: Trade Prospects and Capital Needs of Developing Countries", International Economic Review 12:3 October 1971b), 519-525.
- Behrman, Jere R., "Sectoral Elasticities of Substitution between Capital and Labor in a Developing Economy: Time Series Analysis in the Case of Postwar Chile", Econometrica 40:2 (March 1972), 311-327. (Spanish translation in Cuadernos de Economia 9:26 (April 1972a), 70-88.)
- Behrman, Jere R., "Sectoral Investment Determination in a Developing Economy", American Economic Review 62:5 (December 1972b), 825-841.
- Behrman, Jere R., "Short-Run Flexibility in a Developing Economy: The Postwar Chilean Experience", Journal of Political Economy 80:2 (March-April 1972c), 292-313.
- Behrman, Jere R., "Aggregative Market Response in Developing Agriculture: The Postwar Chilean Experience", in Eckaus, R. and P.N. Rosenstein-Rodan, eds., Analysis of Development Problems: Studies of the Chilean Economy (Amsterdam: North-Holland Publishing Co. 1973a), 229-250.
- Behrman, Jere R., "Cyclical Sectoral Capacity Utilization in a Developing Economy", in Eckaus, R. and P.N. Rosenstein-Rodan, eds., Analysis of Development Problems: Studies of the Chilean Economy (Amsterdam: North-Holland Publishing Co., 1973b), 251-268.
- Behrman, Jere R., "Price Determination in an Inflationary Economy: The Dynamics of Chilean Inflation Revised", in R. Eckaus and P.N. Rosenstein-Rodan, eds., Analysis of Development Problems: Studies of the Chilean Economy (Amsterdam: North-Holland Publishing Co., 1973c), 369-398.
- Behrman, Jere R., 1974a, "Modeling Stabilization Policy for the LDC's in an International Setting" in A. Ando, ed., International Aspects of Stabilization Policy (Proceedings of ISPE - Boston Federal Reserve Bank Conference).
- Behrman, Jere R., 1974b, "Econometric Modeling of National Income Determination in Developing Countries, with Special Reference to the Chilean Experience" paper presented at Colegio de México and NBER Seminar on the "Use of Econometric Models in Latin America".
- Behrman, Jere R., 1975a, "Foreign-Sector Regimes and Economic Development in Chile", paper presented at ECLA-NBER Conference, 1975.

- Behrman, Jere R., 1975b, Foreign Trade and Economic Development: The Chilean Experience (National Bureau of Economic Research, New York).
- Behrman, Jere R., 1975c, Macroeconomic Policy in a Developing Country: An Econometric Investigation of the Postwar Chilean Experience (in process, University of Pennsylvania, Philadelphia).
- Behrman, Jere R., 1975d, "Variable Definitions and Data Sources for a Panamanian Quarterly Economic Model", ILPES, Santiago.
- Behrman, Jere R., 1975e, "Proposed Specification of a Quarterly Panamanian Econometric Model", ILPES, Santiago.
- Behrman, Jere and García, Jorge, M., "A Study of Quarterly Nominal Wage Change Determinants in an Inflationary Developing Economy", in R. Eckaus and R.N. Rosenstein-Rodan, eds., Analysis of Development Problems: Studies of the Chilean Economy (Amsterdam: North-Holland Publishing Co., 1973), 399-416.
- Behrman, J.R. and Klein, L.R., "Economic Growth Models for the Developing Economy", Induction Growth and Trade, edited by W.A. Eltis, M.Fg. Scott and N.N. Wolf (Oxford, 1970).
- Behrman, Jere and Hanson J., 1975, "An Investigation of the Possibilities of Systematically Analysing Economic Data Available in the Very Short-Run in Panama", ILPES, Santiago.
- Beltrán del Río, Abel, "Statistical Regularities in Macroeconometric Models of Developing Economies", (Paper presented at Seminar on Economic Models of Emerging Nations, Tel Aviv, October 1974).
- Beltrán del Río, Abel and Klein, L.R., "Macroeconometric Model Building in Latin America: The Mexican Case", Paper prepared for presentation to the Conference on: The Role of the Computer in Economic and Social Research in Latin America, Cuernavaca, Mexico, 1971.
- Bhuiyan, Muhammad Nurul-Islam, "An Econometric Model of Financial Behaviour in Pakistan", Ph. D. Thesis, University of Pennsylvania, 1971.
- Birnberg, Thomas and Resnick, Stephen, 1973, "A Model of Trade and Government Sectors in the Colonial Economies". American Economic Review 63, 572-587.
- Blinder, Alan S. and Robert M. Solow, 1973, "Does Fiscal Policy Matter?", Journal of Public Economics 2, 319-337.

- Blitzer, Charles R., Peter B. Clark, and Lance Taylor (eds.), 1975, "Economy-Wide Models and Development Planning", Oxford Press.
- Borts, George and Hanson, James, "A Monetary Model of the Balance of Payments" (1975).
- Branson, William H., 1974, "Portfolio Equilibrium and Monetary Policy with Foreign and Non-Traded Assets" (mimeo, draft for Third Paris-Dauphine Conference 1974, 3/28-30/74).
- Bruton, H., 1969, "The Two Gap Approach to Development: Comment" American Economic Review, 59, 439-446.
- Cabezón, Pedro, "An Evaluation of Commercial Policy in the Chilean Economy" (Madison: University of Wisconsin, unpublished Ph.D. dissertation, 1969).
- Cabourrouy, E. and Spillone, J. (1974), "La Experiencia de Colombia en Materia de Exportaciones de Manufacturas en el Período 1960-69", Revista de Planeación 6.
- Calvo, H. and Escandón, J.F. (1973), Las Exportaciones Colombianas de Manufacturas, 1963-1971, Bogotá, FEDESARROLLO.
- Campos, Roberto de Oliveira, 1964, "Economic Development and Inflation with Special Reference to Latin America" in OECD, Development Plans and Programmes (OECD Development Centre, Paris) 129-37.
- Chenery, Hollis B. and A. Strout, "Foreign Assistance and Economic Development", A.E.R. 56 (September 1966): 679-733.
- Christ, C.F., 1968, "A Simple Macroeconomic Model with a Government Budget Restraint", Journal of Political Economy, 76, 53-67.
- Clark, Peter Bentley and Alejandro Foxley R., "Sub-Optimal Growth: The Social Cost of Make-Work Employment Policies" (Paper presented at the session on "Numerical Models of Development Planning", Second World Congress of the Econometric Society, Cambridge, England, Sept. 8-14, 1970, mimeo).
- Corbo Lioui, Vittorio, "An Econometric Study of Chilean Inflation" (Cambridge: Ph. D. Dissertation, MIT, 1971) published as Inflation in Developing Countries: An Econometric Study of Chilean Inflation, Amsterdam: North-Holland, 1974).

Díaz Alejandro, Carlos (1972a), "Trends and Phases in the Colombian Economy and its Foreign Trade and Payments", Yale Economic Growth Center, Discussion Paper N° 139.

Díaz Alejandro, Carlos (1972b), "The Determination of Observed Merchandise Imports and their Link to Capital Formation", Yale Economic Growth Center, Discussion Paper N° 146.

Díaz Alejandro, Carlos (1972c), "Minor Colombian Merchandise Exports", Yale Economic Growth Center, Discussion Paper N° 149.

Dutta, M. and Su, V., "An Econometric Model of Puerto Rico", Review of Economic Studies, July 1969.

Eckaus, R.S., 1955, "The Factor-Proportions Problems in Underdeveloped Areas", The American Economic Review.

Eckaus, Richard S. and Parikh, Kirit S., Planning for Growth: Multisector Intertemporal Models Applied to India, Cambridge, Mass., MIT Press, 1968.

Fei, J.C.H. and Gustav Ranis, 1964, Development of the Labor Surplus Economy, (Irwin Publishing Co., Homewood).

French-Davis, R., 1973, Políticas Económicas en Chile 1952-1970 (Santiago, Ediciones Nueva Universidad, Universidad Católica de Chile).

Friedman, Milton, "Monetary Policy in Developing Countries", in Nations and Households in Economic Growth: Essays in Honor of Moses Abramovitz, edited by Paul A. David and Melvin W. Reder, New York: Academic Press, 1974, pp. 265-278.

Friedman, Milton, The Great Contraction, Princeton, Princeton University, 1965.

Gómez, Armando and Schlesinger, Daniel, Análisis Preliminar de las Cuentas de Flujo de Fondos Financieros de la Economía Colombiana 1962-1964, Bogotá, Banco de la República, 1971.

Hansen, Bent, 1973a, "On the Effects of Fiscal and Monetary Policy: A Taxonomic Discussion", The American Economic Review, 63, 546-71.

- Hansen, Bent, 1973b, "Simulation of Fiscal, Monetary and Exchange Policy in A Primitive Economy: Afghanistan", in Economic Structure and Development (North-Holland Publishing Co., Amsterdam), 215-237.
- Hanson, James, 1974, "Optimal International Borrowing and Lending", American Economic Review, 64, 616-630.
- Harberger, Arnold, "The Dynamics of Inflation in Chile", in Carl Christ, ed., Measurements in Economics, (Stanford: Stanford University Press, 1963).
- Harberger, Arnold C. and Marcelo Selowsky, "Key Factors in the Economic Growth of Chile: An Analysis of the Sources of Past Growth and of Prospects for 1965-70" (Paper presented at Conference on "The Next Decade of Latin American Economic Development", April 20-22, 1966, Cornell University, mimeo).
- Harris, John R. and Michael P. Todaro, 1970, "Migration, Unemployment and Development: A Two-Sector Analysis", The American Economic Review, 60, 126-142.
- Hassanein, Mohamed Medhat Abdelaty, "Towards an Econometric Model of Some Sectors of the U.A.R. Economy 1946-1966", Ph.D. Thesis, University of Pennsylvania, 1970.
- Heller, Walter W., 1954, "Fiscal Policies for Underdevelopment Economies" in Wald, Haskell P., ed., Conference on Agricultural Taxation and Economic Development (International Program in Taxation, Harvard Law School, Cambridge).
- Higgins, Benjamin, 1968, Economic Development: Principles, Problems and Policies, Revised Edition (W.W. Norton and Co., Inc., New York).
- Hynner, Stephen and Resnick, Stephen, 1971, "A Model of an Agrarian Economy", American Economic Review, 61.
- Islam, Nurul, A Short-Term Model for Pakistan Economy: An Econometric Analysis (Dacca: Oxford University Press, 1965).
- Kim, Mahn Je, Nam Duck, Woo and Lee, Sy, "A Macroeconomic Model of the Korean Economy", Economic Research Series, No 8 (Seoul, Sogang College, 1969).
- Lewis, W. Arthur, 1954, "Economic Development with Unlimited Supplies of Labor", The Manchester School 22, 139-191.

- MacBean, Alasdair I., 1966, Export Instability and Economic Development (Harvard University Press, Cambridge).
- Manhertz, H., "An Exploratory Econometric Model for Jamaica", Soc. Econ. Studies, June 1971, 20(2) pp. 198-226.
- Manne, A.S., "Multi-sector Models for Development Planning: A Survey", Journal of Development Economics, 1:1 (June 1974), 43-70.
- Marwah, Kanta K., "An Econometric Model of Price Behavior in India", Ph. D. Thesis, University of Pennsylvania, 1964.
- Marwah, Kanta, "An Econometric Model of Colombia: A Prototype Devaluation View", Econometrica, 1969, Vol. 37, No 2, April 1969, pp. 228-251.
- Marzouk, Mahmoud Shukry H., "The Predictability of Predetermined Variables in Macro-Econometric Models for Developing Economics", Ph. D. Thesis, University of Pennsylvania, 1969.
- Marzouk, Mahmoud Shukry H., "An Econometric Model of Sudan: Simulation Experiment of Growth Prospects", Journal of Development Economics 1:3 (1974).
- Mathieson, Donald J. and Ronald I. McKinnon, 1974, "Instability in Underdeveloped Countries: The Impact of the International Economy" in David, Paul A. and Melvin W. Reder, eds., Nations and Households in Economic Growth: Essays in Honor of Moses Abramovitz (Academic Press, New York and London), 315-332.
- Michalopolous, Constantine, 1969, "Productivity Growth in Latin America: Comment", American Economic Review 59, 435-439.
- Mikesell, Raymond F. and James E. Zinser, 1973, "The Nature of the Savings Function in Developing Countries: A Survey of the Theoretical and Empirical Literature", The Journal of Economic Literature, 11, 1-26.
- Morawetz, D., "Employment Implications of Industrialization in Developing Countries: A Survey", The Economic Journal, (1974).
- Mondell, R. (1968), International Economics, New York, Macmillan.
- Musalen, Alberto, 1970, Las Exportaciones Colombianas 1959-1969, Bogotá, unpublished.

- Musalen, Alberto, 1971, Demanda por Dinero y Balanza de Pagos en Colombia, Bogotá, Banco de la República.
- Naranjo, Fernando, "Macroeconomic Policy in Costa Rica", Ph.D. Thesis, University of Pennsylvania, 1972.
- Nerlove, Marc, "Recent Empirical Studies of the CES and Related Production Functions", in The Theory and Empirical Analysis of Production, New York: National Bureau of Economic Research, Studies in Income and Wealth, Vol. 31, 1967.
- Nugent, J.B., "Country Study, Argentina", Paper prepared for the U.S. A.I.D. Office of Program Coordination, as the author's contribution to the 1965 Summer Research Project sponsored by that Office.
- ODEPLAN, "Marco de referencia cuantitativo preliminar para la elaboración del programa 1970-80", Santiago, January 1970.
- Okun, Arthur, The Political Economy of Prosperity, N.Y., Norton, 1970.
- Pandit, Vishwanath, "Sources of Inflation in Developing Economics: Case Studies of Colombia, India, Korea and Taiwan", Ph. D. Thesis, University of Pennsylvania, 1971.
- Pani, Pillutla Kidenda, "Some Aspects of Macro Modeling of Indian Economy", Ph.D. Thesis, University of Pennsylvania, 1971.
- Papanek, G.F., "The Effect of Aid and other Resource Transfers on Savings and Growth in Less Developed Countries", Economic Journal 327 (September 1972).
- Papanek, "Aid, Foreign Private Investment, Savings and Growth in Less Developed Countries", Journal of Political Economy 81:1 (January/February 1973), 120-131.
- Paulopoulos, P., A Statistical Model for the Greek Economy, 1949-1959, North-Holland Publishing Co., Amsterdam, 1966.
- Ramangkura, Virabongsa, "A Macro Economic Model and Policy Simulation for the Thai Economy", Ph.D. Thesis, University of Pennsylvania, October 1971.
- Ranis, Gustav, 1974, "Short-Run Policy in Semi-Industrialized Economies: Comment", Economic Development and Cultural Change, 22, 345-6.

- Rao, V.K.R.V., 1952, "Investment, Income and the Multiplier in an Underdeveloped Economy", The Indian Economic Review.
- Rosenstein-Rodan, Paul N., 1961, "Notes on the Theory of the 'Big Push'", in Ellis, Howard S., ed., Economic Development for Latin America (St. Martin's Press, New York).
- Reynolds, Clark and Mamalakis, Markos, Essays on the Chilean Economy, Homewood Illinois, Irwin, 1968.
- Schydrowsky, Daniel, M., 1971, "Short-Run Policy in Semi-Industrialized Economies", Economic Development and Cultural Change, 19, 391-413.
- Sheahan, J. and Clark, S., Las Respuestas a las Exportaciones Colombianas a Variaciones en la Tasa Efectiva de Cambio, Bogotá, FEDESARROLLO, 1972.
- Song, Heeyhon, "An Econometric Forecasting Model of the Korean Economy", Korea Development Institute, Working Paper 7212, June 8, 1972.
- Taylor, Lance, "Short-Term Policy in Open Developing Economies: The Narrow Limits of the Possible", Journal of Development Economics 1:2 (September 1974), 85-104.
- Tobin, J. 1969, "A General Equilibrium Approach to Monetary Theory", Journal of Money, Credit and Banking 1, 15-30.
- United Nations Economic Commission for Asia and the Far East (UNECAFE), Programming Techniques for Economic Development, Bangkok, United Nations, 1960.
- United Nations Conference on Trade and Development (UNCTAD), Trade Prospects and Capital Needs of Developing Countries, New York, United Nations, 1968.
- Weisskopf, Thomas E., "An Econometric Test of Alternative Constraints on the Growth of Underdeveloped Countries", The Review of Economics and Statistics, 54:1 (February 1972), 67-78.
- Wachter, Susan, Latin American Structuralist and Monetarist Inflation Theories: An Application to Chile, Ph. D. Thesis, Boston College, Chestnut Hill, Massachusetts, September 1974.

Yoon, Suk Bum, "A Macro Econometric Analysis of the Impacts of Foreign Capital Investment in an Underdeveloped Economy: The Case of Korea", Ph. D. Thesis, University of Pennsylvania, 1971.

Yu, Tzong-Shian, "An Econometric Model of Taiwan's Economy", Journal of the Chinese Statistical Association, Vol. 8, N° 1, March 1970.

Zamowitz, Victor, An Appraisal of Short-Term Forecasts, N.Y., National Bureau of Economic Research, 1967.

FS AND TRADE

Libran Cabactulan * *

tre
tha
and
dev
the
tra

body
inte
in w
to e

le (GATT) is a multilateral
ch together account for more
is to liberalize world trade
uting to economic growth and
les. The General Agreement is
agreed rules for international

the principal international
f trade barriers and with
th a code of rules and a forum
r trade problems and negotiate

to e... opportunities. The uninterrupted and eightfold
growth in the volume of international trade since the Second World War has
provided continuing evidence of GATT's success in this double role.

GATT entered into force in January 1948. Since that time, its membership
has risen from its original 23 countries to the present figure of 85, while
a further 28 countries also apply its rules in their trade.

GATT rules govern the trade of its member countries and the conduct of
their trade relations with one another. The contractual rights and obligations
which it embodies have been accepted, voluntarily, in their mutual interest
by the member countries. Overseeing the application of these rules is an

* Reprinted from "Philippine Development"(Manila), vol. 8, N° 2,
November 15, 1980, pp. 4-6.

* * Policy Coordination Staff, National Economic and Development Authority,
Philippines.

important and continuing part of GATT's activities. GATT is also a place where countries negotiate and work together for the reduction of trade barriers, in pursuit of its aim of the further liberalization of world trade. In successive multilateral negotiations in GATT, obstacles to trade have been progressively reduced.

2. How GATT works

Origins

The General Agreement was negotiated in 1947, and entered into force in January 1948. The 23 countries which originally signed it were at the time engaged in drawing up the charter for a proposed International Trade Organization (ITO) which would have been a United Nations specialized agency. The General Agreement, based largely on selected parts of the draft ITO charter, was concluded in order to get trade liberalization under way quickly and was provided with only minimum institutional arrangements because it was expected that responsibility for it would soon be assumed by the ITO. When it became clear that the ITO charter would not be ratified, the General Agreement was left as the only international instrument laying down trade rules accepted by nations responsible for most of the world's trade.

GATT institutions

The highest body of GATT is the Session of Contracting Parties, which usually meets annually. GATT decisions are generally arrived at by consensus, not by vote. On the rare occasions that voting takes place, each contracting party (member country) has one vote. Most decisions by vote are taken by simple majority, but a two-thirds majority of votes cast, with the majority comprising more than half the member countries, is needed for "waivers": authorization in particular cases, to depart from specific obligations under the Agreement. (When the members thus act collectively, they are referred to in GATT documents as CONTRACTING PARTIES, in capitals).

Working parties (ad hoc committee) are set up to deal with current questions, such as requests for accession to GATT, verification that agreements concluded by member countries, are in conformity with GATT, or studies of issues on which the member countries will later wish to take a joint decision. Panels of Conciliation are sometimes set up to investigate disputes between particular members.

Major provisions of the Agreement

Part One

ARTICLE I is the key article guaranteeing most-favored-nation treatment among all members.

ARTICLE II provides for the actual tariff reductions agreed to under GATT (they are listed in annexed schedules and thus consolidated, i.e., form part of the Agreement itself).

Part Two

The General Agreement is applied only "provisionally". Each member is required to apply the rules in Part Two "to the fullest extent not inconsistent with" its own legislation existing when it joined GATT.

ARTICLE III prohibits internal taxes that discriminate against imports.

ARTICLE XI to XIV deal with quantitative restrictions: XI is the general prohibition of them; XII specifies how they may be used for balance-of-payments reasons; XIII requires that they be used without discrimination, apart from exceptions specified in XIV.

ARTICLE XXII deals with consultations, and XXIII with the settlement of disputes.

Part Three

ARTICLE XXIV specifies how customs unions and free-trade areas may constitute exceptions to the most-favored-nation-rule.

ARTICLE XXV provides for action by the member government, it is under this Article that waivers are granted.

Part Four

ARTICLES XXXVI, XXXVII and XXXVIII, added in 1965, concern the special needs of the developing countries. Article XXXVI sets out GATT's principles and objectives and meeting these needs. Article XXXVII states commitments which members undertake to this end, and Article XXXVIII provides for joint action by them.

3. A framework of rules for trade relations

Although the General Agreement is a long and complicated document, it is based on comparatively few fundamental principles and aims:

Trade without discrimination

The first principle, embodied in the famous "most-favored-nation" clause, is that trade must be conducted on the basis of non-discrimination. All contracting parties are bound to grant, to each other, treatment as favorable as they give to any country in the application and administration of import and export duties and charges. Thus no country is to give special trading advantages to another.

Protection only through tariffs

A second basic principle is that protection should only be given to domestic industry through the customs tariff, and not through other commercial measures. The aim of this rule is to make the extent of protection clear, and to make competition possible.

Consultation

Consultation, to avoid damage to the trading interests of contracting parties, is another fundamental principle. Large and small countries alike can call on GATT for a fair settlement of cases in which they feel their rights under the General Agreement are being withheld or compromised by other members.

The "waiver" and possible emergency action

There are "waiver" procedures whereby a country may, when its economic or trade circumstances so warrant, seek a derogation from a particular GATT obligation or obligations. There are also escape provisions for emergency action in certain defined circumstances.

Quantitative restrictions on imports

A general prohibition of quantitative restrictions is a basic provision of GATT, which was established at a time when they were widespread, and were perhaps the greatest single obstacle to international trade. Today, quantitative restrictions are of lesser significance. Nevertheless, they remain fairly numerous, and affect particular trade in agricultural goods, textiles, and certain other non-agricultural products of export interest to developing countries.

Quantitative restrictions on imports are an important target of the multilateral trade negotiations. The main exception to the general GATT rule against quantitative restrictions allows their use in balance-of-payments difficulties. Even then restrictions must not be applied beyond the extent necessary to protect the balance of payments, and must be progressively reduced and eliminated as soon as they are no longer required. This exception is broadened, for developing countries, by the recognition (in Article XXXIII of GATT) that the demand for imports generated by development may require them to maintain quantitative restrictions in order to prevent an excessive drain on their foreign exchange reserves.

Consultations and complaints

A basic principle of GATT is that member countries should consult with one another on trade matters and problems. Such consultations are held to clarify difficulties and to find equitable solutions to them.

If a country believes that benefits that should accrue to it under the Agreement are being nullified or impaired, or that attainment of any objective of the Agreement is being impeded, it may seek consultations with the parties concerned.

If these consultations do not lead to a satisfactory adjustment, a complaint may be lodged.

4. A forum for discussion and negotiations on trade

"The substantial reduction of tariffs and other barriers to trade" is a principal aim of the general Agreement. It has been the objective of a long series of negotiations held in GATT, the latest and most ambitious of which were opened in September 1973 by a Ministerial meeting in Tokyo at which over 100 countries were represented. During GATT's first 25 years, six major trade negotiations took place under its auspices. Smaller-scale negotiations preceded the accession to GATT of individual countries such as Japan, Switzerland and Hungary. As a result, the tariff rates for thousands of items entering into world commerce were reduced or bound against increases. The Kennedy Round of negotiations alone reduced the average level of world industrial tariffs by about one-third. The concessions agreed upon in these negotiations have affected a high proportion of the total trade of GATT countries, and indirectly, the trade of many non-members as well. GATT has thus contributed greatly to the immense growth in world trade since 1948.

The Tokyo Round of multilateral trade negotiations

The "Tokyo Round" of trade negotiations covered both tariff and non-tariff obstacles to trade in the whole range of industrial and agricultural

products, including tropical products and raw materials, whether in primary form or at any stage of processing, and including in particular products and measures of importance to the trade of developing countries.

A Trade Negotiations Committee guided the negotiations, which entered their substantive phase in February 1975. The Committee consisted of representatives of all the countries engaged in the negotiations, currently numbering 97. These countries together accounted for nine-tenths of world exports; they included all the industrialized market-economy countries, over 70 developing countries (of which 27 are not GATT members) and several Eastern European countries.

5. GATT and the developing countries

About two-thirds of the member countries of GATT are in the early stages of economic development. GATT recognizes its responsibility, as the organization under whose rules the greater part of world trade moves, to assist their economic growth.

GATT follows a two-pronged approach to the problems of trade and development.

In the first place, the developing countries take a full part in its general work. Their presence underlines not only their determination to promote their own trading interests but also their recognition that the success of their own efforts to promote their economic development is closely linked with the continued expansion of world trade. This expansion of trade in turn is largely dependent on GATT's success in its effort to open up world markets. In the second place, a number of the particular problems of developing countries are tackled through GATT bodies set up for this purpose. The aim is to follow up all possibilities that may be identified for opening new trading outlets for these countries.

Part IV laid down the important new principle that developed countries would not expect developing countries, in the course of trade negotiations, to make contributions inconsistent with their individual development, financial and trade needs. Developed countries also agreed, except when compelling reasons made it impossible, to refrain from increasing barriers to exports of primary and other products of special interest to developing countries and would give high priority to reducing existing barriers, including fiscal taxes. Consultation procedures were also established. At the same time a Committee on Trade and Development was set up. The Committee has the duty to follow all activities of GATT, ensuring that problems of concern to developing countries are given priority attention.

Trade Negotiations Among Developing Countries

The potential for expanding trade among developing countries is recognized to be great. Sixteen developing countries --of which two were not GATT members-- successfully negotiated a Protocol providing for an exchange of tariff and trade concessions on a preferential basis, covering several hundred different products. This ground breaking agreement, reached in 1971 after four years of negotiations, is open to accession by other developing countries. Two more countries have joined the original sixteen since 1971, and in recognition of their least-developed state were allowed under the Protocol's provisions to do so without negotiation. A third developing country is negotiating its accession, and others are exploring the possibilities for accession.

GATT member countries gave the necessary authorization to the agreement in 1971, and it entered into force in February 1973. The signatories are now exploring possibilities for a new round of negotiations to be aimed at enlarging both the trade coverage and membership of the Protocol.

Generalized System of Preferences

GATT member countries agreed in June 1971 to a waiver from the most-favored-nation rule of Article 1 of the General Agreement in order to allow the introduction of preferences under the scheme for generalized non-reciprocal preferences by developed in favor of developing countries.

Technical Assistance

GATT provides five-month training courses on trade policy problems for officials of developing countries. Nearly 600 officials from 100 countries have so far attended such courses.

NOTES AND COMMENTS

1. Co-operation for planning

The Second Meeting of Planning Officials in the Caribbean (Kingston, Jamaica, 29 May-2 June 1980) recommended that six working groups should be established in priority areas of co-operation, including the following: agriculture, energy, physical and regional planning, the transportation sector, manpower planning and training in the methodology and techniques of development planning. In accordance with the above, on 19 and 20 June in Bridgetown (Barbados) the First Meeting of the Ad Hoc Working Group of Experts was held. The purpose of this meeting was the identification of priorities and actions and the discussion of the status and function of ad hoc working groups. The final report of this meeting was sent to the Executive Secretary of CEPAL, the Director of ILPES and the Director of the CEPAL Office for the Caribbean for the purpose of obtaining technical, institutional and financial support for the normal operation of the working groups.

As a result of these meetings, and thanks to the definite support of the member governments of CDCC, CEPAL and ILPES, the following activities were able to be carried out:

- A. Through the support of the Government of Cuba, a Seminar on Physical and Regional Planning was held in Havana on 19-26 January 1981 with the participation of various representatives of the subregion.
- B. With the financial support of ILPES, Dr. George Reid was hired to carry out a Fact Finding Mission of Training Needs for Planning Officials in the Eastern Caribbean. This Survey Report was completed in six weeks, starting on 9 March. At the same time that this study was carried out, the training course on planning for development was initiated, to be held in Grenada, and the possible content and overall structure were discussed.
- C. Following the recommendations contained in the Survey Report of Training Needs and in compliance with the recommendations adopted during the Second Meeting of Planning Officials, a training course in development planning was held in St. George's Grenada, on 19-26 September. This subregional course dealt mainly with the following subjects:

- (i) Introduction to the purpose and function of planning
- (ii) Techniques of planning
- (iii) Plan implementation

The Government of Grenada, CEPAL, ILPES and the United Nations Development Programme through the Resident Representative in Barbados, Dr. Gordon Sommers, will also collaborate in carrying out the course. In the development of the classes, seminars and round tables, outstanding professors from the region will participate.

2. First Meeting of the Ad Hoc Working Group in Manpower Planning

In accordance with the mandates established at the Second Meeting of Planning Officials in the Caribbean held in St. George's, Grenada, the first meeting of this Group took place on 14-15 September. Officials from Grenada, Guyana, Jamaica and Suriname participated. At the institutional level, the Caribbean Common Market (CARICOM) and the East Caribbean Common Market (ECCA) were present. During the working days, the agenda included the following activities:

- (a) Discussion and evaluation of the Report submitted by Dr. Ralph Henry entitled "The Basic Situation in Manpower Planning in Caribbean Countries".
- (b) Definition of the future programme of work in Manpower Planning.
- (c) Forms of action designed to achieve a rapid execution of the programme of work.
- (d) Determination of time schedules of activities.

Besides the previous areas, the working group defined and suggested an order of priorities for research in accordance with the present state of socioeconomic development of the member countries of CDCC.

At the closing of the meeting, the National Planning Bureau of Suriname offered to be the headquarters of the next meeting to be held in the second half of 1982. Gratitude was also expressed for the active participation of ILO in the CDCC activities.

3. First Meeting of the Ad Hoc Working Group in Physical and Regional Planning

In accordance with the mandates established at the Second Meeting of Planning Officials in the Caribbean in St. George's, Grenada, the first meeting of this group was held on 16-17 September. Representatives were present from the following countries: Republic of Cuba, Grenada, Guyana, Jamaica and Suriname. At the level of regional institutions, the Caribbean Common Market (CARICOM) and the East Caribbean Common Market (ECCM) participated.

Two projects were submitted for the consideration of the participants:

(i) "Development and Strengthening of the Capability of the region to prepare environmental impact analysis of major development projects and plans in order to incorporate the dimension of the Environment and Natural Resources in the planning and implementation of socioeconomic development programmes".

(ii) "Formulation of Advisory Coastal Zone Management Schemes with particular reference to the preparation of guidelines for land use, resource management and environmental protection and support for national endeavours in this area".

After extensive discussions on the large above-mentioned projects, the group agreed to select the project relating to environmental impact assessment as the first priority. It was also considered that the matter should be submitted to the next ministerial meeting of CDCC for a mandate at the regional level. Participant governments were asked to submit their comments to the CEPAL Secretariat by the end of November, who would circulate them to interested planning agencies.

4. Co-operation between Africa and Latin America

Within the framework of the UNDP/CEPAL/ECA Project entitled "Promotion of Technical and Economic Co-operation between Africa and Latin America" (INT/80/908), the Latin American Institute for Economic and Social Planning undertook the responsibility of directing the study "Prospects for Technical Co-operation in Manpower Development between Africa and Latin America". The study contains a summary of the information gathered in five countries of the region concerning the opportunities for mutual co-operation in the field of manpower training.

By means of visits made specially to training institutions, planning agencies and departments of the chanceries of Argentina, Brazil, Colombia, Mexico and Trinidad and Tobago, it was possible to assemble information on the present situation, prospects and opportunities for more fluid and advantageous horizontal co-operation. The inquiries carried out referred in particular to three areas whose effect on development is self-evident; namely personnel training for the productive sectors, the training of personnel for public administration services and the training of economic and social planning specialists.

5. The world's spending priorities

1978 per capita expenditures (in U.S. dollars)

The United Nations has been trying to begin a "global negotiation" aimed at shifting billions of dollars, from the industrialized world to the developing nations. A perennial theme in the debate -the amount of resources expended on arms- was underlined last week by Rüdiger von Wechmar, outgoing President of the General Assembly.

"We are witnessing -almost helplessly- an acceleration of the arms race", he said. "This year, nearly \$500 billion are earmarked for sophisticated weapons and military hardware". An increase in official development assistance equivalent to only 5 per cent of that figure, he said, would be enough to meet United Nations targets "to help those millions of human beings who still live in want and poverty".

How governments allocate resources for military and social programs is shown in the table below, which covers 140 countries with more than 99 per cent of the global population. The data are the latest available and are taken from the forthcoming edition of "World Military and Social Expenditures", published by World Priorities.

Table 1

NORTH AMERICA	MILITARY	EDUCATION	HEALTH
United States	499	565	341
Canada	174	688	469
LATIN AMERICA			
Argentina	55	54	11
Barbados	4	158	70
Bolivia	18	32	8
Brazil	18	55	27
Chile	73	50	34
Colombia	7	20	11
Costa Rica	11	99	19
Cuba	49	82	41
Dominican Republic	17	18	12
Ecuador	22	35	9
El Salvador	13	23	9
Guatemala	9	14	7
Guyana	10	46	15
Haiti	2	2	1
Honduras	11	18	10
Jamaica	9	79	34
Mexico	8	68	10
Nicaragua	28	24	13
Panama	9	65	60
Paraguay	13	13	3
Peru	33	17	6
Trinidad & Tobago	11	140	63
Uruguay	40	32	20
Venezuela	44	149	83

Table 2

EUROPE	MILITARY	EDUCATION	HEALTH
Albania	60	31	17
Austria	93	438	376
Belgium	322	583	399
Britain	262	297	268
Bulgaria	77	120	65
Czechoslovakia	143	144	137
Denmark	259	752	806
Finland	102	489	318
France	350	512	546
Germany, East	218	226	113
Germany, West	350	491	591
Greece	220	74	98
Hungary	79	142	93
Iceland	-	397	545
Ireland	59	232	220
Italy	112	215	211
Luxembourg	103	698	103
Malta	24	74	74
Netherlands	304	730	560
Norway	322	729	633
Poland	99	101	113
Portugal	64	73	63
Rumania	56	103	70
Spain	67	86	118
Sweden	365	927	883
Switzerland	280	710	486
Turkey	64	44	10
Soviet Union	394	189	82
Yugoslavia	105	136	100

Table 3

ASIA	MILITARY	EDUCATION	HEALTH
Afghanistan	5	3	1
Australia	207	524	325
Bahrain	141	181	141
Bangladesh	1	2	0.3
Brunei	642	239	n.a.
Burma	5	2	1
China	26	15	6
Cyprus	39	75	32
Fiji	12	82	33
India	5	5	2
Indonesia	11	6	5
Iran	261	115	31
Iraq	159	70	11
Israel	839	303	114
Japan	80	489	389
Jordan	87	31	10
Korea, North	63	26	3
Korea, South	75	32	3
Kuwait	613	454	287
Laos	10	2	1
Lebanon	58	n.a.	n.a.
Malaysia	45	71	20
Mongolia	76	51	10
Nepal	1	2	0.8
New Zealand	93	311	267
Oman	914	94	57
Pakistan	12	5	1
Papua New Guinea	9	42	17
Philippines	11	11	4
Qatar	1,194	1,990	333
Saudi Arabia	1,004	507	137
Singapore	186	84	57
Sri Lanka	1	5	3
Syria	147	55	4
Taiwan	106	55	35
Thailand	18	17	3
U. Arab Emirates	836	277	250
Vietnam	18	4	1
Yemen, Arab Rep.	52	10	4
Yemen, People's Dem. Rep.	43	13	5

Table 4

AFRICA	MILITARY	EDUCATION	HEALTH
Algeria	36	115	18
Angola	-	15	7
Benin	3	11	3
Botswana	22	48	15
Burundi	5	4	1
Cameroon	7	13	4
Cent. African Rep.	4	8	3
Chad	8	3	2
Congo	23	45	10
Egypt	91	28	9
Equatorial Guinea	25	10	4
Ethiopia	5	3	1
Gabon	78	100	48
Gambia	-	11	7
Ghana	5	16	7
Guinea	4	9	3
Ivory Coast	11	64	14
Kenya	12	17	6
Lesotho	-	10	3
Liberia	5	28	11
Libya	156	387	80
Madagascar	6	13	4
Malawi	4	5	2
Mali	4	5	1
Mauritania	30	16	5
Mauritius	2	64	26
Morocco	42	41	8
Mozambique	9	3	2
Niger	2	3	2
Nigeria	28	34	4
Rwanda	3	4	1
Senegal	10	12	4
Sierra Leone	2	9	4
Somalia	12	7	3
South Africa	80	67	6
Sudan	14	4	3
Swaziland	2	38	11
Tanzania	10	12	5
Togo	8	21	7
Tunisia	30	58	24
Uganda	11	10	4

(Cont.)

Upper Volta	4	4	1
Zaire	10	6	3
Zambia	41	24	12
Zimbabwe	31	19	9

SOME ASPECTS OF THE INTERNATIONAL DISTRIBUTION
OF INDUSTRIAL ACTIVITY

Alfredo Eric Calcagno and
Jean Michel Jakobowicz */

This article examines some of the recent changes in the industrial structure at the international level. First, it attempts to determine the actual extent of relocation in order to establish whether this is an almost unfulfilled possibility or rather a process in full implementation. It goes on to describe various kinds of industrialization in developing countries and then raises the problem of the 'industrial redeployment' of the developed countries, considering the contradiction that exists between the current problem of unemployment and the probable labour shortage which could occur between 1985 and the year 2000, one solution to which could be industrial relocation (others would be an increase in productivity or an influx of foreign workers). The authors also consider the comparative advantages which may induce transnational corporations to establish themselves in developing countries, and they analyse in greater detail the question of wage differences as weighted by productivity. Finally, policy alternatives are proposed for developing countries, comparing the characteristics and effects of 'open' industrialization based on comparative advantages -which would fit in with the industrial 'redeployment' of the developed countries- with the characteristics and effects of a form of industrialization which tends to affirm national autonomy (as for example in the production of capital goods) and to supply the majority of the population.

*/ Director of the International Trade and Development Division of CEPAL, and Consultant on various occasions to the Economic Commissions for Europe, respectively.

The authors wish to thank Aníbal Pinto, Arturo Nuñez del Prado, Luiz Claudio Marinho and Armando Di Filippo for their valuable comments.

THE INDUSTRIALIZATION DEBATE IN LATIN AMERICA */

Héctor Soza **/

The purpose of this essay is to contribute to the discussion of Latin American industrialization from the standpoint of manufacturing prospects and the long-term options which can be glimpsed within the framework of economic and social development objectives.

In order to accomplish this goal, we must first of all describe the terms in which industrialization is being discussed, since it is well known that the revision of the ideas which for decades inspired the industrial policy of most Latin American countries, together with the changes in world economic trends, are giving rise to positions or projections of undeniable importance for the future.

Next, it is necessary to define quite precisely the region's industrial profile, noting the various trends and situations in the different countries, since the future of industry will also be quite heterogeneous. It is also necessary to describe the basic common traits of Latin American industrialization, which are rooted in the region's history, prevailing political framework and location in the world and its ties -notably those of a cultural, political, economic and technological nature- with the developed Western economies, all of which helps to shape a development style reflecting those traits which together define an overall Latin American industrialization model transcending the heterogeneity mentioned above.

*/ Except where otherwise indicated, the figures used to illustrate various concepts are from CEPAL, which draws its information from the official sources of the Latin American countries, or from United Nations publications when referring to other areas of the world. The author, however, takes full responsibility for their use, especially as some of them appear in works which have not yet been published or are being revised, and consequently have not been approved by the Secretariat.

**/ Staff member of the CEPAL/UNIDO Joint Industrial Development Division.

Finally, it is necessary to review the main schemes or scenarios behind the industrial debate, aside from prevailing trends, attempting to show the areas of common ground and divergence of the various positions and to collect useful elements for an evaluation in each case.

POVERTY IN LATIN AMERICA

A review of concepts and data

Oscar Altimir */

The eradication of poverty has always been one of the main objectives of social reformers, and sometimes this moral concern has made it also the object of empirical investigation by social scientists. This convergence has again occurred in recent years, and has resulted in a flourishing literature both within and outside Latin America. In the first part of his article, the author reviews the most important elements of that literature, laying special emphasis on the writings of the advocates of 'another development', 'redistribution with growth' and 'the satisfaction of basic needs'.

On this basis, he defines the concepts of absolute and relative poverty, justifies his analysis and, following a detailed review of the existing evidence, presents an estimate of the present levels of both types of poverty and recent changes in them in some Latin American countries. The data which he takes into consideration refer primarily to income distribution and consumption, but his approach is rounded by consideration of data on access to public services and on underemployment.

This examination of the evidence leads the author to a number of important conclusions, chief among which are those shedding light on some moot aspects of the distributive consequences of the prevailing style of development. On the one hand in most of the countries examined there has been an improvement in the absolute levels of consumption of the poor strata, at least during the periods under consideration, when the economic growth rate was also considerable. On the other, as a rule the rise in per capita income did not reduce the relative inequality between strata but rather led to the social stratification being reproduced on a dynamic basis. In these circumstances, while the eradication of absolute poverty may be looked for in some of the countries studied, in all of them relative poverty remains, and tends to be the breeding ground of serious conflicts.

*/ Director of the CEPAL Division of Statistics and Quantitative Analysis.

TOWARDS A SOCIAL AND POLITICAL DIMENSION
OF REGIONAL PLANNING

Sergio Boisier */

A large proportion of the Latin American countries have sought and are still seeking to incorporate into their development plans and the design of their economic policies elements whereby they seek to correct or minimize some of the most obvious internal disparities in growth rate, well-being and modernization between the various areas or regions which make up the nation.

A by no means negligible fund of experience and theoretical and methodological proposals has been built up in this field, although it is of course not exempt from errors, problems, and even partial signs of exhaustion. At the same time, however, the growing need to modify the systems of government and internal administration of the countries makes it increasingly clear how useful it would be to have a regional structure capable of overcoming the rigidities typical of provincial systems inherited from a now-distant past. Thus, there are contradictory tendencies depending on the points from which regional development is viewed: some degree of crisis as regards the planning of regional development, but the growing validity of a basic component of the latter, namely, regionalization.

The author begins by making an analytical review of Latin American experience in regional development planning, with special attention to the theoretical, methodological and operational problems raised by the transition from a control approach directed at specific regions to an approach aimed at the control of multiregional national systems. In the final part of his article, the author postulates the need to consider regional development planning in three dimensions -the economic, the social and the political- in order to maximize its contribution to the process of social modernization of the Latin American countries.

This work was originally prepared, under a different title and with a somewhat more extensive thematic development, to serve as one of the reference documents for the Seminar on National Regional Development Strategies held in Bogotá in 1979, of which ILPES was one of the co-organizers.

*/ Staff member of the Latin American Institute for Economic and Social Planning (ILPES).

MAIN CHALLENGES OF SOCIAL DEVELOPMENT IN
THE CARIBBEAN

Jean Casimir */

The author seeks this article as a critical contribution to the work being carried out by the Caribbean Development and Co-operation Committee (CDCC) with a view to formulating a strategy for this subregion (see the summary of this strategy in the section "Some CEPAL publications" at the end of this volume).

In his opinion, the feasibility of this strategy should be evaluated in historical terms, since the challenges of development are found within the peculiar structure of social forces in Caribbean societies. Thus, he analyses the basic trends which governments seek to reorient, and he outlines the discrepancies between manifest and latent development projects, projects and their implementation, and projects observed at different points in time.

After an introduction in which he presents the general background of his argument with respect to the CDCC strategy, he goes into an analysis of the main economic and socio-political aspects of the colonial period ('total extroversion') and independence ('extroversion modified'), ending with a more detailed description of the distribution of wealth, income and employment, and the causes of such distribution, in contemporary Caribbean societies.

He concludes by emphasizing the objectives which, in his opinion, should guide development strategy; thus, he observes that for CDCC the main problem is to increase the capacity of the countries to formulate and execute development policies, that is, to enhance their ability to mobilize resources -especially their labour forces- through appropriate institutions.

*/ Staff member of the CEPAL, Office in Port of Spain, (Trinidad and Tobago).

THE LATIN AMERICAN PERISPHERE IN THE GLOBAL
SYSTEM OF CAPITALISM */

Raúl Prebisch **/

In a series of articles, appearing above all in this 'Review', the author has gradually been giving form to his mature view of the economic, social and political structure and transformations of Latin America. In this process of further perfecting his ideas by giving them greater depth and coherence, the present article represents a major step, being a concise summary of the main lines of thought which he is developing in three closely interrelated spheres.

To begin with, he returns to his long-standing concern for the relationship between the centres and the periphery, which he analyses in the light of a number of salient features of the contemporary scene. In his opinion, the topic is of the utmost importance, in that the nature of those relations conditions, limits and orients the Latin American countries' forms and possibilities of development. Secondly, he broaches the question of the internal dynamics of peripheral capitalism in order to throw light upon its main components, contradictions and trends. Thus, he asserts that peripheral capitalism is driven by its internal contradictions towards structural crises which it can overcome only by turning to authoritarian political régimes. This thesis has a corollary which is the starting point for his third line of thought: a stable and democratic solution to those structural crises calls for a profound change in the bases of peripheral capitalism, and particularly of its predominant forms of appropriation and use of the surplus. As a contribution to thinking on this controversial topic, he outlines his theory of change, guided by the hope of finding a synthesis of liberal and socialist ideals.

*/ This article was especially prepared for the Seminar on Latin American Development Policies held between September 1980 and May 1981 by the Development Training Centre (CECADE) of the Ministry of Planning and the Budget of the Mexican Government.

**/ Director of the CEPAL Review.

