

METHODOLOGICAL AND OPERATIONAL BASES FOR PUBLIC  
INVESTMENT MANAGEMENT

ILPES

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## PRESENTATION

This document constitutes a proposal to facilitate the dialogue with government or other institutions involved in public investment. Consequently, it makes no claim to provide a completed conceptual model for public investment. Its basic aim is to provide a framework for defining, developing, co-ordinating and implementing methodologies and tools designed to increase the efficiency of governments' investment management.

METHODOLOGICAL AND OPERATIONAL BASES FOR THE MANAGEMENT  
OF PUBLIC INVESTMENT

1. Introduction

In their quest for economic and social development, the developing countries have to face the problem of making the most efficient use possible of scarce resources. Labour, in particular skilled labour, capital, foreign exchange and natural resources are generally either in short supply or restricted and need to be allocated as carefully as possible so as to achieve the highest possible rate of growth.

When resources are allocated to achieve a given objective, fewer resources are necessarily available to pursue other objectives. If resources are allocated in the most efficient manner, it is possible to achieve more objectives with the same resources.

The key task of the planner is to define strategies to allow a country to maximize its economic and social development with the limited resources available. Consequently, the planner has to

face the need to make the optimum allocation of the available resources among the different activities and projects so as to allow the chosen development strategy to be accomplished.

The most elementary macroeconomic models link a country's rate of growth to the level of investment. More complex models differentiate between investment in physical capital and investment in human capital. Finally, there are some models which introduce the "quality of investment" variable to account for a country's rate of growth. Consequently, if the validity of this type of model, i.e., the thesis that a country's rate of growth depends on the quality of its investments, is accepted, improving the quality of public investment takes on particular significance.

The high level of indebtedness of most of the countries of Latin America and the Caribbean severely restricts their possibility of achieving greater growth through external indebtedness. Consequently, the only possible path towards greater development of the economies of the countries of Latin

America and the Caribbean requires the improvement of public and private investment.

Furthermore, the limited opportunities for obtaining greater external resources are often further jeopardized by a lack of available projects for which to apply for credit from multilateral financial agencies. In addition, in view of the difficulty involved in preparing and following up programmes involving multiple works, it is customary to devote credit resources to major projects, which are not necessarily of greatest priority. Local resources are diverted to provide collateral for the credit, thereby leading to the postponement of smaller projects, which are frequently of social interest.

Once again, in order to solve this problem it is necessary to improve the public sector's capacity to manage public investment. For example, the adoption by a number of countries in the region of Public-sector Project Banks has proved to be powerful tool for obtaining credit for multiple works, including those in the area of social projects.

Under these circumstances, ILPES, in fulfilment of its objective of being a centre for developing and disseminating approaches and methodologies designed to ensure the greatest possible progress for its member countries, wishes to provide in these pages a coherent, sound and practical programme of action, whose basic aim is to support the various governments in their efforts to improve the management of public investment in those areas to which each of them has given priority.

In order to clarify the possible means of improving public investment, it is first of all necessary to tackle the structure thereof, to identify its main components and the links between them. It is only after the system has been fully grasped as an organic whole that it will be possible to define actions which are coherent with one another as well as with each country's institutional framework. Consequently, the following pages provide an analysis of the structure of public investment, whose complexity has led to the adoption of a systems approach.

## 2. The structure of public investment

Public investment may be assimilated to a production process, in the sense that it absorbs resources and provides products. A production process is easily conceptualized as a production line along which, by the use of various resources, a certain product is manufactured. By analogy, public investment absorbs financial, human and material resources and generates a variety of goods.

Moreover, a production process always involves administrative functions. Thus, for example, in the case of a production line it will be necessary to possess information in order to decide how much to produce and how to do so (what resources are to be used). To achieve this, the administrative function requires information from outside the production line (for example, information on the market for resources and for products) as well as information on the production process itself (for example yield and costs).

Having adopted this starting point, it is possible to conceptualize public investment as a series of production processes controlled by a management function. This leads us to draw up the diagram shown in Figure No. 1, in which the production processes themselves are distinguished from the management function of public investment.

#### 2.1. Elements which make up the Public Investment System

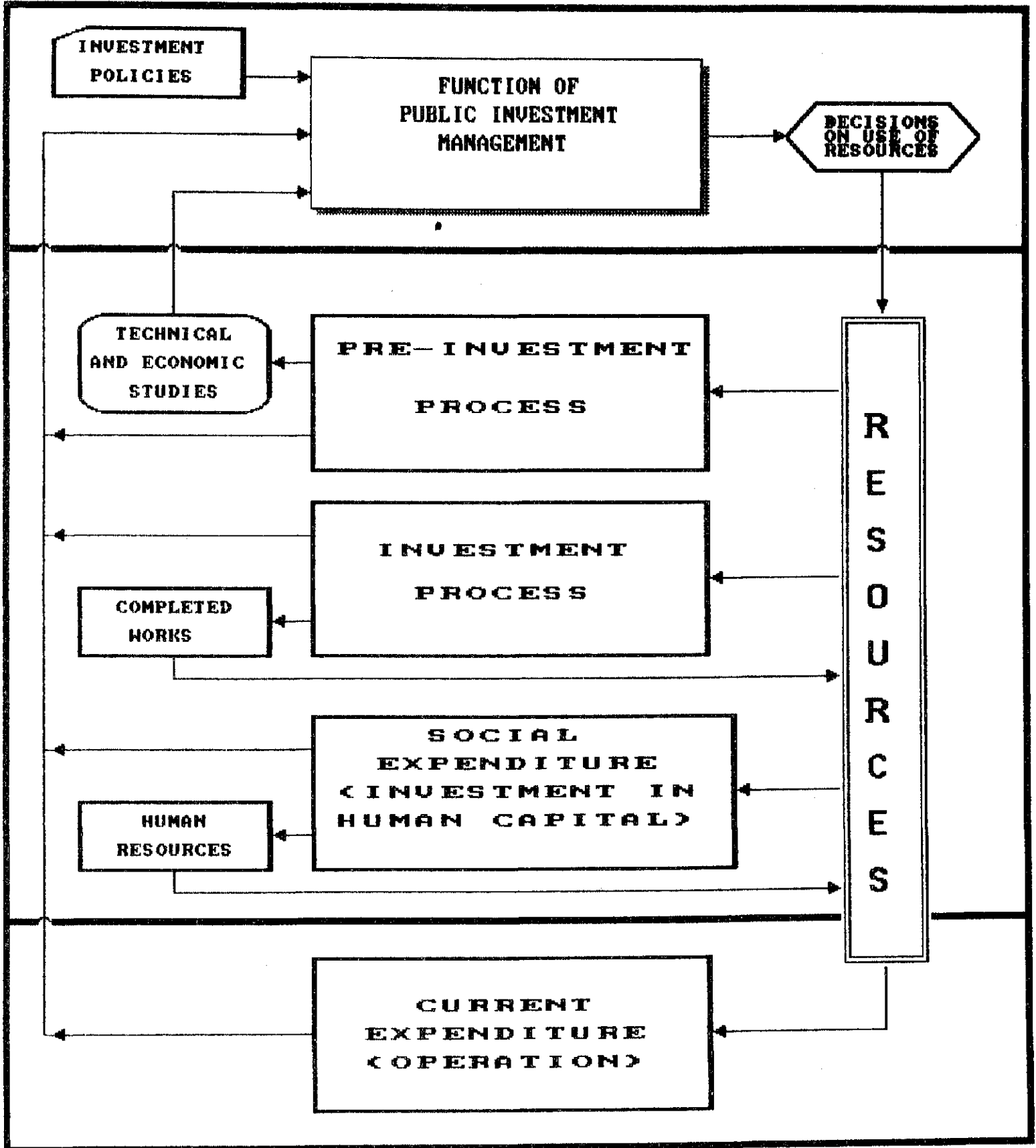
Figure No. 1 sets out three main blocks. The central block represents the physical processes involved, which, in the above example, may be compared to the production line itself. The uppermost block has been used to represent the management function associated with the production process, while the lowermost block represents the current expenditure connected with the production of goods and services by the State. These may be assimilated to the overheads involved in a production line.

In the uppermost block, the Function of Public Investment Management represents all the procedure associated with the management and control of public investment. In other words, it



# FIGURE No.1

## THE PUBLIC INVESTMENT FUNCTION



includes the collection of information, its processing and analysis, and decision making in respect of the planning and control of public investment. For the time being, we shall treat this function as a "black box" and analyse its relation with the physical processes which it manages and controls.

The central block of Figure No. 1 sets out these physical processes. Although in this initial stage of analysis it would have been possible to group the different processes under a single heading of "public investment", in order to identify those areas deserving special attention preference has been given to distinguishing the processes of pre-investment, investment itself and social expenditure or investment in human capital.

The Pre-investment Process includes all steps connected with the identification, preparation, formulation and evaluation of projects. It consequently covers the stages of concept, profile, prefeasibility and feasibility of the project cycle. It should be stressed that the approach adopted excludes decision making from these steps.

The Investment Process covers the construction of work by the public sector. It only excludes action connected with investment decisions and the physical and financial follow-up of the various projects.

Finally, Social Expenditure or investment in human capital includes all action designed to augment or preserve the country's stock of this resource. Consequently, it includes any action or programme undertaken by the public sector for the purpose of improving the population's health and level of training, as well as action to achieve the physical or social rehabilitation of those needing it.

The lowermost block sets out Current Expenditure by the public sector, as a system connected with the management function and with the above processes. This covers all expenditure made by the public sector which does not constitute investment, but which is necessary for the State to play its proper role. Consequently, this category includes expenditure connected with the management

of public investment, conduct of the country's foreign relations and the provision of internal security and of defence.

Having thus defined the main components of the public investment system, we may proceed to analyse how they interrelate in order to function as a harmonious whole. In order to do so, it is essential to point out, as has already been done, that the resources available to a country are always restricted, particularly in the less-developed and developing countries. Consequently, there will always be competition for the available resources between the chosen measures. For example, if a high percentage of the available resources is devoted to the execution of works, it will be to the detriment of the pre-investment process and of social expenditure. By analogy, excessive emphasis on increasing social expenditure may severely jeopardize the provision of the physical infrastructure required for the country's development.

## 2.2. The Function of Public Investment Management

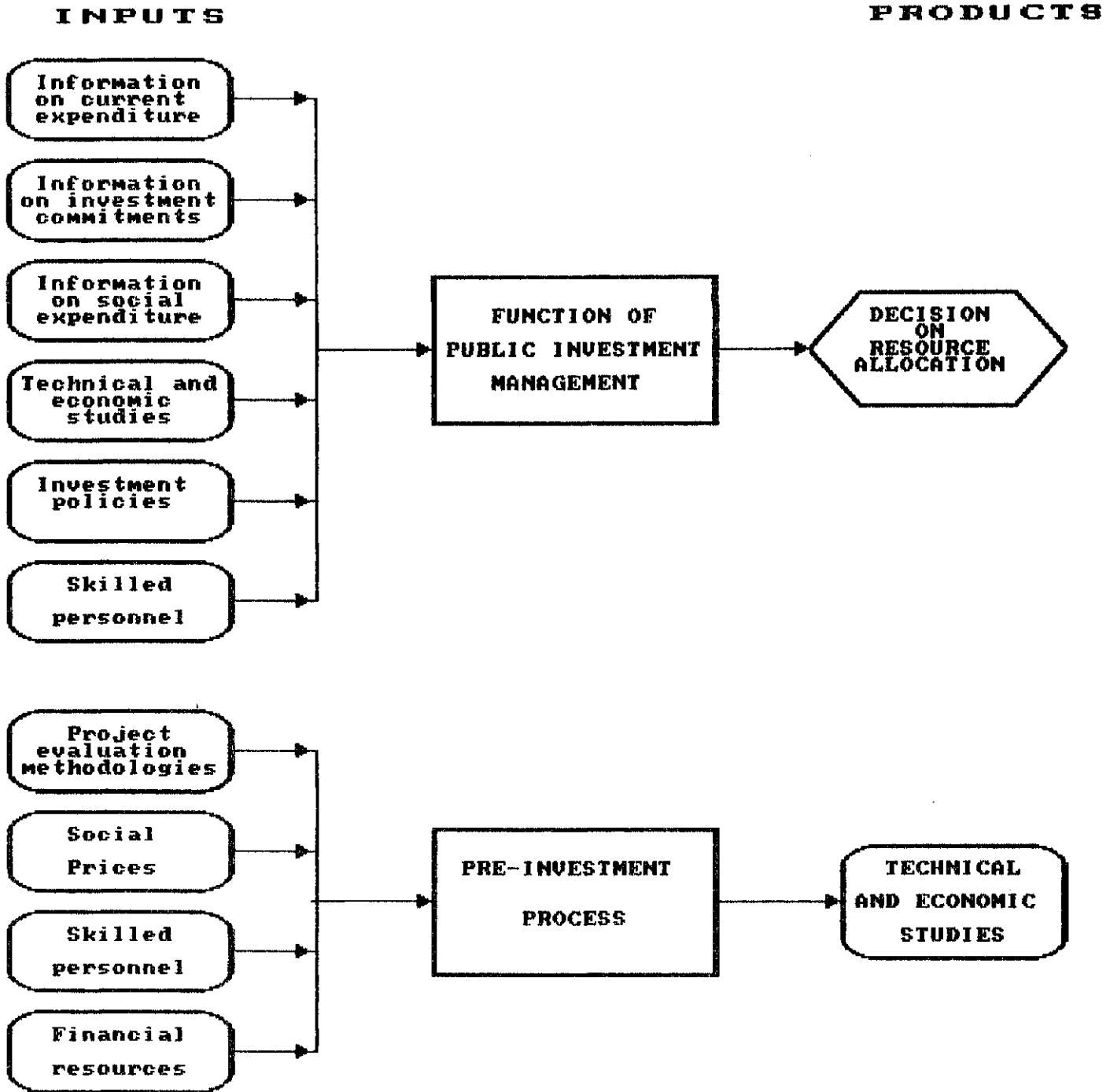
It is in the light of this dilemma that the Function of Public Investment Management acquires particular significance, as it is this function which takes decisions in respect of resource allocation. In other words, it decides how the available resources are to be allocated between pre-investment, investment, social expenditure and current expenditure. It also specifies which projects and programmes are to be allocated resources and in what way so as to optimize their use.

This requires information (Figure No. 2) on the level of current expenditure, of social expenditure, and of investment commitments, technical and economic studies, personnel skilled in the management of public investment and clearly defined investment policies which correspond to national and sectoral targets.

In respect of current expenditure, the management function needs to be informed as to the actual use made of resources by each of the institutions which make up the public sector.

# FIGURE No. 2

## INPUTS AND PRODUCTS OF THE FUNCTION OF PUBLIC INVESTMENT MANAGEMENT (FPIM) AND OF THE PREINVESTMENT PROCESS



Information relating to investment commitments covers information on the resources required for the studies, projects and programmes which will continue to be implemented during the following budgetary period, as well as on the resources actually used by these operations during the current budgetary period.

Technical and economic studies will give rise to fresh and properly weighed-up investment ventures. The management function will utilize this information in order to allocate resources among the different sectors, as well as to projects and programmes within each of them. Furthermore, depending on the volume of available resources and the number of projects assessed, the management function will be able to decide as to the desirability of devoting more or less resources to the pre-investment process.

The need for skilled personnel is self-evident since, as has already been mentioned, the management function involves a set of information flows, analysis thereof and decision making. Consequently, human resources with proper training in the

application of the different methodologies and procedure required for the management function to perform efficiently constitute the cornerstone of any efficient public investment system.

It is equally clear that the performance of the function as a whole needs to be directed by national policies in respect of public investment. Each government decide which objectives it desires to achieve, while the management function is responsible for striving to attain these objectives in the shortest possible time, taking into account the restrictions imposed by the quantity of resources available.

The manner in which these inputs are utilized in order to come to a decision over the allocation of resources will be dealt with in greater detail later.



### 2.3 The Preinvestment Process

The Preinvestment Process (see Figure No. 2) provides output in the form of technical and economic studies of projects. These may be at the level of profile, prefeasibility or feasibility studies. These studies feed the management function with the information necessary for the allocation of resources. The main inputs required to produce these studies are methodologies for the evaluation of projects, social prices for the social evaluation of projects, personnel skilled in the use of these methodologies and financial resources.

The methodologies of evaluation play the key role of indicating, for each type of project, how its costs and benefits are to be assessed. These methodologies provide techniques for assessing, in the case of each project, features such as the use or generation of foreign exchange, profitability of the capital invested, the generation of employment and the demand for

financial and physical resources. It provides standardized information for each type of project, thereby facilitating the attribution of priority to projects by sectors.

Social prices are another significant input for the pre-investment process, as they make it possible to carry out the social evaluation of the projects. Depending on the approach adopted, these may consist of the shadow prices of the resources or include redistributive effects. Whatever the case, the chosen approach must be compatible with other inputs and procedure of the public investment management function.

Once again, there is a clear need for personnel skilled, in this case, in the private and social evaluation of projects. Methodologies themselves only constitute an indicator as to the procedure to be followed in carrying out a technical and economic study. They are of no use if they are not applied by properly trained officials possessing sound judgement.

#### 2.4 The Investment Process

The Investment Process itself (Figure No. 3) provides output in the form of finished works. These works then form part of the stock of resources available for the development of other activities and public sector programmes or alternatively increase the country's basic infrastructure, facilitating private-sector activities. At any point in time, an intermediate product will be works in progress. It is essential to draw attention to these, since the management function will need information on the expenditure involved in completing the works.

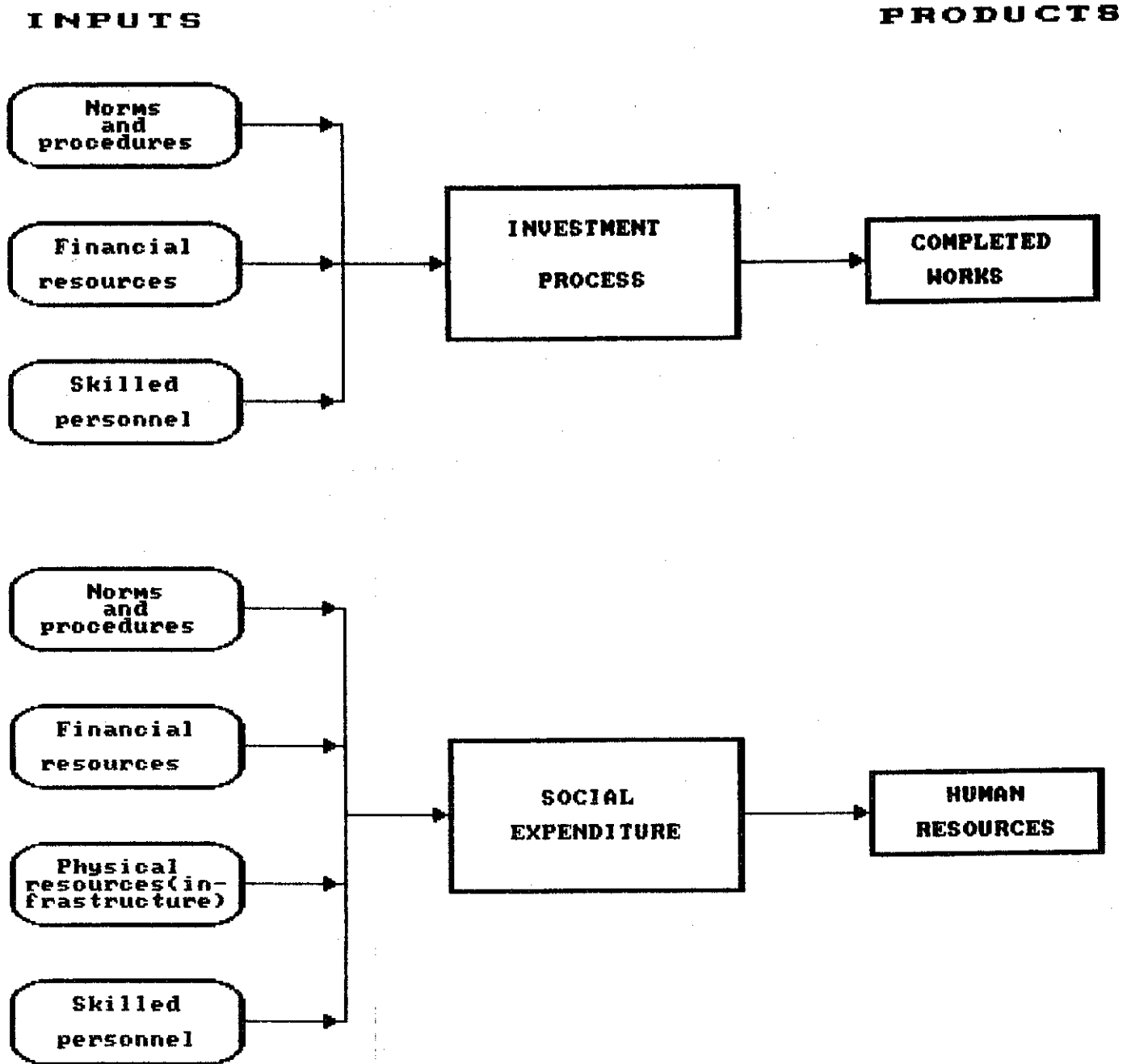
Moreover, the Investment Process is connected with current expenditure, as the completed works require resources in order to operate. The main inputs therein will be capital and skilled personnel. In addition, it is necessary to define norms and procedure for contracting and executing the works.

#### 2.5 Social Expenditure

Social Expenditure or investment in human capital (see Figure No. 3) includes such action or programmes as are

# FIGURE No.3

## INPUTS AND PRODUCTS OF THE INVESTMENT PROCESS AND OF SOCIAL EXPENDITURE



undertaken by the public sector with the aim of improving the health and level of training of the population, as well as those designed to achieve the physical or social rehabilitation of individuals requiring it. In order to carry out this type of action, it is necessary to possess personnel skilled in fields such as education, nutrition, medicine, social rehabilitation and health. Financial resources are also necessary to meet expenditure such as that on salaries, the purchase of materials, transport and the payment of services. Finally, physical infrastructure is required to perform certain actions.

There are obviously tight links between what has been designated as Social Expenditure and the Investment Process as well as with Current Expenditure. Even more so, it will generally be extremely difficult to distinguish between current expenditure and social expenditure on items such as the wages of teachers, doctors and paramedicals, which may appear in the current budget of institutions or be assigned to specific programmes. Furthermore, the infrastructure required to carry out social

programmes would, under the proposed pattern, be set up by the investment process, thereby requiring excellent co-ordination therewith.

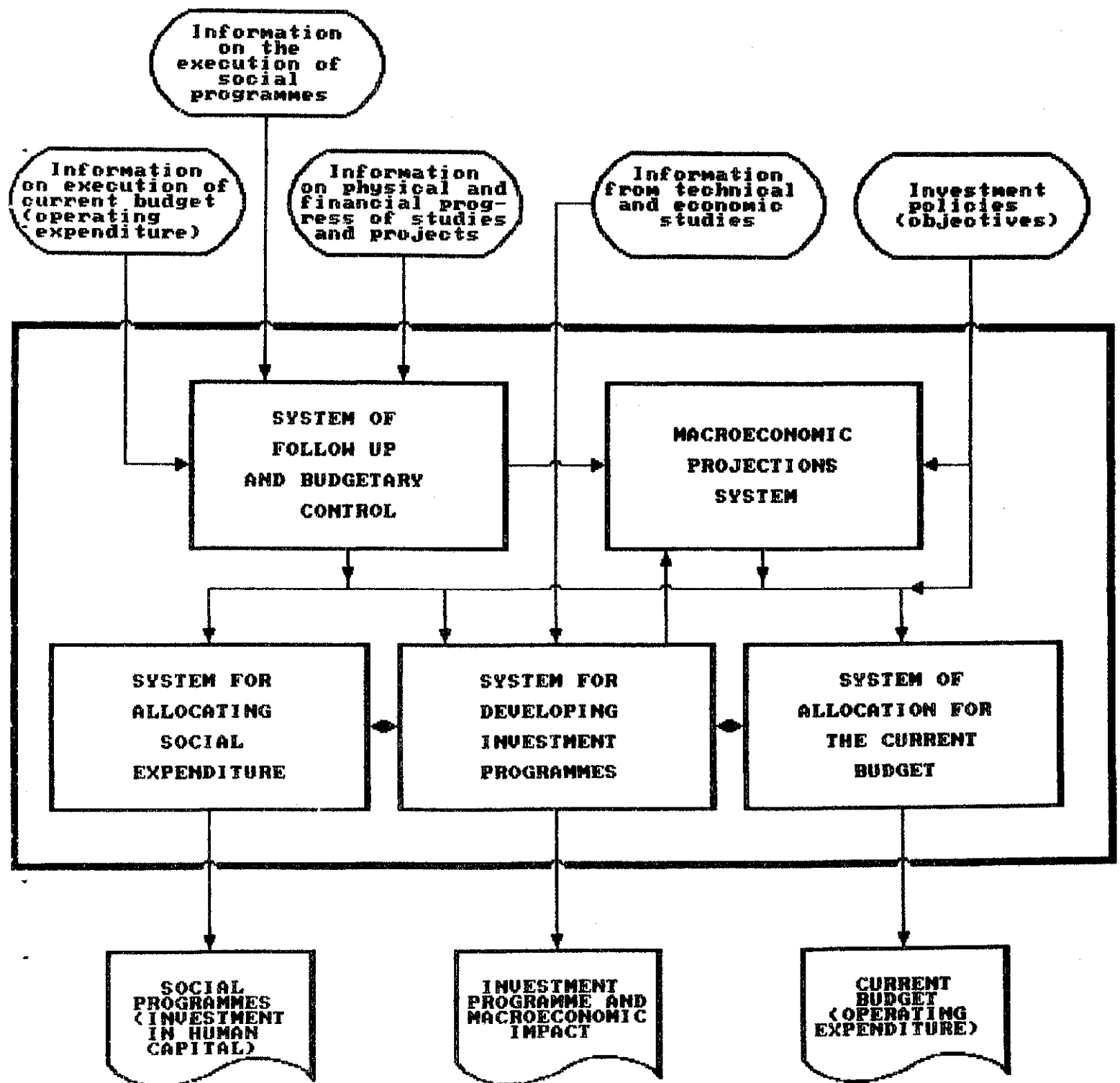
Notwithstanding these observations, it appears desirable to distinguish social expenditure from the investment process and from current expenditure, as this will make it possible to define and use ad hoc methodological tools for allocating and managing social expenditure.

## 2.6 Systems integrating the Function of Public Investment Management

Following this global analysis of public investment, we shall now tackle in greater detail the operation of the management function. To do so, it shall be broken down in order to analyse its different component systems.

Figure No. 4 provides a breakdown of the management function into its five essential component subsystems. These are a System of Follow-Up and Budgetary Control (SFBC), a Macroeconomic Projections System (MPS), a System of Allocation for the Current

**FIGURE No. 4**  
**SYSTEMS MAKING UP THE**  
**FUNCTION OF PUBLIC INVESTMENT MANAGEMENT (FPIM)**



Budget (SACP), a System for Allocating Social Expenditure (SASE) and a System for Developing Investment Programmes (SDIP).

These various systems receive information from outside the management function, process it, and provide as their output a decision as regards resource allocation. This decision may be broken down, as shown in Figure No. 4, into a current budget, social programmes and an investment programme.

The current budget will determine the funds which each public-sector institution may use during the budgetary period for each of the items detailed therein, such as wages of officials, fuel, supplies, etc.

The social programmes will specify the different actions to be undertaken by the government in support of health, education, nutrition or the rehabilitation of the population. It is desirable for these budgets to include all the expenditure connected with a given action, such as wages, materials, etc.

For its part, the investment programme will specify each and every one of the studies and projects which the government will



pursue or initiate during the budgetary period, indicating what resources are allocated to each of them. This programme needs to be tightly linked with social programmes and with current expenditure, as it provides the necessary infrastructure for social programmes and sets up a demand for resources in order for the completed programmes to operate.

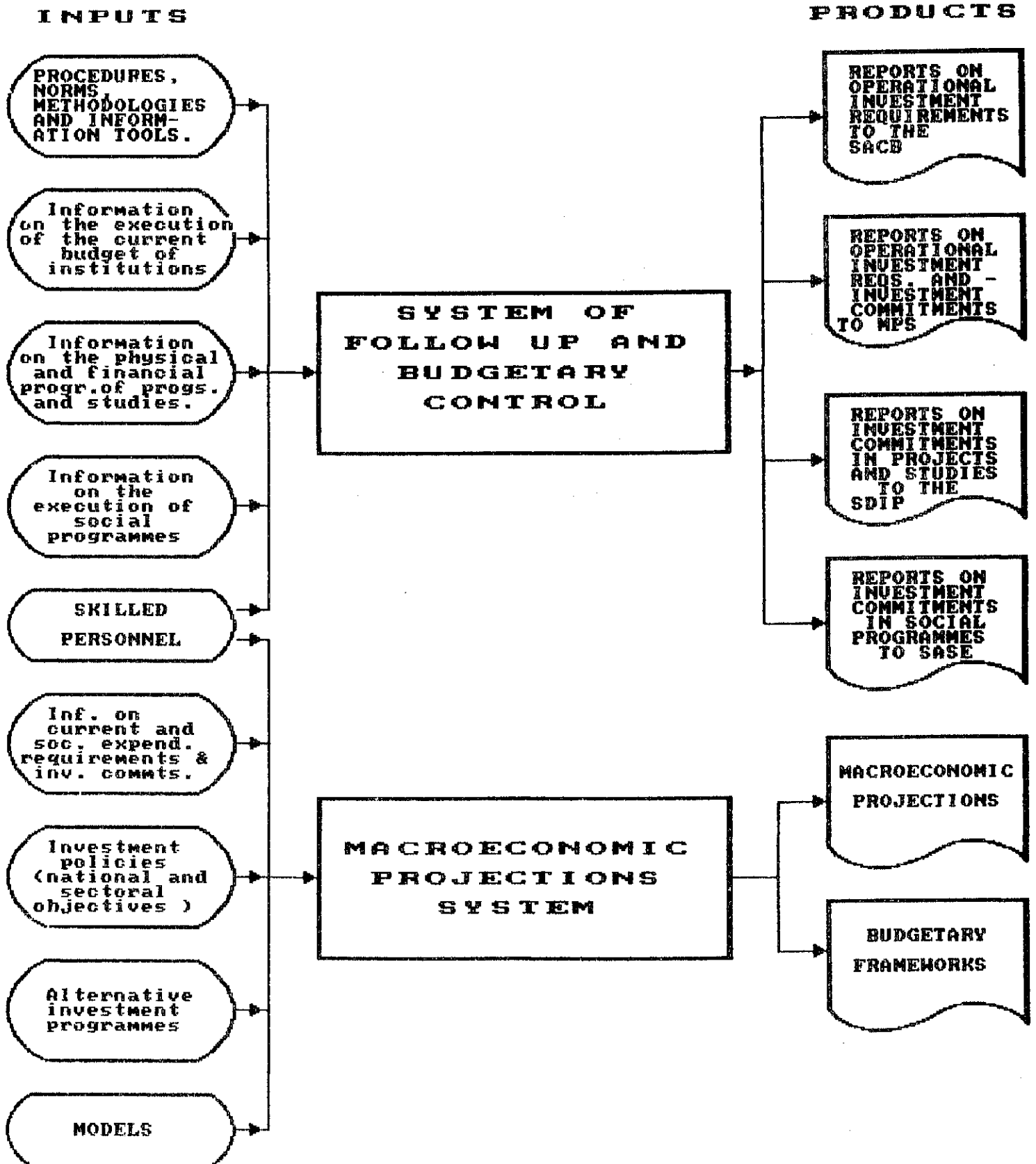
In order to optimize the management function, it is necessary for each of the systems identified to perform efficiently and to be properly co-ordinated. Consequently, an analysis will now be made of each of them with a view to clarifying their functions and interrelations. This will make it possible to subsequently study those actions which will contribute to optimizing the management function.

#### 2.6.1 The System of Follow-up and Budgetary control

If attention is first directed to the System of Follow-up and Budgetary Control (see Figures No. 4 and No. 5), it will be apparent that this system receives information relating to the execution of the current and capital budgets (works and studies

# FIGURE No. 5

INPUTS AND PRODUCTS OF THE  
SYSTEM OF FOLLOW UP AND BUDGETARY CONTROL (SFBC)  
AND THE MACROECONOMIC PROJECTIONS SYSTEM (MPS)



under way). In other words, the subsystem receives information from all public-sector institutions on the payments made, both out of the current budget and in respect of studies, projects and programmes. This information needs to be extremely frequent (on a monthly or at least a quarterly basis), in order to allow decisions to be taken to correct deviations from the initially estimated costs and deadlines, or to make the necessary adjustments when such deviations are the result of uncontrollable circumstances.

In addition to carrying out this control function, the system gathers and processes the information and provides reports to the system which provide macroeconomic projections and set budgetary frameworks, as well as to those which allocate current expenditure, social expenditure and prepare investment programmes.

In order to carry out these tasks, the system requires procedure, norms and computer tools to allow it to gather the required information in a regular and standardized manner, and to

process it rapidly and efficiently. Furthermore, it requires personnel skilled in the use of the computerized support tools and in the overall operation of the system.

#### 2.6.2 The Macroeconomic Projections System

The Macroeconomic Projections System (see Figures Nos. 4 and 5) receives information from the Follow-up System on the actual current expenditure of the different public-sector institutions and on the expenditure involved in studies, projects and investment programmes. This information, together with information from exploratory investment programmes provides an input for the preparation of macroeconomic projections making it possible to set estimated levels of public-sector income and expenditure. Finally, the system will define the overall budgetary frameworks on the base of the information received, the projections made and the investment policies in force. In other words, it will decide the volume of resources to be devoted to current expenditure, to pre-investment and investment as well as to social expenditure.

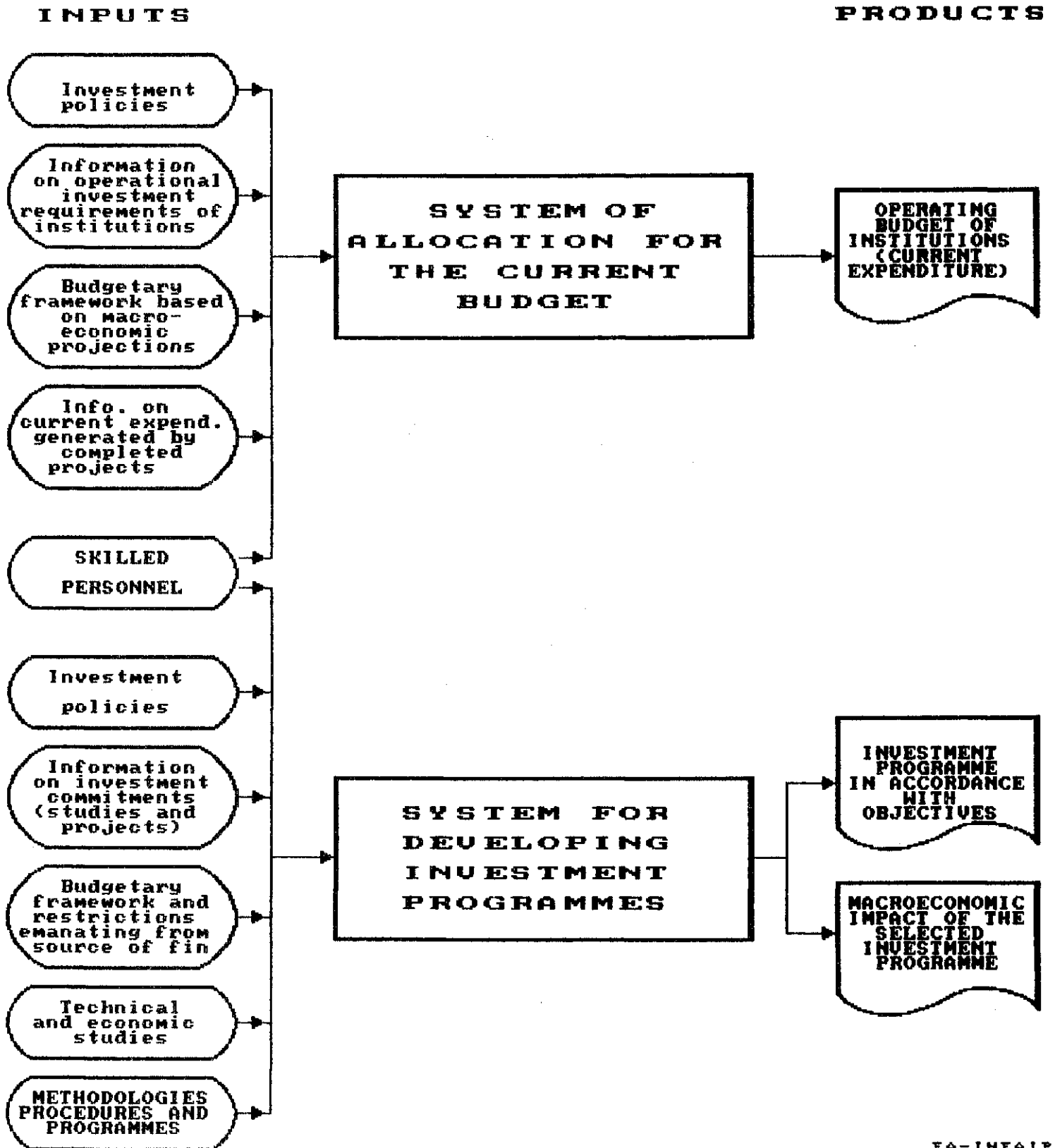
In addition to the information mentioned above, the system requires models in order to effect the required projections as well as skilled personnel to utilize, update and improve them.

### 2.6.3 The System of Allocation of Current Expenditure

The System of Allocation of Current Expenditure (see Figures Nos. 4 and 6) gathers information on the actual current expenditure of each of the public-sector institutions, per budgetary item. In addition, it receives information on the additional current expenditure required by the various institutions to finance the operation of the projects which came on line during the present budgetary period or which will begin to operate during the coming period. The latter information is provided by the System for Developing Investment Programmes and the System for Allocating Social Expenditure. Finally, it also gathers information from the System of Macroeconomic Projections in respect of the total level of resources available for current expenditure.

# FIGURE No. 6

INPUTS AND PRODUCTS OF THE  
SYSTEM OF ALLOCATION FOR THE CURRENT BUDGET (SACB)  
AND THE SYSTEM FOR DEVELOPING INVESTMENT PROGRAMMES (SDIP)



On the basis of this information, the System of Allocation of Current Expenditure takes a decision in respect of the resources to be allocated to each of the public-sector institutions. This allocation may be made at a global level or per item, and may be decided autonomously by the system or on the basis of the draft budgets submitted by each institution. In this case, the final decision on the institutional budgets will be taken through a process of discussion and analysis of each institution's draft budget.

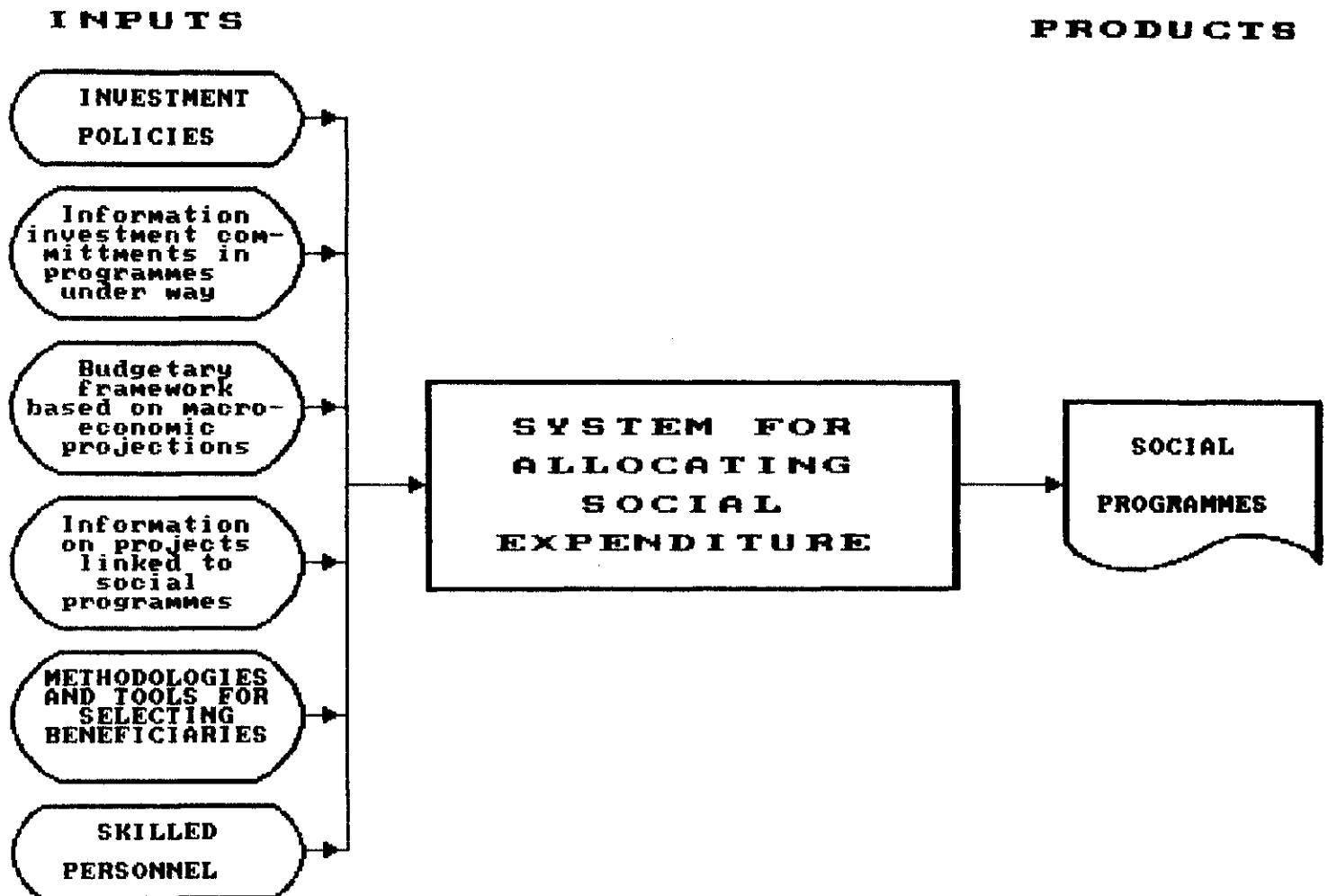
The existing investment policies constitute another major input for this system, as decisions to allocate more or less resources to specific sectors or institutions will be essentially based thereon. In addition, there is a clear need for personnel with proper training in the operation of this system.

#### 2.6.4. The System for Allocating Social Expenditure

The System for Allocating Social Expenditure (see Figures Nos. 4 and 7) receives information from the System of Follow-up on the actual expenditure of the different programmes under way. In addition, the Macroeconomic Projections System provides it with information on the resources available for the coming budgetary period. On this basis, and taking into account existing policies, the system takes a decision as to the allocation of resources to programmes under way or to be initiated during the coming budgetary period. Once again, the allocation may be made at the level of the institution or at the level of the programme or even at the level of each programme item. The decision may be taken autonomously or on the basis of discussion with the agencies operating in the field.

In order to perform its task efficiently, the system requires methodological and information-science tools allowing it to clearly identify the different social action programmes. In



**FIGURE No. 7****INPUTS AND PRODUCTS OF THE SYSTEM FOR  
ALLOCATING SOCIAL EXPENDITURE (SASE)**

other words, in addition to allocating resources to the different programmes, the system must be capable of ensuring that the resources are actually received by the target groups thereby minimizing seepage to other sectors of the population.

#### 2.6.5 The System for Developing Investment Programmes

Finally, in addition to the budgetary framework drawn up by the Macroeconomic Projections System, the System for Developing Investment Programmes is provided with information from the technical and economic studies undertaken as part of the pre-investment process together with information from the Follow-up System in respect of the work and studies under way which require financing for the coming budgetary period. On the basis of this information, and taking into account the investment policies in force, the system takes a decision concerning the allocation of resources to pre-investment and investment at the study or project level.

There is clearly a tight link between the Macroeconomic Projections System (MPS) and the System for Developing Investment

Programmes (SDIP). An iterative process is required to prepare investment programmes to supply the MPS together with budgetary frameworks supplying the SDIP in order to obtain the definitive projections and investment programme.

## 2.7 The Institutional Factor

Naturally, the diagram of the public investment system set out above is a theoretical one. Its purpose is to provide a clearer understanding of the way in which the system operates, rather than to reflect any real situation.

In practice, this diagram is rendered far more complex by the existence of numerous public-sector institutions involved in public investment and fulfilling different roles which in many cases overlap. An analysis will now be made of the roles which the public sector must assume in order to link the different elements of the system with the institutions making up the public sector.

### 2.7.1 The roles of the Public Sector

A fundamental factor which needs to be taken into account in analysing the public investment process is the structure of government. This will to a large extent determine the existing procedure or those which evolve for the identification, examination, choice and execution of investment programmes.

Whatever institutions compose the public sector, it will always be possible to classify them on the basis of their functional areas and territorial coverage. From the functional angle, the following categories may be distinguished:

- The Government

Government institutions are those institutions responsible for decision making in respect of the management of the State. From the public investment angle, we are particularly concerned with those possessing decision-making capacity as to which investment programmes are to be undertaken.

- Execution

Executing institutions are those responsible for implementing the decisions taken by the government institutions. For our purposes, our interest is in those institutions which carry out, either directly or by contracting private firms, works, studies or programmes which it has been decided to implement.

- Advisory services

The role of advisory services is to provide support for decision making, by putting forward recommendations to government institutions. This role is generally filled by offices or ministries of planning or of economic development. These institutions will analyse the different investment proposals and recommend which are to be undertaken and which not.

- Finances

There is always an institution responsible for managing public finances within a government. This institution is

usually responsible for distributing the funds allocated to the other institutions by the national budget and possibly for supervising budgetary performance.

- Comptrollership

The role of the comptroller may be performed by the institution responsible for financial management or by another specially established institution. In respect of investment initiatives, its role will be to ensure the funds are used for the studies, projects or programmes to which they were actually allocated, and that the whole of the process of contracting, purchasing, payments, advance payments, is carried out in accordance with the respective government norms.

The above roles may be connected with some of the elements and systems of which public investment is composed. Thus, for example, the system of follow-up and budgetary control is clearly linked to the financial and comptroller functions. The investment process is carried out by executing institutions, while

pre-investment will probably involve both advisory and executing institutions.

Consequently, it is necessary for the proposed theoretical model to adjust to the specific characteristics of each country's institutional framework. However, it is essential to keep sight of the overall pattern of the system in order to efficiently buttress steps to improve public investment. Failing this, it is easy to fall into the trap of adopting an approach whose limits are set by the activities currently carried out by each institution. In this case there is a risk of adopting measures to strengthen institutions, methodologies and systems of support for decision making which are inconsistent and even incompatible with one another.

## 2. Measures in support of improving public investment

The breakdown of public investment provided on the previous pages makes it possible to identify those areas in which it is possible to take steps to help improve its management and to increase the efficiency of social expenditure, of pre-investment and of investment.

If we start by analysing those areas in which prospects for providing support are smallest, it is clear that the Institute, which is not a financial agency, should not involve itself in the Investment Process. It should only concern itself with those aspects which are linked to the physical and financial follow-up of the projects under way, as this information constitutes a major input for the Management Function of the Public Investment Process. In this field, i.e., in respect of physical and financial follow-up, there is generally a considerable lack of efficient and reliable systems, as well as of skilled personnel to operate them.



Nor should the Institute concern itself with the management of the Current Public-Sector Budget, with the exception of those aspects connected with the follow-up of the expenditure and profits generated by a project of which it is desired to carry out an ex-post evaluation. It could however draw up training programmes designed to improve the training of public-sector officials in information science and accounting techniques so as to ensure more efficient management over current expenditure.

These observations are also valid in respect of the implementation and execution of social programmes.

On the other hand, the Pre-investment Process is an area wherein the Institute would have a major role to play, on account of its link with the Management Function and the level of excellence it has achieved in this area. Specifically, an examination of the inputs required for the Pre-investment Process (Figure No. 2) clearly reveals that the Institute has a valuable contribution to make in areas such as the development of methodologies for social evaluation adapted to the circumstances

of each country, calculation of the relevant social prices, the development of procedure for the follow-up, control and planning of the process, and training for public-sector officials in project evaluation and the management of the Pre-investment Process.

As far as the Function of Public Investment Management is concerned, it clearly constitutes the main field of action in that it lays down plans for measures designed to improve public investment. An examination of the breakdown of the function into its component systems (Figure No. 4) clearly reveals that any support activity will be of an interdisciplinary nature and involve the use of numerous resources which must act together harmoniously.

As far as these systems are concerned, ILPES's contribution to improving public investment would focus on the System of Follow-up and Budgetary Control, the Macroeconomic Projections System, the System for Allocating Social Expenditure and the

System for Developing Investment Programmes. In other words, the only system excluded is the System of Allocation for the Current Budget.

Support for the System of Follow-up and Budgetary Control would be restricted to follow-up and control over public-sector expenditure, i.e., follow-up and control over the pre-investment and investment processes and, possibly, follow-up of social programmes. Effective support for this task could be provided through the physical and financial follow-up module of a Project Bank, particularly if all the institutions executing the pre-investment and investment processes actively participated.

The Macroeconomic Projections System is a field in which the Institute has a major contribution to make. The huge experience which it has acquired in the building of macroeconomic models and in their application to produce projections allows ILPES to undertake this type of activity in an effective, efficient and reliable manner. Furthermore, development of these tools as part of a co-ordinated approach with other measures designed to

improve the Function of Public Investment Management makes it possible to ensure maximum profitability from the resources invested in its development.

The System for Allocating Social Expenditure is another sphere in which there is room for valuable contributions to improving public investment. The shortage of resources affecting a large number of countries in the region has compelled many governments to postpone urgent social programmes. An alternative solution is to focus the available resources and avoid them seeping away to sectors which do not require them. Designing social programmes and developing and executing methodologies and systems to focalize them is a field in which much work has yet to be carried out.

As far as the System for Developing Investment Programmes is concerned, intensive work is at present under way within the Area of Advisory Service Programmes to develop methodologies and programmes to facilitate effective support for this system. The aim is to achieve a flexible integration of information from a

Project Bank and from the Macroeconomic Projections System with national and sectoral investment policies.

### 3. Tools to support the management of public investment

The complexity of the problems which planners have to tackle in order to achieve optimum allocation of the available resources has led to the development of a set of methodologies and tools using information science and designed to facilitate the task. A brief examination follows of the different tools which are either available or being developed, illustrating the connections between them and the system which make up the function of public investment management.

One of the main existing support tools whose use has already spread to several countries in the region are Project Banks, whose aim is to buttress the follow-up and control of investment projects, basic and pre-investment studies as well as preinvestment planning and the execution of ex-post project evaluations. Consequently, in respect of the above conceptual framework, they constitute a mainstay for the System of Follow-up

and Budgetary Control and for the System for Developing Investment Programmes.

In order to make use of them, it is necessary to develop project evaluation methodologies, to establish social prices and provide broad training for personnel in the use of the methodologies as well as in the procedure for creating, updating and using data. Consequently, this also provides the preinvestment process with sound of support.

Information Systems on Technical Co-operation are being perfected to provide support for administrative management in the sphere of management of technical co-operation. Their purpose is to support the follow-up of technical co-operation projects, the identification of sources of technical co-operation for projects and the execution of the legal and administrative steps necessary for them to materialize.

Since technical co-operation projects are part of the investment managed by the public sector, the adoption of Information System on Technical Co-operation provides support for

the System of Follow-up and Budgetary Control and the System for Developing Investment Programmes. Consequently, these systems constitute a special type of Project Bank, and must be developed in close co-ordination therewith.

Another area which has been able to call on up-to-date tools to render its management more efficient is that of the allocation of social expenditure. Social Stratification Surveys together with the information systems developed for their application make it possible to rapidly ascertain the effectiveness of the social programmes under way, by identifying to what extent they have reached the target population. These methodologies are thus the cornerstone for the efficient operation of the System for Allocating Social Expenditure and may make a significant contribution to the Macroeconomic Projection System in respect of the intersectoral allocation of resources.

Considerable experience has already been build up in respect of the development of data bases and Macroeconomic Models to support the development of macroeconomic projections which are an



essential tool in planning public investment. These macroeconomic models will clearly constitute the foundations for the Macroeconomic Projections System. Mention need only be made of the importance of developing them in conjunction with other tools such as those described above, so as to improve their performance and efficiency. Finally, work is under way to develop Computer Programmes to draw up investment programmes. These seek to facilitate the rapid and efficient preparation of investment programmes, by making use of information from Project Banks, Macroeconomic Models and from a System of Management of Technical Co-operation. Together with the Project Banks, the computer programmes developed will form the nucleus of the System for Developing Investment Programmes.

Each of these tools may be used independently from the other. However, it is clear that they will only be of maximum use when they are developed and applied in a co-ordinated fashion. Complementarity between the different systems reinforces each of them through the use, in addition to their own specific

information, of allied information contained in the other systems. The duplication of efforts is also avoided by eliminating the recording and handling of duplicated information.