

UNITED NATIONS  
ECONOMIC  
AND  
SOCIAL COUNCIL



✓ 474983  
Distr.  
GENERAL



E/CN.14/182  
4 January 1963

Original: ENGLISH

ECONOMIC COMMISSION FOR AFRICA  
Fifth session  
Leopoldville, February - March 1963  
Provisional agenda item 7

REPORT OF THE MEETING OF EXPERT GROUP  
ON COMPREHENSIVE DEVELOPMENT PLANNING

## REPORT

## EXPERT MEETING ON COMPREHENSIVE DEVELOPMENT PLANNING

Addis Ababa, 15 - 20 October 1962

Introduction

1. The Officer-in-Charge of the Economic Commission for Africa welcomed the experts on behalf of the Executive Secretary. He stressed the significance of their discussions in view of the priority now being given in the work of the Commission to problems and policies of economic and social development, and particularly to programming and projections within this general area. This was reflected in the recent organization of a Division of Social and Economic Development within the secretariat, with a special section concerned with programming and projections, as well as in the emphasis placed on programming within the Division of Industry, Transport and Natural Resources. The discussions of the meeting would also make an important contribution to the organization of the programme of the Institute for Economic Development and Planning in Dakar, where the first courses were scheduled to start in the autumn of 1963.
2. Mr. A. Assouline, Director of the Department of Co-ordination and Planning in Morocco, was unanimously elected Chairman of the meeting.
3. In the discussion on the draft agenda prepared by the secretariat it was agreed that the subject matter of the meeting should be confined to the techniques of economic planning, rather than the substantive content of planning. Several additional points for discussion were proposed and the agenda items were reorganized to follow more closely the actual planning process. The agenda as amended is included as an Appendix to the present report.
4. It was agreed that the report of the Conference on the Problems of Economic Development which took place in Cairo, July 1962, should be included as a working paper in the documentation for the meeting.

## AGENDA ITEM I

### PRELIMINARY PREPARATORY WORK ON THE PLAN

#### Government directives

5. It was pointed out that initial government directives were usually of general nature; for example, increasing the national income, the modernization of the economy, the achievement of full employment, the diversification of exports and import substitutions, the avoidance of a balance of payments crisis, the emphasis in each case depending on the existing economic and political situation. In some cases these directives were framed in very general terms; in other cases they were more specific.

6. In either case these general directives usually leave room for different interpretations and it is the responsibility of the planner to translate the directives into specific operational terms. A process of iteration takes place by which the planner examines the feasibility, the consistency and the implications of the original directives, and translates these into specific proposals, which may then be put to the government in the form of alternative possibilities, eventually emerging in the form of definite policies.

#### Constraints

7. Discussion then centred around the constraints which have to be taken into account in preparatory stages of drawing up a plan. All the experts emphasized the institutional constraints. These included particularly the dual nature of the economy, characterized by the high proportion of GDP derived from traditional agriculture. Planning had much more effect on the output of the modern economy than on the output of the traditional sector. The slower rate of increase of output in this sector pulled down the average for the economy as a whole, and structural changes were a necessary precondition of increased productivity. Other important institutional factors that were stressed included monetary institutions, the tax structure, and the administrative capability of governments.

8. Amongst the more directly economic constraints, the scarcity of capital, the lack of foreign reserves resulting particularly from the deterioration in the terms of trade, the small size of the market, the "stickiness" of savings, both private and public, and the lack of skilled manpower, were mentioned.

9. Finally, there was some discussion of the statistical constraints. It was pointed out by the secretariat that building up a statistical service to provide adequate current statistics was a long and costly business. In the meantime, much could be done to adapt planning methods to the statistical data available. Experts suggested that efforts should be directed towards improving the statistical data which were already being collected, and consolidating information already available, and that detailed planning should concentrate on those sectors where more data were available. It was pointed out that planning on the basis of existing data helped to identify the statistical gaps and to emphasize the need for better statistical data.

#### Aggregate approach and other approaches

10. After taking into account government directives and existing constraints of an economic, social and institutional character, the experts went on to discuss the methods used to determine and co-ordinate over-all targets. In some cases experts presented in greater detail the methods outlined in the country papers.

11. The aggregate model used to set the over-all targets for a certain country's plan is an economic growth model for the next fifteen years. It was prepared in somewhat unfavourable circumstances, with a very limited amount of statistics and with no input-output tables.

12. This model regards the development of the gross domestic product and net inflow from abroad (or trade deficit) as resources; and that of net investment, depreciation and consumption as uses.

13. The model functions as follows. The starting-point is the data concerning the first year (1962) obtained from the national accounts. The

GDP for the next year is obtained by adding to the GDP of the first year the net investment of the previous year divided by the capital-output ratio. By adding the net inflow from abroad (or the trade deficit) as evaluated on the basis of the expected inflow and outflow of funds, we obtain the total resources. This figure is then multiplied by the expected investment ratio to obtain the net investment for the year. Depreciation is calculated by adding to the depreciation of the previous year 3 per cent of the net investment carried out two years previously. The final consumption of goods and services (including administrative services) is then obtained by subtraction.

14. Three series of variants were envisaged in the use of this model, corresponding to the three following parameters:

the rate of investment (ratio of net investment over gross domestic product), for which six possible courses of development between the years 1963 and 1978 were studied;

the over-all marginal capital-output ratio (ratio of net investment to the resulting increase in GDP). On the one hand three different values were used: 2.3, 3 and 3.6; and on the other hand, two average investment gestation periods: one year and two years; the new inflow from abroad, for which two series of modifications were studied. First, the effects of a lower and of a higher inflow from abroad than the probable assumption used as the basis of calculation were examined. Secondly, the possibilities of a deterioration or an improvement in the terms of trade during the next fifteen years were considered. It was possible to introduce the last two variants because they are equivalent to changes in the trade deficit or, which amounts to the same thing, in the new inflow from abroad.

15. The assumption finally retained for the five-year plan and for the ten subsequent years which correspond to the fifteen-year perspective, is set out in the calculations appearing in table R-3 annexed to document E/CN.14/CP/4, which show the development of the various aggregates considered.

16. The rate of net investment, starting at the level of 7.5 per cent of the GDP, gradually increases (by about 1.5 points each year); it amounts to 24 per cent in the eleventh year of the plan and is maintained at that level for the rest of the period contemplated. The reasons why the rate of investment was set at a low level in the beginning are as follows:

- (a) the difficulty for the economy to absorb a greater amount of investment;
- (b) the undesirability of lowering the level of consumption per capita;
- (c) the danger that a higher rate of investment would entail too heavy a burden of recurrent expenditure for the budget, and
- (d) the very low level of domestic savings during the early years.

For capital-output ratio of 3, it should thus be possible to obtain an equilibrium rate of growth of slightly less than 8 per cent, the slight discrepancy being due to the two-year time-lag for the gestation of investment. The final consumption per capita obtained from the calculations remains almost constant during the first five years and then increases, at first slowly and afterwards more rapidly, and lastly at a rate approaching 6 per cent during the last years of the plan period.

17. There was some discussion of the model used in preparing another plan. This model is closely related to the one described above. The model is composed of five equations, seven unknowns (two of which are derived from the others) and two coefficients given

$$P = C + E \quad (1)$$

$$I_b = I_n + A \quad (2)$$

$$P + D = C + I_b \quad (3)$$

$$p^t - p^{(t-1)} = \frac{1}{P} \cdot I_n^{(t-1)} \quad (4)$$

$$A^t = A^{(t-1)} + a \cdot I_n^{(t-1)} \quad (5)$$

The unknowns are:

- P - gross domestic product
- C - consumption
- E - savings
- Ib - gross investment
- In - net investment
- A - depreciation
- D - foreign trade deficit

Two coefficients given are:

- p - capital-output ratio = 4
- a - amortization rate = 3 per cent per annum

As the number of variables is greater than the number of equations it is assumed that two of the unknowns are dependent on others:

- (a) the foreign trade deficit should not be greater than 50 per cent of investment

$$D \leq \frac{1}{2} I_b$$

- (b) the savings should rise at the end of the 10 year period to the level of 26 per cent of the GDP

$$E = \frac{26}{100} P$$

- (c) as the gross domestic product is to increase by 6 per cent per annum; hence, the net investment calculated from equation (4) is:

$$In = \frac{24}{100} P$$

All the unknowns are given for the base year. By solving the equations we obtain the aggregates for each year in succession.

18. The common element in these two models consisted of building into the model a fairly high rate of economic growth, and accepting the necessity for related changes in the economic, social and institutional structure.

19. In the case of another country the plan was formulated taking into account the economic trends of the previous ten-year period, the most important

of which were, first, an increase in GDP of 4 per cent per annum, combined with an investment ratio (Gross Fixed Capital Formation to GDP) rising from 7 - 15 per cent, reflecting decreasing productivity of investment during this period, and second, a stable savings rate resulting in surplus savings in the early part of the 1950's as investment lagged and dissavings in the second half as investment exceeded savings.

20. In drawing up this plan the national income accounts were used to test the consistency of the plan, and feasibility of claims on real resources, rather than to build up a theoretical model. The projections were based on a set of national accounts and particularly in respect to investment, inventory accumulation, consumption, and import surplus. Initial assumptions were made regarding:

1. a minimum rate of gross fixed investment of 15 per cent, which was based on historical experience,
2. inventory accumulation amounting to 50 per cent of the marginal increase in investment, based on the experience of other countries,
3. a minimum increase of 3 per cent per annum in private consumption, and
4. government consumption of 85 per cent of current government expenditure.

Detailed estimates, item by item, were then made of projected government investment, government consumption and import surplus by item calculations.

21. In view of the falling productivity of gross fixed investment in the earlier period, particular attention was directed towards shifting the composition of government investment from non-productive to productive investments.

22. The following points were brought out in the discussion of the differences in approach illustrated by these experiences. In the first case planning starts from the aggregate model; the rate of net investment for each year of the five-year plan is determined on the basis of the expected domestic and foreign savings available with a view to obtaining the maximum increase



in the GDP. The disaggregation of sectors follows at a later stage; it is done in such a way as to allocate the major share of funds to directly productive investment. The fixing of a given rate of investment reflects the intention to modify existing trends. In the initial stages of the last-mentioned plan, on the other hand, attention is concentrated on estimating individual projects and key sectors, and aggregate objectives are used mainly for checking purposes. These are projections of feasible developments based on the actual resources available. It was pointed out in the discussion that in one country it was considered that capital-output ratios and modern planning techniques should be applied only in the modern sector of the economy, and therefore that country's plan distinguished between the traditional sector and the modern sector. It is assumed that in the traditional sector a whole range of investments including the building of huts, cattle breeding, improvement of cultivation etc., which are not usually regarded as investment, are being carried out in proportion to the increase in population. For the rest of the economy, the approach consists in starting from a number of individual projects and ensuring their consistency with the over-all targets.

## AGENDA ITEM II

### SETTING OF SECTORAL OBJECTIVES

#### Sectoral objectives and investment allocation

23. It was pointed out that the setting of sectoral objectives and the allocation of investments, more than any other stage of the planning process, involved a constant going back and forth from the allocation of aggregate investment among sectors to a consideration of individual projects.

Discussion centred round the question of the extent to which sectoral aims can be derived from the aggregate models, before the considerations of individual projects.

24. In presenting the first experience mentioned it was indicated that both an aggregate and a project approach had been used, the second as a

check on the first. A preliminary allocation of investment among the different sectors was made on the basis of past experience in this country and others at similar levels of development, as well as of development requirements, the largest possible share going to directly productive investment. The distribution was as follows:

50 per cent productive investments	(agricultural sector	40%
	(industrial sector	10%
50 per cent non-productive investments	(economic infrastructure	20%
	(social infrastructure	20%
	(research work	10%

In the case of agriculture, assumed to be the leading sector of the economy, a minimum sectoral target was fixed before the individual projects were studied; investments in these were adjusted to that target by distributing them among commodities. A more aggregate approach (at the sector level) had come first; this endeavoured to take into account the possibility of attaining the over-all objective by means of changes in the structure of the agricultural economy induced by those in charge. On the other hand, in the other sectors, a percentage of investment was allocated before the sectoral targets were set; after consideration of the projects, the share of the industrial sector was increased to 15 per cent of the total, i.e. an increase of about 50 per cent over the initial proposal.

25. Value added was then calculated on the basis of capital-output ratios worked out separately for the different sectors. In the final calculation the sectoral targets were considerably adjusted as a result of calculations based on projects.

26. The methods applied in this country for the calculation of the capital-output ratio were outlined. Although in building an aggregate model it used an over-all capital-output ratio, at a later stage carefully calculated sectoral capital-output ratios were introduced which in the end confirmed the value of the over-all capital-output ratio assumed in building the aggregate model. It was pointed out that different results were obtained when capital-output ratio is understood as:

(a) gross investment and increase in gross product

(b) net investment and increase in gross product

Different results are also obtained if the effects of investment during the planned period alone are considered or after full gestation of the investment is achieved even if that occurs after the end of the plan.

27. In allocating investments among sectors, only so-called "concerted" investments were considered. These included all government investment and those private investments which were considered important from the point of view of the plan. If the "free" investment, comprising most of the investment in the traditional sector and the other private investment of the modern sector is taken into consideration, the share of productive investments in the total will rise from 50 to 55 per cent.

28. It was stated that in one country the percentage of investment to be allocated to the different sectors was laid down in advance in the general directives, and was later adjusted after the consideration of individual projects.

29. In another country the sectoral targets were defined by means of growth model setting out, for all the major sectors, a balance of resources and uses, based on the primary data available to the country, i.e. an approximate total amount of investment for the planned period and the acceptable trade deficit at the end of the period.

30. In another country on the other hand, sectoral targets were determined by a critical examination of projects from the point of view of their productivity, although some qualitative guidance was derived from aggregates. Planners were faced with the difficult task of shifting government investment from non-productive to productive sectors. Therefore particular stress was laid on the returns from anticipated investments, and on checking the consistency or linkages between them by determining the specific demand for different services and by drawing up commodity balances.

31. In another case also the distribution of investment between sectors was related to the projects to be included.

32. In considering the two approaches it was suggested that if sufficient data existed for a preliminary allocation of investment among sectors, this provided a guide for sectoral and departmental estimates.

33. It was suggested that the only logical solution of investment allocation between sectors lies in the application of linear or non-linear programming maximizing gross national product, consumption, etc. At the present time and under the present conditions in most under-developed countries it may be extremely difficult to apply such techniques. Nevertheless the use of the input-output techniques may provide a way to reach a reasonable allocation of investment based on the repercussions of these investments on the economy. On the other hand, it was pointed out that in fact the planner was not often left with much choice in countries with a low income per head where planning was just beginning and most available investment funds were already committed to projects with long gestation periods such as irrigation schemes, and where projects strengthening the balance of payments had high priority. Under such circumstances the use of highly mathematical techniques like linear programming and input-output tables was hardly possible.

#### Formulation of projects

34. This item, which was introduced by one of the experts, covered both formulation and evaluation of projects as distinct from selection of projects. The main points that were raised were:

- (a) the relation between planners on the one hand and technicians and government officials on the other hand:  
the main question here is what should be the rôle of planners in the formulation of projects;
- (b) to what extent planners should intervene in project formulation, and what can they contribute to the initial formulation of projects;
- (c) to what extent can the planners assist the private sector in formulating private projects;

(d) what are the organizations that are entrusted with selecting the projects in different countries;

(e) what criteria should be used for selecting projects to be included in the plan.

35. It was then agreed to group the discussions under two headings, namely:

(a) the rôle of the planners in formulating the projects, and their relations with the technicians and officials, which include the first four points mentioned above,

(b) criteria to be used in selecting the projects, which come under point (e).

36. With regard to the first point, it was agreed that the rôle of the planner in formulating the projects depends on the circumstances in the different countries, on the influence that the planning body has over the other departments, on the size and type of planning staff, on the time given to them to prepare the plan, and on the tradition and procedure of the government concerning planning.

37. The circumstances vary in the different African countries, and therefore, the experience also differs in various ways. The rôle of the planner might be to take the initial steps and provide guidance to technicians and officials. Even when it is possible to recruit technicians on the planning staff, their task should still be to review the proposals put forward by the departments. In case such technical staff does not exist, technicians have to be found from abroad, or as an alternative, an attempt may be made to find technical reports on the same project from other sources both in the country and abroad, to check the technical feasibility of the proposals.

38. In some cases, the task of formulating the project is entrusted to teams or committees including engineers, technicians and planning experts. Sometimes the planning experts are instructed not to intervene in the technical problems.

39. It is also useful in some cases to provide a precise common framework for the formulation of the quantitative aspects of the projects, as this

would ultimately facilitate the work of co-ordination and selection. In one country this framework is supplied beforehand to the bodies entrusted with formulating the projects; in other cases its use is confined to the planner himself. In both cases the information collected covers essentially:

- (a) the time-table and summary of the project;
- (b) the determination of the source of financing (origin, type of foreign aid, method of bank financing);
- (c) the budget implications;
- (d) the proportion of investment and of current expenditure to be provided in foreign exchange;
- (e) the impact on employment and foreign trade;
- (f) the effect on domestic production;

It was suggested that it was sometimes an efficient method to make sure at the outset that the projects had the best possible chance of being consistent with each other, by bringing together the representatives of the various sectors or ministries concerned with the same sphere of development while the projects were being formulated.

40. In some cases, the planners try to achieve different purposes when asking for information from the ministries. In other words, they try to evaluate the post performance of the different departments and ministries. The purposes are:

- (a) to get beyond the narrow budget and technical approach;
- (b) to make it easy to see the inter-relationships;
- (c) to measure their performance and capabilities;
- (d) to study the strengths and weakness;
- (e) to collect important data for future planning.

41. In most other cases, the planning authority invites the departments to formulate their own projects. These projects are then submitted to the

higher planning authority for discussion and decisions. The question was raised whether in such cases, a ceiling should be set for each project in the stage of formulation, in order to avoid high and unrealistic projects. But the feeling was to let the departments free to submit as many projects as they wished and to let them use their imagination in formulating the projects. It was also felt that it could be of major assistance to the private sector for planners to exchange information with them, for example on such matters as market forecasts, transport costs, electricity, etc.

#### Criteria of choice and evaluation of projects

42. The item was introduced by a member of the secretariat. The point was raised that in developing countries, the planners have a limited choice of projects in the initial phase. Many investments are committed or under construction and the investment funds are limited. It was felt that in any case this problem arises only in the short run.

43. The following criteria were then agreed as the most important in selecting and evaluating the projects:

- (a) consistency with the planning target;
- (b) the capital-output ratios; <sup>1/</sup>
- (c) full employment;
- (d) profitability; <sup>2/</sup>
- (e) impact on current budget operational expenditure;
- (f) indirect and secondary effects;
- (g) interdependency and linkage;
- (h) import substitution;

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<sup>1/</sup> This is the ratio  $\frac{\text{net investment}}{\text{value added}}$

<sup>2/</sup> The calculation of profitability does not make use of the capital-output ratio shown in (b). It is in fact another meaning of the English concept of "capital-output ratio"; it relates the net investment not to the value added but to the profit. Profit is here defined as the difference between gross income and the total cost of factors of production: capital (rate of interest and depreciation), labour, etc. Hence profitability is:  $\frac{\text{Profit}}{\text{Net investment}}$

- (i) export promotion;
- (j) gestation period of projects;
- (k) the size of the market.

44. One view was that the usefulness of the profitability criterion was limited for two reasons. First, it failed to measure the indirect benefits of projects, such as employment or foreign exchange effects. Secondly, it could not be applied to economic service projects such as transport which provide external economies to other sectors, or to social sector projects which entail no cash return. Another view was that profitability was the essential test of the efficiency of resource allocation, and that indirect effects could be measured with the method. Profitability as a criterion refers to economic rather than financial or commercial profitability. The difference is that economic profitability adjusts current market prices which reflect structural distortions in supply and demand, to an estimate of the true supply and demand situation. This means eliminating the effect of institutions and of all positive or negative government subsidies. Economic instead of commercial prices can be calculated by the use of "shadow" accounting or weighted prices which adjust current market prices in some systematic fashion. It was pointed out that in the case of one country where major reliance was placed on profitability in project selection, indirect effects such as those on employment or foreign exchange could be measured by profitability if the prices of foreign capital and labour are adjusted to measure their supply and demand values. In the case of this country, profitability of economic and social service projects such as railways, electricity, water, and housing was calculated whenever a cash price or charge was involved. It was noted that the use of "shadow" prices was in its infancy, that it is difficult to establish "shadow" prices, and that a reasonably rational decision could be made only on the basis of trial and error which would be more or less related to current market prices. It was also noted that the profitability test cannot be applied to many social or administrative projects, and that this method of calculating indirect effects was not as complete as an input-output matrix. The combination of profitability and input-output tables could be a remedy.



45. There was some discussion of "shadow" prices which were recognized to be still in an early stage and subject to trial and error. The application of "shadow" prices to wages in the case of developing countries with open and disguised unemployment was also discussed. In one country, the cost of technical and unskilled labour was considered separately, and the cost of the first was inflated and the second deflated for accounting purposes. It was pointed out that the use of input-output tables in another country indicated very wide variations between actual prices and "shadow" prices.

46. The capital-output ratio criterion was not used in all countries. Where it was used, it was based on market prices.

47. The importance of the gestation period criterion was also stressed. Gestation period here would mean the time of maturity of the project. The time-lag is a very important variable, and it was suggested that a price should be calculated for the time element. Another point mentioned was the co-ordinating of the starting of the project in relation to the starting of other projects.

### AGENDA ITEM III

#### MEANS OF REALIZATION

##### Financial problems

48. The basic source of financing the plan is domestic savings. Since in under-developed countries domestic savings are low and it would be difficult to increase them at once, a number of measures are required for increasing domestic savings from one year to another; in some plans after a number of years an attempt even is made at financing all investment out of this source.

49. The problem of deficit financing and inflationary tendencies was also discussed. Some took the view that, as national income rises and the demand for money increases, the amount of money could be raised proportionately and could be used for financing the planned investment. It is, however, possible that, with the existence of private banks inflationary tendencies

may arise. The inflationary financing was not contemplated by a number of countries where the common monetary system would mean that inflation in one country could spread quickly to others.

50. In under-developed countries the majority of domestic savings are made by the government, as compared to the private sector. In some countries sampling methods were used to assess private savings. In many cases, however, it is much more important to promote increased savings through government channels.

51. Government savings depend on the relative rate of increase of government revenues and government current expenditure. It was suggested that some ceiling should be put on rising government current expenditure. It was also pointed out that a plan should provide ways to increase government revenues either by increasing the revenue from old sources or finding new sources of incomes. Increase in government current expenditure should only be considered after careful analysis because it may lead to diminishing private savings.

52. A number of ways to raise government revenues and to save government expenditure were suggested, such as reducing the cost of school building by adapting standardization of buildings, increasing the efficiency of civil servants, shifting the burden of local services (for example water supply) to the local population, etc. The problem of co-ordinating the annual budgets of the government with the longer-term plan period was also raised, as well as that of the feasibility of projecting these annual budgets up to the end of the planned period. One country gave an example of that type of projection.

53. Foreign investment constitutes the second source of financing the plan. In some cases it was calculated by taking the gap between the necessary investment funds and domestic savings and comparing that gap with the difference between imports and exports. In other cases, assumptions were made as to the trend of foreign financing which results from the calculation of the trade deficit.

54. In order to limit imports, import restrictions have been introduced permanently in some countries while in others the import restrictions were treated only as a temporary measure.
55. The most accepted way of limiting imports was to set up new industries producing the goods previously imported. This, however desirable, had sometimes led to a fall in government revenues from import duties. It must also be remembered that new import-substituting production quite often requires some additional imports of raw materials, semi-finished products, etc.
56. One way of planning future imports is to make use of import coefficients. Doubts were raised, however, concerning the validity of this method, since import coefficients, like all other technical coefficients, were changing more quickly in African countries than in more developed countries.
57. The planning of future exports raised even more difficulties, not only on account of the difficulty of calculating external demand for African exports and the terms of trade, but also on account of home production.
58. The foreign trade deficit was generally calculated from the projection of the balance of payments. In some cases, however, a ceiling of say 40 to 50 per cent was set on the foreign share in financing investment. In one case preliminary talks were held with foreign governments, institutions and firms as to the feasibility of obtaining foreign loans. Other countries were tending to rely more on increased domestic savings than on foreign aid and loans because of the uncertainty of the latter.
59. Another source of savings for financing investments is the so-called "épargne-travail" applied in one country. About 80,000 people chiefly unemployed or under-employed newcomers from villages to towns were given the opportunity to work for payment half in cash and half in kind. The total value of this wage is a little below the minimum legal wage. The works carried out in this way were confined to irrigation, road construction, etc., which do not require much capital outlay. As this system gave very good results during the first two years it was subsequently expanded.

In another country "investissements humains" were carried out, without any payment, by the population of given villages constructing a school, building a local road, etc.

#### Man-power planning

60. Man-power planning was in a number of African countries relatively less exact than other parts of the plans. The reason for this was the lack of adequate statistics. It could be stated that, generally speaking, two approaches to man-power planning were made: one as an integral part of the plan based on evaluating the demand for labour and its supply; the other, a "public works" approach, aiming only at solving the problem of existing unemployment.

61. The basic problem is to assess the demand for labour. In one country the work began on the basis of studies that tried to establish technical labour ratios based on comparison with other countries and then relate these to projected economic growth. Besides this, a rough survey was carried out of employment in large and medium government and private firms. Finally a detailed analysis of new projects was made from the point of view of demand for five or six categories of skilled and unskilled labour.

62. In another country two approaches were tried. In the first approach, a projection of the rise in income was made and, on its basis, the demand for man-power, both skilled and unskilled, was evaluated. In the second approach, detailed estimates of the demand for man-power were based on an examination of projects. Four sectors were distinguished:

1. agriculture
2. industry
3. transport
4. administration

At the same time at least four categories of labour were taken into account:

1. technical
2. skilled
3. unskilled
4. administrative

The total demand was obtained by considering the demand for labour of these four sectors for the four categories.

63. In one country an estimate was made, based on production targets for the main crops, of the needs in day's work per hectare of cultivated land; this demand was compared with the man-day capacity estimated from population projections by attributing a different coefficient ("production unit") according to the age and sex of the members of an average family. This estimate was made monthly in order to ascertain the seasonal bottlenecks during the crop period. Subsequently the figures of the demand for agricultural man-days were adjusted to an evaluation of changes in work-time due to the new techniques introduced by the projects. In another country where the question was also considered, many sample surveys of farmers were made.

64. The evaluation of the supply of labour can be considered under two headings: the supply of skilled, and unskilled labour. So far as the latter is concerned, it was stated that in a number of African countries, on account of tribal factors, the mobility of labour was found in fact to be very low; and this created some difficulties in case of great investment projects like building dams. An additional problem was the unpredictability of the migratory movements of the population.

65. One essential problem, however, is that of the supply of skilled labour. It is closely linked with the planning of education. General education should be closely linked with the problem of supply of skilled labour - mainly through secondary schools and universities and polytechnics training technicians. The planning of general education on the whole, however, was fairly loosely linked with the planning of the supply of labour.

66. The real problem of supplying qualified labour to developing sectors was that of vocational training. Efforts were being made to increase the number of pupils having vocational training in relation to production plans, but the number trained were usually below those needed, and it was necessary to envisage on-the-job training.

67. The short-term demand for skilled labour is linked closely with technical assistance. Quite often the planned projects remain unimplemented for lack of one or two men. Thus the questions to be answered are: what kind of specialists are needed, for how long they are needed, and, most important, how soon they are needed. The planners should be advised to make a projection of the specialists needed well in advance of the time when they will be required. Another problem in relation to technical assistance raised at the meeting was whether it is better to have more specialists of medium grade or fewer of higher grade. However, it was pointed out that the choice of non-African specialists was at present very limited. In one country there exists an institution which co-ordinates the demand for technical assistance from different ministries.

68. The last item considered was that of wages. It was pointed out that it was difficult to change the wage structure in a short time in some countries. In the long-term this task was nevertheless essential for carrying out the planned objectives. A separate problem was that of salaries of civil servants. It was remarked that their salaries were rather high compared to the average standard of living in the country. It was the legacy of colonial days. Certain countries had taken effective steps to scale down the salaries of civil servants. Some other countries, however, had not been able to take such steps and would not be able to take them in the near future if they wanted to attract the most qualified people from the private sector into civil service.

#### Adjustment and co-ordination of the plan

69. This item was introduced by the secretariat, and the opinion was expressed that the co-ordination - or rather the test of consistency of the plan - should be carried out in advance of the adjustment of the plan, since the latter refers generally to the adjustments made during the implementation period.

70. Various methods of co-ordination were introduced for discussion, the first of these being economic models. Attention was drawn to the variety of relationships which the planner has to keep in mind. These include

behavioural trends, policy measures, and definitional relationships as well as structural relationships. It was stated that in the formulation of a plan these relationships will have to be satisfied simultaneously, and the conclusion was drawn that unless concepts are systematized in the framework of an economic model it may be difficult to test their logical consistency. In order to do this, the economic model to be utilized must fulfil certain requirements, namely it has to be consistent, complete and realistic as well as logical.

71. The question was raised in the discussion as to whether it is permissible under the prevailing conditions in the under-developed countries to adopt such models and, if so, what are the characteristics of such a model. The opinion was expressed that, given the institutional restraints (the lack of an organized banking system, money market, or managerial class, etc.) the simpler the model the better, since it is difficult to assume that the existing institutional set-up could behave in a fashion which is generally presupposed by most models.

72. In the second place, the use of the input-output model as a tool of co-ordination was discussed. It was pointed out that the main utilization of the model in planning was the discovery of bottlenecks and excess capacities. Other utilizations of the model were referred to, particularly in the field of allocation of investment, in calculating the labour requirements, in calculating the effects of import substitutions as well as in testing the effects of various alternative development policies.

73. On the other hand, the limitations of the use of an inputs-outputs to the under-developed countries were indicated. These limitations are due mainly to lack of data, lack of interdependency and, lastly, to the constant change in the technical coefficients in a developing economy. Concerning the last point, which presents the most serious obstacle to the utilization of the input-output model in developing economies, the opinion was expressed that the best way to get round this difficulty is to forecast the shape of the future technical coefficients. This led to some argument, and a delegate confirmed that this line of thinking was in line with what

was done in his country. Various questions as to the procedure for adjusting such coefficients were posed, and this was explained in some detail in terms of the method and the time and labour involved in such procedure.

The accuracy of such projection was discussed, but it was suggested that the margin of error resulting from such a procedure would be less than that from utilizing coefficients which are known beforehand to be subject to change.

74. Another method of co-ordination, namely the commodity balances, was discussed and it was stated that the construction of such commodity balances forms a preliminary stage for the construction of input-output tables; nevertheless, the former do not always have to lead to the latter. In any case, it is useful to have a table which shows those commodity balances in an aggregate form.

75. As for the adjustment of the plan, it was stated that it is more or less traditional that plans will be subject to various adjustments other than those arising from input - output or resource tables. All plans must necessarily be flexible, and all the experts noted that provision is made in all the plans for adjustments to changing circumstances.

#### AGENDA ITEM IV

##### REGIONALIZATION OF THE PLAN

76. This item was introduced by one of the experts. In the introduction it was mentioned that the regionalization of the plan may have three aims:

- (a) to correct the economic balance within the regions;
- (b) to give more precision to the elements of economic policy outlined by the plan, and to help in locating the investments;
- (c) to associate the local population with planning.

Other points that were raised for discussion were:

- (a) methods and organization of regional planning;
- (b) the relation between regional and national planning;
- (c) whether administrative or economic regions should be considered.



77. It was agreed that it is certainly more appropriate to consider economic regions rather than administrative ones; but it is more difficult, especially in short run. If economic regions are created, then administrative bodies must also be created to deal with these regions. This change from administrative to economic regions is essentially a political decision, and requires long time. The shortage of staff, especially those trained for planning, is also a serious handicap.

78. It was felt that the consideration of economic or administrative regions depends on the circumstances, on the organization of the government, and on the organizations that will execute the projects. In some cases, certain areas that are isolated and under-developed were indentified, and special agencies were set up to deal with such areas. In other cases, administrative or political regions were grouped together for planning into economic regions. It was then possible to ask the government to change the political regions into economic regions.

79. The question was raised as to the degree of decentralization of authority to regional authorities. It was felt that regionalizing the plan does not only associate the local population with planning, but also helps to mobilize additional resources and shift more responsibilities to the local people. On the other hand, it was mentioned that if the regional authorities are given too much autonomy, then there is the danger that the national objectives may be overlooked and that the available investment funds may be exceeded. There is also the difficulty of integrating such regional plans within the national plans and of testing the consistency of the regional targets. It was suggested that the regional authorities could be of great help in providing information about the provinces and in reporting on the implementation of the plan.

80. It was considered important to make a distinction amongst the projects in the plan between national projects, regional projects but with national interest, and purely regional projects. From the financial angle, there are projects that are totally financed by the central budget, projects financed by the central budget with local participation, and projects that are totally financed by the local budgets.

81. The use of regional accounts and input-output techniques was also discussed. Although experience of this is still limited, it was considered that such techniques could be useful to show the inter-relations between the different regions on the one hand, and between them and the outside world on the other hand.

82. The difficulty of integrating the regional plans with the vertical structure of the technical ministries was also raised. One solution to this problem was to ask the ministries to create divisions on the same level as the political regions.

#### AGENDA ITEM V

#### IMPLEMENTATION OF THE PLAN AND FOLLOW-UP

83. Comprehensive economic planning can be divided into two stages: one is the elaboration of the plans, the other is their implementation. The latter is equally as important as the former, and without it the planning tends to become a theoretical exercise.

84. The problem of the implementation of the plan and its follow-up is a dual one. The first aspect is the technical one of the readjustments found necessary as the plan is being carried out, while the second one - the follow-up of the plan and its implementation - is more a question of organization. As the former aspect was touched on in the previous item of the agenda, only the latter is dealt with here. The countries can be divided into two groups: one in which the execution of the plan is followed up by the same unit which elaborates the plan, the other in which these two functions are carried out by strictly separate units.

85. In one country one of the departments of the Ministry of Planning, the Technical Department, supervises the implementation. Besides this economic control there is technical control by the Ministry responsible for given projects, and political control by the party; the Ministry of Finance controls the financial side.

86. It was noted that when plan staffs are small, it is difficult to balance the desire of influencing implementation which absorbs staff time in administration with the desire to save staff for planning and research. It was noted that planners might solve this problem by reserving their efforts to concentrate on crucial types of decisions that affect resources mobilization and use. These usually mean the major decisions on government budgets and staff authorization; foreign exchange committees or loans boards; and foreign aid budgets. These activities might also be related to any evaluation reports or economic forecasts made to governments, e.g. the presenting of an economic forecast as guidance when a new budget is being prepared. This is a system of selective direct participation by the planners, but with a major reliance on indirect measures as in the formulation of policy guidelines which departments implement.

87. It is felt that the planners should have the knowledge of what is happening concerning all these questions and should have a say when decisions are taken.

88. In one country the Minister of Planning is responsible both for preparing and implementing the plan. There is, however, a very strong division between the department that elaborates the plan and the department which controls its execution. The Ministry of Finance at present deals only with the budget as the National Bank is subordinated to the Ministry of Planning.

89. The main idea is that the same department that prepared the plans should be responsible for the control of its implementation and for the necessary adjustments. One serious difficulty in connexion with this control, which needs to be overcome, is that the financing of the plan is under the control of different agencies (Foreign aid through the Ministry of Planning, budget financed investments by the Ministry of Finance etc.).

90. The second important problem of implementation is that of control of private investment. The problem is dual again on the one hand to encourage investments; on the other hand to choose the projects outlined in the plan. Governments can encourage private investors through indirect methods such

as the discount rate and other credit facilities, tax exemption, tariff protection, land acquisition facilities, general facilities supplied by development corporations etc., or by direct intervention.

#### AGENDA ITEM VI

#### ECONOMIC PROJECTION FOR AFRICA

91. The subject of a long-term projection for Africa was introduced by the secretariat. Attention was drawn to Economic and Social Council Resolution (777) authorizing the Secretary-General to convene a meeting of experts, and also to General Assembly Resolution 1708 (XVI) requesting the Secretary-General to establish an economic projection and programming centre.

92. The aims of the global projections discussed by the meeting of experts which took place in New York in June 1962 were briefly stated. The essential objective of the centre is to carry out global projections for the whole world which will enable the consistency of the development targets of the various regions to be checked. They will in particular give indications on the magnitude of the effort which would be required to balance the financial assistance provided by developed countries and the needs of under-developed countries. They will also bring to light the problems resulting from the need to reconcile the various trade flows within a coherent matrix.

93. The secretariat, then proceeded with a brief discussion of the type of model it intends to adopt for carrying out the long-term projections for the region of Africa.

94. In the course of the discussion which followed, the meeting agreed upon the general characteristics of the model which, although of a rather crude and aggregative nature, yet was felt to be adequate for the derivation of an acceptable answer to the problem of the international consistency of the development plans (including the problem of balancing the supply of, and the demand for, international financial assistance). The meeting,

however, recommended that in checking the consistency of the projections of the various regions of the world, alternative assumptions regarding the values of the various parameters of the model should be adopted.

95. Various questions were put to the meeting by the secretariat; they are listed in paragraphs 5 to 12 of Document E/CN.14/CP.13.

96. Concerning the horizon of the projection period, the meeting agreed that although a twenty-year period appears satisfactory, care should be taken to proceed by successive projections for periods of about five years so as to take into account the acceleration of the rate of growth which could be expected from the implementation of the successive plans.

97. The meeting agreed that for the African region a sectoral model distinguishing, as a minimum, between agriculture, industry and services was extremely desirable since the rates of development of these sectors are bound to differ.

98. The meeting also agreed that the utilization of an over-all gross capital-output ratio applied to an estimate of the total capital stock would not be feasible at this stage in Africa, and that instead incremental capital-output ratios applied to investment during the projection period should be utilized. It was also pointed out that although the use of gross incremental capital-output ratios would avoid the complication of measuring the depreciation of capital, the method would have the disadvantage of ignoring the changing proportion of depreciation to gross investment characteristic of a developing economy.

99. In discussing the export demand function the meeting recognized that, as a first step towards the solution of this extremely difficult problem, exports should be broken down into different categories, such as primary products, consumer goods and capital goods. In the case of primary products attention was drawn to the work already done on the projection of world demand for certain primary products by FAO and other institutions.

100. Concerning the estimation of international financial assistance which could be made available to under-developed countries, it was considered that

projections should not be based solely on existing possibilities of assistance but also on requirements resulting from desirable rates of growth.

101. The question of income-elasticity of consumption was next discussed, and the question was raised as to whether sufficient data were available on which to base the necessary calculations. It was pointed out that although data on consumption by income groups were lacking for most countries, aggregate consumption data by categories of products were available in a number of them.

102. When discussing the possibilities substituting local production for imports of capital goods and consumer goods, which appear in the model as policy parameters, the meeting recommended that different values of the parameters should be introduced into the model to evaluate the effect of different policies of import substitution.

103. No agreement was reached on the most appropriate ways of grouping countries into sub-regions for projection purposes. It was felt that grouping by either geographical or structural characteristics each had its own advantages.

104. All participants expressed their willingness to help the secretariat by contributing information which would be of assistance in drawing up the proposed projection for Africa.

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