UNITED NATIONS

ECONOMIC
AND
SOCIAL COUNCIL

LIMITED

UNESCO/ED/CEDES/13
ST/ECLA/CONF.10/L.13
PAU/SEC/13
15 February 1962

ENGLISH
ORIGINAL: SPANISH

CONFERENCE ON EDUCATION AND ECONOMIC AND SOCIAL DEVELOPMENT IN LATIN AMERICA

Sponsored by the United Nations Educational, Scientific and Cultural Organization, the Economic Commission for Latin America, the United Nations Bureau of Social Affairs and the Organization of American States, with the participation of the International Labour Organisation and the United Nations Food and Agriculture Organization

Santiago, Chile, 5 to 19 March 1962

QUANTITATIVE AND QUALITATIVE EVALUATION OF MANPOWER IN RELATION TO EDUCATIONAL AND VOCATIONAL TRAINING REQUIREMENTS ARISING OUT OF ECONOMIC DEVELOPMENT

prepared by the

International Labour Office

INTRODUCTION

Since the economically active population is a major production factor and since for countries such as those of Latin America its full and efective use is probably - more than anything else - the key to their economic and social development, a sober and careful evaluation of manpower requirements and resources must form a necessary part of development plans. While this paper is concerned exclusively with the evaluation of manpower, this process does not take place in isolation; the data on manpower supply and demand must be analysed in close relationship with data on other economic factors. Manpower evaluation is the outcome of a comparison of data on resources and requirements, considered not only an over-all sense as part of a country's economy or as homogeneous concepts, but in terms of one or more branches of economic activity, with clearly defined occupations and more or less circumscribed geographical spheres of action. The purpose of manpower evaluation is not to determine present or future manpower requirements along inflexible lines prompted by a balancing, however systematic, of human and material resources. Basically, manpower evaluation is the analysis of factors which generate and characterize manpower requirements and those which prevent the available human resources from satisfying those requirements. It is not an end in itself but a rational process designed to show what measures should be adopted to promote a balanced ratio between manpower supply and demand in an essentially dynamic situation.

The above measures may cover a broad range of activities, some of them carried out directly by Governments as part of their economic and social development plans, others, consistenly with the over-all aims, by the private sector with the encouragement of Governments. Evaluation of manpower resources and requirements may, for example, reveal a shortage of skilled, particularly highly skilled, workers which at present impedes or delays development. The data obtained may serve as a basis for the broadening of programmes designed to satisfy the more urgent needs. Another aim is to determine future requirements which may result from economic and social development as planned or envisaged. Here too data are required

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in order to undertake or broaden educational and vocational training media designed to make available suitably skilled manpower when and where it can be used. Conversely, data on the maximum supply of skilled manpower, taking into account the resources available for education and vocational training, are essential in drawing up feasible development plans and establishing priorities.

In a broader sense, data on available manpower resources and more particularly on unemployment and under-employment are essential in order to define employment objectives within development plans, that is to say the number of job opportunities that will have to be created so as gradually to absorb the total available labour force into productive activities. Data on some regions or on certain sectors of society, e.g. landless farm workers, might help to indicate what priorities should be established in creating employment opportunities as a social aim. Moreover, in the case of major construction projects, the extent to which manpower is available in the areas selected may be an important factor in deciding whether methods involving the large-scale use of manpower or capital should be employed in the projects.

Since the Conference is mainly concerned with questions relating to education and vocational training, no attempt will be made in this document to deal with every phase of the evaluation of manpower resources and requirements, the discussion will be confined, as far as possible, to its application to the characteristics and scope of educational and vocational training programmes and to research sources and methods.

/PART ONE

PART ONE

Chapter I

WHY THE LATIN AMERICAN COUNTRIES MUST EVALUATE THEIR MANPOWER RESOURCES AND REQUIREMENTS

A cursory examination of the chief problems which characterize the manpower factor in the Latin American countries will help to a considerable extent, in spite of the risks inherent in generalizations, to demonstrate the over-all need for specific data on human resources and the demand therefor. It will also contribute to an understanding of the various research methods and aims which must be undertaken and of the urgent nature of that task in view of the present lack of basic information and, what is even more important, in view of the increasingly dynamic nature of the environment in which Latin American manpower will have to function within the next few years.

1. The disequilibrium between manpower resources and their use

While there is a lack of accurate data by which these trends as they exist today can more accurately be measured and compared, several factors make it clear that the rate of growth of productive employment in Latin America is generally not as rapid as would be desirable in view of the population growth, which tends to aggravate the problem of the use of human resources, considered as a whole and in terms of the changes in the employment structure produced by population pressure and other causes. The chief effect of the problem has not been to create conditions of outright unemployment although this has happened on a relatively small scale in a few cases. The biggest and most vital problem is that created by under-employment or partial utilization of the productive capacity of manpower.

By way of illustration a few characteristic facts may be mentioned here, such as the large number of farmers who work small plots of land and rural workers who have no land at all; the existence of many small

/family-type or

family-type or cottage industries whose productivity is low because of the methods they use; and the apparent disproportionate increase of employment in the services sector.

This is not the place to analyse these facts, although the last-mentioned deserves special consideration because it is relatively recent and is closely related to other pressing problems in Latin America such as the exodus from the land and urbanization. According to data for the period 1945-1955, virtually two-thirds of the increase in non-agricultural employment in Latin America was absorbed by the services sector. In some countries in the region this increase in manpower working in the services sector was chiefly due to the growth of a number of activities other than trade or transport. It has been, throughout the area, a common symptom of excessive concentration of manpower in activities of low productivity, usually in cities with an unduly rapid population growth. There is every reason to believe that population shifts from the country to the towns and from one economic sector to another, as they are taking place today, in no way dispose of the under-employment problem, but on the contrary, create dislocations whose repercussions are even more severe, particularly in the social field.

2. Demographic trends and their effect on the economically active population

The population growth rate is higher in the Latin American area than in any other part of the world. The population of Latin America doubled between 1925 and 1960, when it reached an estimated total of 205 million. Conservative estimates indicate that the population may well exceed 300 million by 1975,[1/] which implies an annual growth rate of about 2.8 per cent. Birth and death rates naturally vary from country to country

1/ See United Nations, Department of Economic and Social Affairs, The Future Growth of World Population, Population Studies No. 28 (New York, 1959), pp. 31-37, and Economic Commission for Latin America, Estudio sobre la mano de obra en América Latina (1957), mimeographed document in Spanish only, pp. 9-11.

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and thus the age structure of the population will be different in the different Latin American countries. This is important from the standpoint of the ratio between the population of working age (15 to 60) and the population as a whole. If it is assumed that there will be no major reduction in birth rates in the fifteen-year period between 1960 and 1975 and that the death rate may well continue to drop, there will probably be a higher proportion of persons under 15 and over 60 years of age, and more of the former than the latter, particularly in countries with a relatively high birth rate. On the other hand, in Argentina, Chile and Uruguay, countries with relatively low birth rates, there is a fairly high proportion of old people compared with the other countries in the region, as well as a lower percentage of inhabitants under 15 years of age.

In absolute terms, data for the region as a whole indicate that in the aforementioned period - 1960-1975 - the population under 15 years of age will perhaps increase from 83 million to 130 million, that between 15 to 59 probably from 109 million to 160 million (although, as shown above, their share in the total population will drop from 54 per cent to 52 per cent) and the population over 60 years of age from 12.7 million to 20 million.

3. The quality of manpower

To focus attention once again on the quality of the manpower available in Latin American countries and on the problems it creates, it should be pointed out that for a variety of reasons, including illiteracy, the low educational level of the literate population, lack of vocational training programmes, the relatively brief duration and the as yet fairly limited scope of industrialization and diversification of economic activity, manpower in Latin America comprises a very small proportion of skilled workers of the categories and levels which will inevitably have to play an essential role in economic development. The shortage of trained workers is now a problem, varying in degree from country to country and depending

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upon the area or industry concerned in each country; this is something of a paradox in view of the fact that, as mentioned earlier, there is a plentiful supply of manpower still under-employed in the agricultural, industrial and services sectors. As long as the economy of the Latin American countries maintained a vegetative rate of growth and was not, obliged, as it is today, to step up its rate of growth in order gradually to improve the living conditions of a steadily increasing population, the need for skilled manpower could be met through improvisation, by making the most of the undoubted adaptability of Latin American manpower and the more or less thorough training provided at universities and secondary training institutions. In other cases, the demand was met through the immigration of skilled manpower, chiefly from Europe. Until a few years ago such immigration constituted, for a few Latin American countries, an abundant source of manpower, including a large proportion of skilled manpower. It might be pointed out, incidentally, that this in itself may have contributed in some measure to the lack of proper attention to the training of Latin American manpower. During the past few years this source of skilled manpower has dwindled, and special training centres have had to be set up in the countries of origin, such as Spain and Italy, for unskilled manpower prepared to emigrate.

4. Requirements deriving from the manpower situation

Under the conditions described, the productive absorption of this growing working force and, therefore, an improvement in its economic and social conditions can only be achieved through economic development and its ability to create employment opportunities. This requirement is related to the equally ineluctable need for the expansion of educational and vocational training media which would make possible the more effective participation of the human factor in the effort to raise total production and productivity.

Data on the quantitative and qualitative supply of and demand for manpower at present and in the foreseeable future, in conjunction with other economic data, are most important for the purpose of formulating,

/directing and

directing and applying economic development policy and the specific educational and vocational training programmes of the Latin American countries. The value of such data is particularly obvious for the following types of decisions, although not limited to them:

(a) Determining employment objectives which it is hoped to achieve through the various phases of the economic development programme including, for example, consideration of the relative merits of projects and methods which call for a more intensive use of manpower or of capital;

(b) Determining reasonable production targets, bearing in mind present or estimated manpower resources, these being considered from the point of view of quantity and level of skill;

(c) Determining the educational and vocational training objectives through which the proposed economic development can be achieved, including decisions which require the expansion or adaptation of existing methods for primary, secondary and university education and for the professional training of various categories of executive staff for industry, as well as supplementary training programmes for employed or unemployed workers.

/Chapter II

Chapter II

TYPE OF DATA REQUIRED IN ORDER TO DETERMINE EDUCATIONAL AND VOCATIONAL TRAINING REQUIREMENTS

Manpower data required for educational and vocational training purposes are those relating to the current supply and demand position and the corresponding projections, not only in global figures, but mainly so as to permit of comparison between geographical areas, brances of economic activity, trades, and required levels of education or training.

1. Data on current conditions

While many of the educational and vocational training measures taken to maintain a proper balance between the supply of and demand for manpower of various kinds will only produce results over the long term, as in the case of the training of high-level scientific and technical personnel, there are others for which much shorter term objectives may be set. Among these mention might be made of the establishment or expansion of supplementary professional training courses for executive or supervisory personnel, the organization of programmes to be carried out inside or outside an enterprise to improve the technical skill of workers, and the organization of intensive vocational training courses to train adults as skilled workers. Another immediate objective might be the training of teachers and instructors for the same purpose or the reduction, through adequate measures, of wastage among persons attending higher level courses in some specialized fields in which a shortage of manpower exists.

These reasons alone would justify the task of compiling data on present manpower supply and demand and the skills required in each case. The data compiled might also make it possible, under certain conditions, to take measures to correct incongruities such as the excessive training of manpower for jobs or in specialized fields for which there is a lack of demand on the labour market; this is even more serious if, at the same time, training facilities for categories of workers essential to development are limited. In any event, data on current conditions must be the

/starting point

starting point for estimating future short-term or long-term requirements and resources. In fact, unless the data on resources adequately reflect current conditions, subsequent estimates for determining future requirements will probably be unreliable.

The main types of data on current manpower supply and demand conditions should be determined in the light of the following main considerations:

(a) The trades in which there is a shortage of manpower, as indicated by the impossibility of obtaining staff with the required skills, should be determined. This should cover not only the volume of unsatisfied demand but also the specific over-all educational and vocational training requirements called for in each trade;

(b) Moreover, data should be obtained through which the manpower now available can be evaluated from the standpoint of skill and general educational level for the purpose of determining:

(i) Supplementary educational and vocational training requirements;

(ii) Whether existing educational and vocational training programmes require thorough revision in order to adapt them to the actual characteristics and requirements of the labour field:

(iii) The existence of any disequilibrium with respect to the surplus or shortage of educational and training media in the different branches of economic activity, e.g. the limited capacity of programmes for the training of agronomists, veterinarians, laboratory technicians, plant supervisors and instructors and workers skilled in production processes, as against the excessive number of persons educated in fields leading to jobs which require only part of the qualifications provided in schools.

/(c) As

(c) As an essential complement to the aforementioned data, information should also be methodically compiled on the functions to be performed in the trades for which vocational training is to be provided in order to ascertain the abilities, knowledge and skill needed by the workers in each trade. This calls, in turn, for determination of the methods and procedures used in the work as undertaken in different establishments and regions, and for constant study of technological changes. In fact, as indicated in the report of an expert meeting on employment as an objective of economic development, there is a considerable difference in the cost and duration of vocational training not only for workers at various levels of skill as, for instance, between an engineer and a manual worker, but also for workers engaged in industrial production and employees in various jobs, including workers who have the same trade but are employed in different jobs and have a different level of output and efficiency. 2/

2. Estimating future resources and requirements

The reasons for which projections should be made in this field and the length of the period which such estimates should cover should be considered from different standpoints. In the first place, educational and vocational training programmes are usually established for a long period. In the case of scientific, professional, public administration and company management jobs and others requiring higher-level qualifications, education and training may be compared to long-term investment; this applies also to skilled laboratory assistants and other types of technicians. Moreover, additional time is required in the stages preparatory to the training itself, such as the training of the teaching staff, the preparation of programmes and the provision of material, and data on future requirements may possibly lead to changes in present training media and programmes or to the creation of entirely new ones. With respect to the last mentioned point, an important factor is the selection of the most suitable sites for the establishment of teaching or vocational

2/ See International Labour Office, Employment as an objective of economic development. Report of an expert meeting, mimeographed document, Geneva 1961, pp. 142-143.

/training centres.

training centres. In this selection account must be taken, among other factors, of the geographical distribution of the population, the different branches of economic activity and means of communication.

/Chapter III

Chapter III

SOURCES AND METHODS FOR THE EVALUATION OF MANPOWER

In view of the aims of the evaluation of manpower resources and requirements, the data used for this purpose must come from various sources, and must be obtained by different methods. Even if it were theoretically possible to insist on all the data considered necessary being sent to a given body, the complicated and heavy administrative work involved would rule out such a system. Hence the need for compiling and comparing data collected for different purposes by different bodies, and ensuring the use of uniform criteria and classifications. It may also be necessary to establish machinery for conducting direct surveys.

The present chapter describes some of the main sources that can be used in conjunction with the background data or reference material supplied by censuses, vital statistics and migration data. Annex I gices a more complete synopsis of the sources and the data that can generally be obtained therefrom. The analysis made here of certain sources concentrates on their special features, without entering into the question of their present use in Latin America. Any purely administrative defects can be corrected by the means available to Governments, including technical assistance, while the inherent merits and defects of a particular source or method should be taken into account before adopting any plan or programme for evaluating manpower requirements and resources.

1. Evaluation of present requirements and resources

The following list of sources of data on existing manpower resources is not exhaustive, but it includes those generally most capable of contributing to the purposes of a broad and prompt evaluation of present resources and requirements.

(a) Employment service

One of the main functions of the employment service is the regular analysis of the labour market. If the service operates efficiently, and covers a sufficiently large geographical area and a significant proportion of economic activities, it is always in a position to provide a considerable

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amount of useful information. In fact some of these data can be collected only through the close contact with employers and workers that is maintained by the employment service as an intrinsic part of its regular activities.

The officials of this service not only interview those seeking work; they also maintain a regular programme of visits to employers, one of the aims being to obtain information about changes in the volume of employment and about the qualifications required in specific occupations. Because of the nature of its placement activities, the employment service has access to non-statistical data on factors that influence the relation between labour supply and demand, for example, recruitment problems, the relative difficulty of finding suitable employment opportunities, and other factors that upset the balance between supply and demand when there are workers who appear to be qualified to fill the available openings.

The functions of research and analysis with respect to the structure of employment that are usually given to the employment service constitute the main source for the drafting of a standard national system of classification of occupations, which is an indispensable instrument for any manpower information programme.

It should be pointed out that the area covered by the operations of the employment service, in those Latin American countries where it has been established, is still very limited, from the standpoint both of the territory covered and of the economic branches or occupation groups included. Thus although this source may be comparatively well supplied with data on certain industrial and commercial occupations, it may be deficient in absolute terms in information on the labour market in the construction industry, for example, or in agriculture, or in occupations requiring a high level of qualification. This situation may result either from the absence of labour exchanges outside the large towns, or from the failure to use the service, in certain branches of activity and occupations, on the part both of the workers, because they have a mistaken idea of the nature and aims of the service, and of the employers, because they recruit their employees by other means.

/(b) Public

(b) Public posts left vacant for want of qualified candidates

The experience of government offices in staff recruitment problems may provide another source of data on the supply of certain kinds of labour. The collected observations of government personnel offices or civil service commissions can provide a useful guide, above all with respect to staff in scientific and other categories for which a high level of qualification is required, for technical staff, and for supervisory staff at the intermediate level.

(c) Labour surveys in employing establishments

The main value of labour surveys in employing establishments is that they are very useful in providing knowledge of the existing structure of employment by occupation, the level of education and vocational training of those employed in the various economic activities, and also any existing or possible future shortage of trained staff in particular occupations. Such surveys may also constitute a source for short-term forecasts of changes in employment, their value is being still greater if they are taken in conjunction with other indicators of the trend of economic activity in each branch.

The qualitative analysis made possible by these inquiries is of the utmost importance in relation to education and vocational training, since it can show in what fields intensive vocational training or the training of instructors is required, and what should be the content and the degree of training in the various instances. The usefulness of the data gathered through inquiries of this kind depends largely on the method used in conducting them. Since the correct identification and analysis of the occupations concerned is work calling for the use of standard classifications and criteria, it is generally better to collect the data by means of visits to representative employer firms by properly instructed staff rather than to restrict the work to despatching and receiving the questionnaires by post. The success of such surveys is naturally also influenced by publicity given to its aims and methods, support from the employers' organizations, and choice of suitable dates.

/(d) Various

(d) Various sources for workers on own account

Labour surveys in employing establishments leave uncovered a wide range of activities, namely, the heterogeneous groups of workers on own account, for which it is of interest to know the specific requirements as to education and vocational training. This is usually the situation of many workers in agriculture, small trades and industry, certain liberal professions and miscellaneous services. As might be expected, estimates of labour supply and demand in these categories raise a number of special problems.

Although the supply is reflected in the general population censuses and in agricultural and industrial censuses, resort must be had to a number of miscellaneous sources in order to supplement the information for the intervals between censuses, such as statistical sampling surveys of the economically active population, the public registers of professional workers, the lists of members of professional associations, the lists of taxpayers and other similar administrative registers. Comparison of the supply with the actual or potential demand now or in the near future can be made on the basis of a given economic hypothesis for the various branches of activity. In specific cases demand can be estimated, allowing for some margin of error, in terms of the size of the population requiring the services concerned; this need can be expressed as a percentage of the total population. However, a standard rate cannot be used for all countries, since in each case such factors must be considered as the age structure of the population, the level of service considered satisfactory, and the extent to which, for example, functions normally performed by doctors are delegated to other professional workers.

(e) Sources for trained workers whose qualifications are not being used

Quantitative and qualitative evaluation of human resources whould not be complete or trustworthy if it neglected the residual manpower, sometimes substantial, represented at any given moment by unused skills in the labour force, either through unemployment or through the employment of

/workers in

workers in occupations other than those for which they have been trained, or by emigration. In certain occupations requiring high qualifications it is not difficult to compare data for those trained with those for the active labour force allowing for the normal losses through death or retirement, on the basis of data on graduations, entries in the public registers concerned, and information from the relevant professional associations. For other categories of workers use can be made of general or sampling surveys on the work actually being done by those who graduate from the ordinary teaching or vocational training establishments.

2. General evaluation of future needs and resources

The formulation of an educational policy consistent with the aim of reconciling the function of the school with the labour world and with the specific requirements of the economy undergoing development calls for a thorough and sustained knowledge of employment conditions and trends in the various branches of activity. Up to now it has not always been possible, in drafting economic development plans, to pay due regard to either the quantity or the quality of the human material likely to be required in conjunction with the investment in other resources, and this failure can only be remedied if methods of forecasting these labour requirements with reasonable accuracy can be worked out and applied.

Estimating future labour requirements and resources can be regarded from three standpoints: requirements in relation to economic development, requirements in relation to replacements, and the determination of future demand.

(i) Manpower requirements in relation to population and rate of development

As stated above, for certain types of labour the demand can be estimated as a proportion of the total population, although the actual percentage depends on a number of factors such as the age structure of the population, the level of service considered satisfactory, and the extent to which certain functions normally considered as belonging to the occupations in question are performed by other workers.

/Certain industrialized

Certain industrialized countries that have fairly extensive statistical series available have been able to conduct studies to determine the relation between the number of engineers, for example, and the number of other workers, mainly at the intermediate level, in different industries. In other cases ratios have been established between the number of engineers and the investment of capital per worker, or between the number of engineers and the output per worker.

Another useful indicator of the broad requirements of trained personnel by type of occupation are the composition patterns of the various industries with respect to the percentage of the total number of workers represented by the various occupations or groups of occupations. However, in applying this method account must be taken of the variations arising from the different size of the firms, the relative productivity of manpower and the nature of production, including production methods and the degree of mechanization.

(ii) Manpower needs in relation to replacement

Although the estimates referred to can give an idea of the future volume of employment of personnel with specific qualifications in the various industries and occupations, indices and projections of the net growth of the activities are not a sufficient basis for estimating the number of persons who should possess these qualifications. It is also necessary to take into account the number of persons who have to be replaced because they cease working for such reasons as death, disability, retirement, or change of occupation. Although in some industrial countries it has been possible to calculate replacement rates by type of occupation there are a number of reasons why it cannot be assumed that this type of specific rule can be worked out easily in such countries as those of Latin America, whose statistical systems cannot yet provide the basic data required. Thus for the moment resort must be had to the general indications of experience as to the length of the active working life, the incentives to retirement at a relatively early age, and other considerations, including mobility. In many Latin American countries it is customary to assume an annual replacement rate of 3 per cent, although the factors listed above have obviously not all been taken into account

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in adopting this figure. This approach does not mean that the procedure is regarded as satisfactory, but in the absence of any immediate alternative that would be more accurate, it may be hoped that evaluation of experience gained over a certain number of years will make it possible at a later stage to adopt more solidly grounded rates that could be applied to the various branches of economic activity and to specific occupations.

(iii) Determining future supply

Because of such factors as the growth of population and changes in its distribution by age groups and economic branches, technological changes, mechanization, and increases in productivity resulting from education and vocational training, it is impossible to estimate the future labour supply by projections based on the present structure of the economically active population by occupations. Consequently forecasts of the supply of workers with particular qualifications must be based mainly on data showing the numbers completing courses in educational vocational training establishments and programmes of all kinds, and on the proposed expansion of such facilities. Information on training abroad, and on emigration and immigration, can be used to supplement these data.

3. Assessment of requirements in relation to specific economic development plans

One of the first problems encountered, and not the least important, in determining the demand for manpower in terms of the plans for future development, is that the period covered by the plans rarely exceeds five years, whereas, as previously stated, the training required for many kinds of specialist work covers a longer period. It should also be borne in mind that education and training plans require certain prior conditions for their execution, and that teachers and instructors also have to be trained.

However, there are two comments to be made. First, in some cases it may be possible to increase the number of persons qualifying in particular specialist fields within a relatively short time by, for

/example, merely

example, merely reducing present rates of wastage in the higher classes, or in other cases by intensive training. Secondly, the assessment of manpower requirements may be facilitated by experience acquired in the actual execution of formal economic development plans. This experience may demonstrate that the execution of a plan is hampered and delayed by the shortage of certain categories of manpower, or facilitated by the existence of others.

Furthermore, it must not be overlooked that multi-purpose education and vocational training, and other conditions that may encourage manpower mobility, may be factors that facilitate fairly rapid adjustments in the supply of manpower with particular skills. The fact is that assessing future needs in education and professional training is particularly difficult in the absence of a definite and specific economic and social development policy; but this underlines the fact that the assumptions on which any sound economic development plan is based must take account, as it proceeds, of the supply of skilled labour.

However, when economic development plans have to be adopted without this prerequisite, and the plans are embodied in specific investment projects by economic sector or branch, it is not difficult to identify the occupations where there will be a demand for trained staff. If, for example, the industrial development plans include such particular chemical industries as paper, explosives, tanning extracts, fertilizers, etc., it may perhaps be concluded, in view of the size of the market and the diversification of the activities concerned, that the categories of manpower required should include, among the highly skilled personnel, experts on cost accounting, industrial efficiency engineers, statisticians to control quality, electric plant engineers, chemical engineers and industrial chemists. Manpower with intermediate-level training might include in such cases, installation mechanics and fitters of chemical equipment, chemical still operators, draughtsmen, installation and maintenance electricians, plumbers, laboratory technicians and technicians in charge of chemical processes.

/Estimating the

Estimating the volume of manpower by occupations will require a combination of the methods and sources referred to in the present document, according to circumstances. Generally speaking, in the case of existing activities the basis could be the present structure of similar enterprises, with due regard for possible technological advances. In addition it should be possible in some cases, on the basis of studies such as those already made in relation to vocational training programmes in Latin America, to determine the approximate ratio of technicians to engineers, for example.

/Chapter IV

Chapter IV

ORGANIZATION AND CHARACTERISTICS OF MANPOWER EVALUATION PROGRAMMES

1. Need for continuity in the evaluation of manpower

Every programme of this type must be continuous, so that comparisons can be made, trends established and forecasts checked and corrected. This continuity can be achieved only by the establishment of a mechanism for co-ordinating the work of collecting data from the various sources, compiling and interpreting them and ensuring their prompt and regular distribution to all users. Among the major tasks involved are those of standardizing definitions and concepts and working out the appropriate standard classifications. The adoption of international standards as a guide might facilitate the preparation of such classifications and make the national and international comparability of data feasible.

2. General principles for the establishment and administration of a manpower evaluation programme

The administrative organization of the various programmes or government services concerned with labour varies from one country to another, and no hard and fast rules can be laid down in this connexion. Experiences suggests, however, that the application of the following principles, among others, may contribute to the efficient organization of the programme in any country:

(a) The administration of the programme should be in the hands of a labour information bureau working in co-operation with a consultative committee;

(b) The consultative committee should be of tripartite in character, comprising representatives of the various government departments concerned, of the workers and of the employers;

(c) The government representatives on the consultative committee should have the status of heads or acting heads of their respective departments, i.e., they should be officials empowered to take or propose decisions affecting the policy of the departments in question;

/(d) Manpower

(d) Manpower analysis and labour market functions should be technically and administratively co-ordinated, and duplication of functions avoided;

(e) The programme should have a legislative basis ensuring the provision of budgetary resources and regularity of reports.

3. Place of the programme within the administration

The place in the administrative structure assigned to the agency responsible for co-ordinating manpower evaluation functions may be determined by one or more of the following circumstances: the content and objectives of the manpower information programme at the time of its initiation; the relative importance in government programmes of the various bodies responsible for the different aspects of labour policy; the existence of an employment service, and the status of its development and organization; the existence of a national economic development planning authority; and budgetary or administrative considerations.

Apart from the national development planning authority, which sometimes undertakes the evaluation of the country's resources, including manpower, on its own account, the branches of administration in which labour information units are to be found in different parts of the world include the central office of statistics and censuses, the labour research and statistics bureau and the national employment service.

4. Functions of the programming agency

Whatever the position within the administrative services occupied by the central agency responsible for the programme of evaluation of manpower requirements and resources, its functions should include the following:

(a) Identification of those using the data - as, for instance, economic and social development authorities; primary, secondary, university and vocational education authorities; and other public and private agencies - and definition of their respective requirements, including the form and periodicity of data in each case;

(b) Determination of what data the various sources possess, and co-ordination of the requisite measures to ensure that data are regularly and systematically compiled and transmitted, in accordance with uniform

/classifications, definitions

classifications, definitions and criteria. Such a programme entails co-ordination with sources like the statistics and census department, social security institutions, industrial record offices, labour inspection bureau, government personnel or civil service offices, education and vocational training authorities, universities, public health authorities, employers' and workers' organizations, scientific and professional associations, the armed forces and other public or private sources of information;

(c) The development of supplementary activities relating to research and the compilation of data on special problems, through surveys or other procedures; and

(d) Analysis of the information thus gathered and prompt distribution of the data to the users.

5. Membership and functions of the consultative committee

In principle, the members of the consultative committee should be representatives of those agencies which constitute the main sources of information directly or indirectly bearing on the evaluation of manpower resources and requirements, and should also include representatives of the agencies which use such information. As regards the government sector, these representatives might include officials from the central economic development planning authority, from financial institutions collaborating in planning activities and from the ministries and other public departments concerned with education, finance and economic affairs, statistics, labour, agriculture and agrarian reform, commerce and industry, migration and public works. The non-governmental sectors might be represented by members of employers' associations, chambers of commerce and industry, professional association and trade unions.

The duties of the consultative committee would be to advise on the content of the programme, review the activities undertaken and the progress made, assist in the development of potential sources of information and facilitate administrative and technical co-ordination.

/PART TWO

PART TWO

Chapter V

EVALUATION OF MANPOWER: CURRENT SITUATION IN LATIN AMERICA

In the present chapter an attempt will be made to summarize the activities carried out in the Latin American countries in relation to data on human resources, whether for general purposes or with the specific aim of determining supply and demand in respect of various types of manpower at the different levels of skill, from the standpoint of vocational training requirements. For the reasons set forth above in connexion with methods of evaluating resources and present and future needs, it can readily be understood that virtually all basic data on the total population and the economically active population, as well as any that may indirectly shed light on the utilization of manpower, are of interest for the purpose of determining education and vocational training requirements, although much of the information in question needs to be brought up to date, improved or completed before it can be turned to account.

1. Censuses

A certain amount of general population data exists in the Latin American countries, covering, for example, total population figures and distribution by geographical areas, age and sex, and level of education; and data on the economically active population, broken down by branches of economic activity and by occupation, are also available. The main source of these background data is constituted by the censuses taken in almost all the countries of the region in or around the year 1950, under the so-called Census Programme of the Americas, designed to promote ten-yearly operations of this type. Population estimates for the intervals between one general population census and the next are formulated fairly regularly, and demographic projections exist for each country and for the region as a whole, including those published by the United Nations

/Department of

Department of Economic and Social Affairs,[3] which relate to the growth of the world population up to 1975. Thanks to the experience acquired in recent years, and above all to inter-American co-operation in the field of censuses, especially as regards methods and training of personnel, it seems likely that the findings of the censuses carried out in almost all the countries of the region in 1960, 1961 and 1962 will afford a more punctual, complete and accurate supply of data on the basis of which a clearer idea of the existing situation can be formed and estimated trends verified. Almost all the censuses which have been or are to be taken in the Latin American countries in the course of the three years referred to include data on population, housing and agriculture.[4]

The minimum tabulation programme recommended for the Census of the Americas comprises the total population and its distribution by place, sex, age, marital status, birthplace, legal nationality, literacy, level of education, school attendance, economically active and non-economically active population, occupation, branch of economic activity, occupational category and census household.

It should be pointed out, on the other hand, that data on the distribution of the economically active population by branches of economic activity and by occupation are still, as a rule, published with a fairly long time-lag, which deprives the information of some of its value. Apart from this drawback from the standpoint of the analysis of the current manpower situation, census data by their very nature fall short of the ideal degree of accuracy in respect of the classification of occupations; nor do they reflect the present or projected demand for manpower.

3/ See The Future Growth of World Population, Population Studies, No. 28. United Nations Publications, Sales No: 58.XIII.2, New York, 1959.

4/ According to reports issued by the Inter-American Statistical Institute (IASI), by June 1961 eleven American countries had taken their population and housing censuses, under the Census of the Americas programme for 1960, eight of them had also carried out their agricultural censuses.

/2. Special

2. Special surveys in employing establishments

The shortage of data on skilled manpower in Latin America is most acute in the industrial sector, and in order to remedy it, even if only in part, some countries have carried out special surveys which the prevailing shortage of resources and time has almost invariably restricted to specific branches of economic activity and, within these, to employing establishments selected for their size and whereabouts. One of the principal aims pursued is that of ascertaining the structure of employment and vocational training requirements. Surveys of this type have been carried out in recent years in Argentina, Venezuela, Peru, Colombia and Costa Rica, with the technical assistance of the ILO. A series of surveys with the same end in view is at present being conducted in various branches of economic activity in Chile, and the Ministry of Education in Paraguay decided to organize another of the same kind in 1961, through the Inter-American Co-operative Service of Education.

A survey was undertaken in Argentina in 1956 to ascertain skilled manpower requirements in industry. It was designed in such a way that the information collected might include data which would give a relatively accurate picture of the structure of industrial labour in Argentina and the significance of the skilled manpower deficit which was affecting the country's industry at the time. The survey was carried out for manufacturing and a few other categories of industry, in the Federal capital and in six provinces. In 1958 and 1959, other surveys with similar objectives were conducted in Argentina, with a view to completing and bringing up to date some of the information, and establishing comparisons.

The report published by the Economic Commission for Latin America on the economic development of Argentina in the agricultural and industrial sectors[5/] contains an annex entitled "Investment in technical training" which incorporates estimates based on the above-mentioned partial manpower

5/ See Economic Commission for Latin America, Análisis y proyecciones del desarrollo económico: V. El desarrollo económico de la Argentina. Vol. II. Los sectores de la producción: (a) Agricultura; (b) Industria, United Nations Publication, Sales No.: 59.II.G.3, Mexico City, June 1959.

/survey carried

survey carried out in 1956; on data relating to the requirements of some Latin American countries in respect of foreign skilled labour, obtained by a joint mission of the ILO and the Inter-Governmental Committee for European Migration (ICEM) also in 1956; and on the findings of another survey undertaken by ICEM in 1957 for the Italian Government, to investigate the skilled labour requirements of the metallurgical industries and of those manufacturing electrical machinery and appliances. These findings were supplemented by means of a special survey carried out by the ECLA secretariat among engineers and industrialists in June and July 1957. On the basis of all the foregoing data, it was estimated that the shortage of skilled labour represented about 25 per cent of the contingent of skilled workers in the motor vehicle and machinery industry; 20 per cent in the case of the wood and metal (excluding machinery) industries; 10 per cent in the manufacture of electrical machinery and appliances; and 5 per cent in printing and publishing and in the chemical products, food and beverages, leather and miscellaneous industries. The study also presents a projection of aggregate re uirements up to 1967 and an estimate of the necessary investment in training.

In Colombia, in 1958, the Manpower Division of the National Apprenticeship Service (SENA) carried out, with the technical assistance of the ILO, the first of a series of surveys of employing establishments. This survey covered a large part of the national territory, and its purpose was to ascertain skilled labour requirements in qualitative and quantitative terms, as well as to define the annual demand for new skilled workers on Colombia's labour market generated both by retirements from economically active life and by the expansion of productive activity.[6/] The study made it possible to calculate not only the approximate number of workers that should be trained for occupations in various branches of economic activity (excluding agriculture), but also a definite order of priorities for the training of manpower in the various categories and special fields. Later, SENA extended this research to the agricultural

6/ See National Apprenticeship Service (SENA), Informe sobre necesidades de mano de obra calificada en Colombia, Bogotá, January 1959.

/sector, and

sector, and its Manpower Division is also undertaking various other studies in connexion with the planning and implementation of the vocational training programme.

Elsewhere, other research has been carried out with a view to elucidating special aspects of the vocational training problem, cases in point being the surveys conducted in Brazil and Mexico.

In 1959, the Research and Statistics Department of Brazil's National Industrial Apprenticeship Service (SENAI) embarked upon a study of 175 skilled occupations in industry, in the north and north-east of Brazil, with a view to the adaptation of relevant training programmes to the requirements of local industry. The data sought comprised estimates of the number of workers employed; operations involved in each occupation and the physical and mental ability needed for the work; experience required; length of training, whether in the form of courses at special centres of in-service training; and effects of technological progress on the occupations studied.

In a survey of employment of technical personnel in specific branches of the Mexican metal-transforming industry, carried out from 1955 to 1957 by the Banco de México, an attempt was made to determine, among various other factors, the existing deficiencies in the formal training of the groups of workers designated as técnicos profesionales (technical experts). In the textile industry, where the great majority of the university-level professional staff are textile and chemical engineers, the most significant defect revealed by the survey was lack of experience in handling machinery and equipment. Next in importance came insufficient practical laboratory training and ignorance in the field of personal relations. Other shortcomings that cropped up relatively often were inadequate knowledge of working methods and calculation of production costs, and, in some cases, want of training in the preparation of projects. Similar deficiencies, although with some variations, were noted in the other industries covered by the survey.7/

7/ See Banco de México, S.A., Industrial Research Department, El empleo de personal técnico en la industria de transformación, Mexico City, 1959.

/Some of

Some of the defects in professional training programmes revealed by research of this type can be corrected by means of appropriate changes in curricula and teaching methods. Others suggest that it is sometimes necessary to train new types of specialists, as, for example, cost accountants.

3. Other sources of data on the labour force

The collection of manpower data in Latin America at the present time is largely a problem of co-ordination an improvement of the statistical work carried out for different purposes and in different spheres by government institutions and services, parastatal agencies like the social security institutions, and non-governmental agencies such as the employers' and workers' organizations, university research institutes and other similar centres; and it also calls for direct and systematic studies, including manpower surveys in employing establishments.

In some Latin American countries, in recent years, the first steps have been taken towards the establishment of continuing information programmes relating to manpower and the labour market, in which due importance is attached to the need to formulate standard criteria and instruments - such as a standard classification of occupations based on properly-checked definitions of these - and to the analysis and co-ordination of the various sources of data. Nevertheless, even in countries which have made considerable progress as regards industrialization, there are still sometimes many, sometimes few, sources from which it is or might be possible to obtain fragmentary data that are neither compiled or analysed in co-ordinated fashion. Many of the sources do not collect manpower data in accordance with a regular programme, either because such information is not considered essential for the agency concerned, or for want of sufficient resources, while in other cases tabulations are made with an unduly long time-lag.

In very few countries of the region are indices of employment and hours worked compiled on the basis of establishment statistics, and where they exist they cover only certain categories of workers and specific branches of activity and parts of the country. Another procedure for

/the collection

the collection of employment and unemployment data consists in taking statistical samples of the labour force, like those used by the Institute of Economics of the University of Chile.

Social security systems whose fields of application extends to sizable portions of the economically active population may constitute a valuable source of data on employing establishments and on the level and structure of employment, provided that the necessary measures are adopted to speed up their statistical procedures and ensure a degree of comparability sufficient to enable real fluctuations in employment, for example, to be distinguished from those reflected in the data as a result of legislative or administrative changes. The usefulness of this source is not confined to the provision of employment data. In the case of the initial manpower surveys recently carried out at San José, Costa Rica, the records of the Costa Rican Social Security Bank furnished information of the greatest value for the purposes of drawing up the list of establishments covered by the survey.

In those Latin American countries where an employment service is currently in operation, its activities, as a general rule, cover only a small part of the territory and of the labour market. Consequently, the statistics of vacancies transmitted to the service by employers and the registers of applicants for employment reflect neither the magnitude nor the composition of real manpower demand or supply. In the particular case of the Peruvian Co-operative Service of Employment, however, the development of the manpower and labour market information function and the initiation of this activity in Peru's principal labour markets is being given precedence even over the establishment of employment bureaux. On the basis of this information programme a quarterly bulletin is published, containing numerical data and an analysis of fluctuations in the volume of employment, wages and working hours in Lima, Callao and Balnearios, as well as of employment fluctuations in other labour markets.

/4. The situation

4. The situation in brief

Much still remains to be done with respect to the establishment of machinery and the application of practical methods for the constant evaluation of manpower requirements and resources, although the experience of some countries is certainly encouraging, and it is not too much to speak of real progress if allowance is made for the total lack of activities of this type up to a few years ago. The fact is that most of the Latin American countries are still at a very early stage in the development of regular programmes of compilation and analysis of the manpower data obtainable from a variety of sources. The obstacles to the solution of this problem are of different kinds. One of them lies in the intrinsic weakness of the region's statistical systems; another has to do with the lack of specialists, and a third with the shortage of funds. Now that the decisive importance of the human factor in the Latin American countries' development plans has been recognized, especially in resolutions adopted at the seventh conference of American States members of the ILO (Buenos Aires, April 1961), and in others adopted at the eighth and ninth sessions of ECLA (especially resolutions 149 (VIII) and 192 (IX)), it seems likely that Governments will make an effort to overcome these difficulties. This aim will undoubtedly be furthered both by specific technical assistance in the organization of programmes and the training of personnel, and the type of aid obtainable from the Advisory Groups organized by ECLA and the United Nations Bureau of Technical Assistance Operations in Latin American countries, the purpose of which is to help to establish a stable mechanism for the formulation and implementation of economic development plans within the structure of the Government.

/PART THREE

PART THREE

Chapter VI

INTERNATIONAL ACTION

1. Activities of the United Nations and certain specialized agencies

The consensus of world opinion on the close relationship between population and manpower questions on the one hand and economic and social development on the other has given rise to various research and technical assistance activities carried out at the international level by inter-governmental organizations and private foundations, and to the adoption of important resolutions by these bodies. Among the population studies undertaken, mention may be made, for purely illustrative purposes, of those issued by the United Nations Department of Economic and Social Affairs which include, in the series entitled Population studies, demographic projections by countries up to 1975, based on maximum, intermediate and minimum estimates. Among the many basic economic studies in existence, mention may be made of the series entitled Analysis and projections of economic development, covering several countries, prepared by the Economic Commission for Latin America. In addition, the Organization of American States has contributed towards the adjustment of norms applicable to productivity censuses and studies, and UNESCO has helped to determine the need for education in general and for personnel with scientific training in particular, as well as to extend and improve primary schooling in Latin America. Other international bodies, such as the United Nations Food and Agriculture Organization and the World Health Organization, are undertaking activities within their respective provinces that in certain respects are related to the determination of personnel requirements in particular categories.

/2. Activities

2. Activities of the International Labour Organization

The work of the ILO comprises research and assistance with respect to such matters as employment policy and aims and vocational training; manpower evaluation and the preparation of labour market information programmes; the organization of employment services; the classification of occupations; manpower statistics; productivity, etc. Technical assistance missions from the ILO have been working in British Guiana, Chile, Colombia, Cuba, Ecuador, Guatemala and Peru on manpower statistics, including employment data. The following examples may be given of technical assistance to Latin American countries in recent years in connexion with the organization of labour information programmes: the training courses on labour information held at Mona, Jamaica in 1960 for officials of the Federation of the West Indies; and a serie of missions - to Colombia in 1956 and 1958 to help and advise in evaluating skilled labour resources and requirements and formulating an information programme on labour and employment in the National Apprenticeship Service (SENA); to Venezuela from 1959 to 1960 on employment, involving a study of employment structure and an assessment of vocational training requirements; to Peru from 1960 to 1961 to help the Peruvian Co-operative Employment Service to extend the information programme on manpower and the labour market to other parts of the country and perfect the methods used; to Brazil in 1958 and 1959 for the purpose of carrying out manpower studies in connexion with the development programme for the North-east; to Uruguay in 1960 to help the Universidad del Trabajo to establish a programme of statistics on the teaching profession and analyses of skilled labour requirements; and to Costa Rica from 1960 to 1961 to organize an employment service and set up a permanent information programme on manpower and employment.

A technical assistance mission was also sent out in 1961 to evaluate manpower problems in relation to the Andean Indian Programme, which is being organized by the ILO. The seventh Conference of American States Members of the ILO, held at Buenos Aires in April 1961, adopted a resolution on manpower planning and evaluation which, after pointing

/out the

out the need to take into account the manpower factor in economic development, describes the nature and extent of the manpower information required and the arrangements that should be made at the national level to ensure the collection and analysis of such information. It concludes, inter alia, that the first requisite, which should be fulfilled without delay, is to determine present and future trained manpower requirements, especially in the case of highly skilled technicians whose training takes many years and should therefore be planned well in advance. As information sources are often inadequate, the resolution adds that paramount importance should be attached to the formulation of simple and practical methods of evaluation. Furthermore, it instructs the International Labour Office to take certain measures in co-operation as appropriate, with other agencies, namely the collection and dissemination of information regarding the experience of various countries concerning the methods and techniques used in manpower assessment and the possible organization of training courses, on a regional or national basis, on the collection and use of manpower information. The text of this resolution is reproduced in Annex II.

3. The development of co-ordinated action

The endeavours of the international organizations to co-ordinate their activities in the field of vocational training crystallized in the meetings held by several agencies within a short period, such as that at Geneva in January 1961, and, later, the meeting on education and vocational training with particular reference to Africa; the Conference of African States on the Development of Education in Africa, organized by UNESCO and the Economic Commission for Africa, and held at Addis Ababa in May 1961, and the present Conference on Education and Economic and Social Development in Latin America. The participation of international organizations which have widely varied spheres of action and are in a position to make real contributions in their respective spheres through their research and technical assistance programmes gives these meetings an exceptional value.

/Mention should

Mention should be made here of the types of practical collaboration that have derived respectively from resolution 149, adopted at the eighth session of the Economic Commission for Latin America, Panama, May 1959, and from the appointment by the ILO of a regional specialist in manpower questions.

The resolution in question proposed the establishment, with the other international organizations concerned, and in particular with the ILO, UNESCO, OAS, and ICEM, of a joint project to make an estimate of the skilled labour required in the countries of the region, with particular reference to those categories which are difficult to train; to make an estimate of the means available for training and of the existing resources, and to collaborate with Governments which request such co-operation in preparing measures for the readaptation and expansion of these resources and the utilization of skilled immigrant labour.

At meetings of a working party at Geneva in 1959 and at Santiago, Chile, in May 1960, attended by representatives of the international organizations concerned, some guide-lines were drawn up for international collaboration through the medium of the technical assistance received by the Latin American countries from these organizations; in addition, some extremely useful information was exchanged on the activities directly or indirectly related to the subject being carried out by these organizations in Latin America. It was decided that the working party should meet regularly, and stress was laid on the need to devise and adopt a methodology for manpower policy.

During the early part of 1961 the ILO appointed an expert on manpower questions to its South American Field Office at Lima to collaborate with the programme of the Advisory Groups. The expert's duties include participating in the work of the Groups in relation to manpower questions, including the evaluation of resources and requirements, the employment objectives of economic development and specific vocational training requirements arising from the plans adopted; satisfactory co-ordination between the ILO technical assistance missions and the Advisory Groups whenever necessary, and participation in the training courses for experts on economic development.

/4. Criteria

4. Criteria for future action

A number of general considerations should be taken into account in an analysis of the means of action. In the first place, a comparative review of Latin American statistics in general and manpower statistics in particular shows that these vary widely from one country to another. As pointed out by the Working Party at Santiago in May 1960, there are some countries that offer suitable conditions for the establishment of fairly elaborate machinery, others with nothing to offer in that sense and others again that fall midway between the two categories. There are also differences in the extent to which the Governments have prepared economic and social development programmes with which the relevant measures in the fields of education and vocational training may be linked up; moreover, in some cases a distinction has first to be made between specific realizable projects and aspirations that have not yet been given tangible form.

Flexibility is thus of extreme importance. Methods and techniques should be adapted to the different needs and conditions of each country, particularly as regards the supply of general and manpower statistics, the nature and extent of economic and social developmente policy and the existing administrative organization.

Furthermore, it is imperative that the international organizations should take action without delay. This means that every co-ordinated programme should include recommendations for immediate implementation in addition to those involving long-term measures. Unless this is borne in mind in all the phases of formulation and execution of a joint programme, the international organizations will probably not succeed in adjusting themselves to the rhythm of events in Latin America.

The need to deal rapidly with the most pressing problems does not mean that the long-term economic and social objectives of the different countries can be ignored for the time being. On the contrary, the efforts being made to determine education and vocational training requirements without delay should be related as far as possible to the actual and potential human, material and financial resources available, and the

/programmes proposed

programmes proposed for their development, however modest their scale. This is, in fact, perhaps the primary role of the co-ordinated assistance that the international organization can give each country for the evaluation of its requirements, a concept that is often implicit in the individual requests for such assistance made by the Governments to international organizations.

5. Immediate measures

(1) The international organizations concerned should make a joint examination of the methods that might be used to incorporate into sectoral economic developlment plans, or plans corresponding to specific projects already under way or to be drawn up in the near future, a study of labour requirements by occupation and level of training and of the actual and potential labour supply, including an examination of the steps to be taken to satisfy these requirements.

(2) At the same time efforts should be made to co-ordinate the technical assistance supplied to each Latin American country by the international organizations in order to make it possible, even in the absence of formal economic development plans, and as far as the data obtainable in the country permit:

(a) To carry out, in collaboration with the governmental organizations concerned, a rapid appraisal of the situation as regards skilled personnel at different levels and in the principal branches of activity; to take note of the actual educational and vocational training requirements that are generally agreed to be the most urgent and establish an order of priority for their satisfaction, with due regard to development needs and the resources available;

(b) To determine what measures can be put into effect immediately with a view to the following:

(i) Obtaining a continuous supply of information on skilled labour requirements in relation to economic and social development;

(ii) Ensuring that the authorities responsible for preparing and executing the plans be informed of the labour supply situation and prospects, so that they may take them into consideration when fixing the targets for employment plans;

/(iii) Establishing

(iii) Establishing the minimum amount of machinery needed under (i) and (ii);

(iv) Training specialized personnel for the evaluation of manpower resources and requirements, including the collection of information, particularly through the medium of fellowships and special courses organized on a national or regional scale;

(c) To determine, in accordance with the Government concerned, the technical assistance needed to carry out the above measures.

6. Longer-term measures

The implementation of the short-term measures will indicate the type of activity and, in particular, the technical assistance, required in each case to increase the supply of information on manpower and to establish, consolidate or improve the institutional machinery devoted to that purpose. For instance, it might be necessary to give assistance over a longer period in order to make a gradual improvement in basic manpower statistics (e.g. relating to population, education, labour, industry, and agriculture), to carry out special studies (e.g. the rural exodus, migratory movements across frontiers, labour mobility in employment), to develop activities connected with labour market information and vocational guidance in public employment services or other agencies, to plan a national system for classifying occupations as well as tables giving occupational breakdowns by types of industrial or agricultural activity, to formulate methods of projection, particularly as regards trained labour supply and demand, and to establish special agencies for co-ordinating, analysing and interpreting information on manpower.

/ANNEX I

ANNEX I

PRINCIPAL SOURCES OF INFORMATION ON MANPOWER AND TYPES OF DATA USUALLY OBTAINABLE THEREFROM

Synopsis

The following list gives the principal sources from which useful information may be obtained for evaluating manpower resources and requirements. Not all the sources are necessarily to be found in one country. The list has been divided into three parts, according to the types of source, namely, sources of reference, the principal supplementary sources, and other minor sources. Although this is an arbitrary classification, it gives a fairly faithful picture of the situation in a number of countries. In each case, the agencies responsible for the collection of data are indicated, together with kinds of data specifically related to manpower evaluation.

I. SOURCES OF REFERENCE

1. Population censuses (Central Statistical Office)

Geographical distribution, by age, sex and educational level; the economically active population and its distribution by branch of economic activity, occupation and employment situation; distribution by civil status, locality, sex, age, private or public employment, educational level, years of work, etc.

2. Vital statistics (Central Statistical Office, Ministry of Publich Health, Civil Registry)

Births, marriages and deaths with suitable break-down by locality, sex, age or population projections by age and sex.

3. Migration statistics (Ministry of the Interior, Ministry of Labour, Ministry of Transport, Central Statistical Office)

Immigrants and emigrants classified by sex, age, country of origin or destination and length of residence. (In some cases a breakdown by occupations can be made.)

/II. PRINCIPAL

II. PRINCIPAL SUPPLEMENTARY SOURCES

1. Economic development plans (National Economic Planning Office; Ministries of Economic Affairs, Labour, Finance, Industry and Commercial Affairs, Education, Agriculture)

Financial provision for specific projects under the plan or plans; projected investment in education, public health, public works; development of specific industries, and similar data.

2. Surveys of employing establishments in the public and private sectors (three types of survey) (Central Statistical Office, national employment service, national apprenticeship service, Ministries of Industry, Education or Labour, as the case may be)

Type A

Number of workers in all establishments employing more than a given number, by branches of economic activity, with possible distribution by sex and broad age-groups and by type of work (employees and manual workers); data on the number of hours worked may be included.

Type B

With reference to a selected group of large establishments (employing more than twenty workers, for example): number of workers, by sex and broad age-groups; projections of changes in number of workers; current vacancies, by occupations; organization of labour; employment policy and recruitment practices. Special topics may include mobility rates, skills needed, suitability of training and vocational training requirements.

Type C

With reference to a selected group of large establishments (more limited than the group chosen for type B surveys): number of workers in specific skilled occupations (a list of which is supplied), broken down by skilled, semi-skilled and unskilled workers, with an indication of those requiring supplementary training; number of posts currently vacant, or likely to become so over the short term, for which training is required; existing facilities for training within the establishment itself.

/3. Labour

3. Labour force surveys based on statistical samples (Central Statistical Office, Statistical Office of the Ministry of Labour, specialized university institutions)

Members of a scientifically selected group of family units: economically active or non-active persons, with distribution by age, sex, marital status, employment situation, number of hours worked weekly, duration of unemployment, length of time employed, branch of economic activity and major occupation groups.

4. Activities of the employment service (National employment service)

Applicants enrolled and vacancies reported, by occupations, branch of economic activity, personal characteristics; factors affecting the labour market; types of applicants difficult to place; types of vacancies difficult to fill.

III. OTHER SOURCES

1. Agricultural and industrial censuses (Central Statistical Office; Ministries of Industry and of Agriculture)

These censuses may include employment data.

2. Labour administration (Labour inspection and statistical offices of the Ministry of Labour)

Name, location and type of production of employing establishments; possibly volume of employment by occupations; number of apprentices, by occupations; labour conditions; absenteeism; mobility of manpower; and other data.

3. Control and patent offices (Various agencies empowered to grant rights, authorizations and patents required by law, such as certain branches of the Ministries of Education, Publich Health, Labour, Commercial Affairs or Agriculture, or of municipalities)

Number of persons authorized to practise various trades and professions subject to regulations or requiring specific scientific or technical knowledge.

/4. Commercial

4. Commercial and industrial policy (Ministries of Commercial Affairs, Industry, Finance)

Data on tariff policy, import restrictions or measures to encourage exports, or any other economic or monetary measures which may have significant repercussions on the employment of various types of labour.

5. Tax registers (Ministry of Finance, tax departments)

Data on taxpayers and their employment situation.

6. National budget (Ministry of Finance)

In some cases the occupations of personnel can be identified from budgetary estimates.

7. Social security institutions or banks

Miscellaneous data on workers and employers in the sectors covered by the relevant legislation.

8. Compulsory labour registers (Ministry of Labour)

Breakdown of workers by place of employment, age and sex.

9. Miscellaneous information

(a) Administrative reports, especially the annual reports of the Ministries of Labour and Education;

(b) Economic reports prepared by banks;

(c) Reports on research activities conducted by universities and specialized institutions;

(d) Reports of Chambers of Commerce and employers' associations;

(e) Reports of workers' associations;

(f) Reports of professional associations.

Annex II

Seventh Conference of American States Members of the International Labour Organization

(Buenos Aires, 10-21 April 1961)

RESOLUTION CONCERNING MANPOWER ASSESSMENT AND PLANNING

The Seventh Conference of American States Members of the International Labour Organization, having met in Buenos Aires from 10 to 21 April 1961,

Recognizing that unemployment and underemployment are problems which will, in the near future, be aggravated by the extremely high rates of population growth,

Being convinced that special efforts are urgently required in order to expand opportunities for useful, full-time employment in the region,

Considering that this urgent need should be taken into account in the planning of economic development policies,

Considering that there is a need for assessing present and anticipated availabilities and requirements of manpower in the region, in relation to the determination of the employment objectives of economic development policies and to the formulation of specific manpower programmes in such fields as vocational training, vocational guidance and migration,

Noting that the International Labour Organization has for many years given primary attention to manpower problems, including the assessment of manpower resources and requirements, and noting in particular such recent developments as the decision to appoint a specialist on employment objectives and manpower organization on the staff of the Field Office for South America, arrangements for closer co-operation with the Economic Commission for Latin America in the field of manpower assessment related to economic development planning, and the recent organization of a Training Course on Manpower Information conducted in the West Indies for labour administration officials having responsibilities for information on manpower supply and demand,

/Invites the

Invites the Governing Body of the International Labour Office

1. to draw the attention of governments to the following conclusions concerning the need for assessment of manpower resources and requirements in relation to the determination of the employment objectives of economic development and to the planning of manpower policies and programmes designed to ensure an adequate supply of workers with the right qualifications:

(a) reliable information regarding present manpower availabilities and requirements, and forecasts of future trends in these respects, are essential to the determination of the employment objectives of economic development policies, and to the formulation of programmes of vocational training, vocational guidance, migration and other measures which may affect the availability of manpower for productive employment;

(b) such information should make it possible to determine:

(i) nature and extent of the unemployment and underemployment problems, taking into account new entrants into the employment market, for whom additional employment opportunities should be provided in the various sectors of the economy through economic development;

(ii) the number and qualifications of workers to be trained for various occupations in order to meet the estimated requirements for trained manpower;

(iii) the need for other measures that may be required in the field of employment market organization;

(c) information on the supply of and the demand for manpower should relate to:

(i) the size, distribution and characteristics of the labour force;

(ii) the many different factors which may affect the labour force (demographic factors, geographic and occupational mobility, changes in production techniques and methods, etc.);

/(iii) the

(iii) the expansion of existing and creation of new economic activities in industry, commerce and agriculture;

(d) appropriate arrangements should also be made at the national level for the collection and analysis of the above-mentioned information. The role of any service which may be set up for that purpose should be to centralize all relevant data, both statistical and descriptive, which may be collected by various public, quasi-public or private bodies and to supplement such data as necessary through its own activities. While as an ultimate objective the service should be able to advise on all aspects of manpower policy in relation to the economic and social development of the countries concerned, a primary need to be met immediately will be to determine current and future requirements for trained manpower, in particular highly skilled manpower and technicians whose training requires many years and should accordingly be planned well in advance. Having regard to the frequent inadequacy of existing sources of information, emphasis should be placed on the development of simple and practical methods of assessment;

2. to instruct the International Labour Office to take the following steps in co-operation as appropriate with other agencies:

(a) to collect and disseminate information regarding the experience of various countries in making fuller use of manpower resources, particularly where such fuller use may help to reduce the capital requirements of economic progress;

(b) to collect and disseminate information concerning the methods and techniques used in manpower assessment, more particularly in forecasting future manpower availabilities and requirements; and

(c) to consider the possibility of organizing, on a national or regional basis, training courses on the collection and use of manpower information for manpower planning related to economic and social development.