

THE STATE OF STATISTICS FOR MANPOWER PLANNING

By

SEBASTIAN B. SANTIAGO\*

The current series of employment statistics in this country were established in response to the data demands of general economic development planning. Specifically, the desire was for information on the nature and characteristics of the labor supply and its components with broad employment goals and the eventual elimination of mass unemployment as the terms of reference.

These terms of reference determined the design and content of the employment statistics we have been collecting during the last eight years. Their requirements are relatively few and simple. The general impression is that employment statistics are adequate, from the standpoint of development planning, that is, if they can at least indicate the size of the labor force, its rate of growth, current levels of unemployment, and the sectoral distribution of employment. These specifications are consistent with the rather meager use that general economic planning has for labor statistics. And so labor statistics have never progressed beyond the statistical survey of households initiated in 1956.

In the last few years some concern has developed for treating the development of human resources as a distinct though not separate planning area. It has been observed—and this is very true in our case—that most development programs assumed that the necessary number of workers with proper training and skills will come into being as employment opportunities are created. In other words, an assumption of perfect mobility in the labor market. Such a perfect relationship between the demand for and supply of workers has never

---

\* Director of Manpower, Program Implementation Agency.

## THE STATE OF STATISTICS FOR MANPOWER PLANNING

existed in any nation regardless of its degree of economic development. Much less in developing economies where imbalance, both in the total relationship and in specific occupational categories, is the rule.

Economic development involves change, consisting of the introduction of new products, new organizations and new methods of producing the goods and services needed by the population. That population is not merely the recipient of goods and services. It is also the producer. To be an effective producer, it must first be equipped with the proper attitudes and the myriad of skills, knowledge and capacities involved in establishing and maintaining a modern economic system. These attributes cannot be acquired overnight. It takes time and it takes planning.

The process of planning the development and utilization of manpower has a more exacting demand for information on the nature and characteristics of the country's human resources. Its immediate objective is to produce the right types of workers in the numbers necessary to meet the timetable of the general economic program. In the longer term, its concern is for anticipating requirements for a minimum of ten years and preferably for two decades in advance because of the long lead time required for human resources development. These estimates provide the guidelines for the formulation of policies on formal education, inplant and other systems of informal training, the establishment of developmental facilities, and the creation of incentives to influence vocational choices.

In the light of these objectives, the assessment function is evidently the essence of manpower planning. The demands of this function which, unlike general economic planning, has a direct use for employment data, should determine the course of improvements in our labor statistics program.

The planning process proceeds from a short-term assessment of manpower requirements. Its initial task is to identify current and prospective, that is, in the next three to five years,

manpower shortages and surpluses, while providing the fundamental basis for longer-range estimates. For this purpose we are thankful to OSCAS for providing the necessary population projections. From these projections have been derived estimates of the labor force for equivalent periods by applying labor force participation rates obtained by the PSSH. The procedure is relatively simple. It provides a reasonable approximation of the future supply of labor provided that the factors that influenced population in the labor force during the base year remain constant. The assumption is valid for the short run but for longer term estimates adjustments must be made to the extent that changes in the determinants of participation of their influence on rates of participation can be predicted.

In anticipating the demand for labor, the Program Implementation Agency has applied a method that is generally recommended for the purpose within our existing statistical limitations. Essentially the method involves the application of the correlation between the national income and employment of a given year to income targets during the programmed years. Sectoral demands have also been estimated by using the same procedure. Again, inherent in this procedure is the assumption that productivity in all sectors shall remain constant. While an assumption of constancy may be valid for estimating supply where changes occur over relatively longer periods, the same cannot be said of demand especially in an age of rapidly changing technology.

At this stage, the estimates of supply and demand so derived are useful mainly to the economic planner who can now test the feasibility of this income and production targets. To the manpower planner they are, in large measure, still meaningless. Manpower planning is more precise in its desire for knowledge about surpluses and shortages. Its concern being the production of specific types of workers consistent with the specific demands of the developing sectors of the economy. Surpluses and shortages, therefore, would have meaning only if given occupational values.

## THE STATE OF STATISTICS FOR MANPOWER PLANNING

The PSSH publishes data on the occupational composition of the labor force. But the occupations are grouped in such broad categories that they yield virtually the same distribution as the industrial location of employment. To project one is to project the other. For those occupations that cut across more than one activity, their industrial location is not reflected in published data. Through persistent requests the PIA was able to obtain special tabulations of the two digit distribution of employment by industry and occupation and pertinent cross tabulations. The PIA is now attempting to project occupational demand on the basis of the ratios reflected by the industrial location of the given occupational categories. The PIA realizes the limitations of the method. It is also aware, however, of the lack of two factors essential to the exercise—a more precise methodology and a more incisive inquiry into the characteristics of demand for specific occupations.

Also a problem-ridden function is the process of estimating future supply by occupational category. The primary determinants are the output of the educational system and informal and in-plant training schemes. Statistics on educational activities are available. But aside from registered apprenticeship programs hardly any information is available on the training activities of the country's employing institutions.

A basic problem involved in determining the supply of occupations is one of categorization. Given the educational levels of the population and the yearly contributions of formal training institutions, the question of attaching equivalent occupational values to specific courses still arises. In this respect, Professor Harbison of Princeton University<sup>1</sup> recommends a classification system used by the Mediterranean Regional Project of OECD which could be adapted to suit the local situation. These categories are:

---

<sup>1</sup> Education, Manpower and Economic Growth, Frederic Harbison and Charles A. Myers; McGraw-Hill; 1964; p. 191.

Class A includes occupations for which a university education or an advanced teachers college degree or its equivalent would normally be required.

Class B includes occupations for which two or three years of education beyond the secondary level (twelve years) or its equivalent may be required.

Class C includes occupations for which a secondary school education (either technical or academic) or its equivalent would normally be required.

Class D encompasses all occupations not included in the three preceding classes.

Under these four classes are grouped the 1,345 occupations defined in the International Standard Classification of Occupations.

The extent to which a similar classification system can be adopted for our use will be controlled principally by four educational standards and qualification requirements of employers.

Until we tackle the basic problems outlined here, realistic manpower planning cannot be effectively pursued in this country. This does not mean, however, that manpower planning must stop until it is provided with basic statistical tools. Statistics are essential to planning but, in the final analysis, the real essence of planning is judgment. To quote a manual on the subject<sup>2</sup>, "The assessment of future manpower requirements must be a judgment or a series of judgments, based upon experience and expectations of future development. These judgments must be made without any magic formula or prophetic powers. The person making the judgments... should have a fairly extensive knowledge of current developments in

---

<sup>2</sup> The Forecasting of Manpower Requirements, U.S. Department of State, Agency for International Development, February 1963.

## THE STATE OF STATISTICS FOR MANPOWER PLANNING

his country, and the aspirations of the people and their government. He should be thoroughly familiar with the prevailing social, political, economic, and religious patterns. He should make judgments only after consideration of the opinions of experienced observers. x x x In the end, his evaluation of future manpower requirements is only an estimate (or an "educated" guess), subject to error. But such an assessment provides a sounder basis for decision and action than any alternative evaluation."

The manpower planner in this country experiences some difficulty in exercising that judgment due to the limitations of the data at his command. He is, however, relatively fortunate in having many of the basic statistics for the purpose. There are the population censuses, the censuses of agriculture and manufacturing, and the household labor force surveys. It would be appreciated, though, if they could be made available on time. In future surveys, particularly in manufacturing, a more detailed inquiry into the occupational structure of manufacturing industries would be desirable. The PSSH reports, on the other hand, should consider the regular publication of cross tabulations of the two-digit distribution of employment by industry and occupation.

Yet to be established is a continuing system of reporting labor market statistics. The function is related to the operation of employment exchanges of which there is only one in this country. There are, however, two alternatives which can provide data vital to occupational forecasting. One is the exploitation of idle information in the Social Security System. The other is the area manpower survey for purposes of looking into the occupational characteristics of the labor supply in the pre-determined labor market areas, and determining the number of occupations that must be brought into the labor market to satisfy the needs of employers.

Harbison also recommends an "analysis of the structure of incentives and the utilization of high-level manpower." Such

a study is vital to the development of incentives to guide human areas into proper areas of utilization and forestall shortages of manpower critical to accelerated economic development.

These studies are basic to rational manpower planning. These are the studies which we believe should be given the highest priority in any plan involving the expansion of the labor statistics program. Given these crystal balls the manpower planner can look into the future which may be just as obscure, but with more confidence and a higher degree of certainty.