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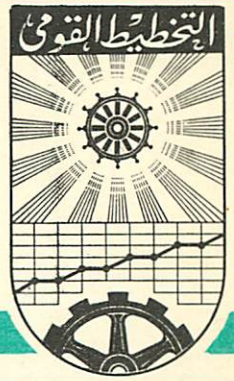

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THE OBJECTIVES, MACHINERY AND METHODOLOGY OF MANPOWER PLANNING

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This paper deals with three aspects of manpower or human resource development planning: I. Objectives, II. Machinery, and III. Methodology. It stresses in particular the problems of newly developing countries with partially planned economies. In many respects, it reflects the basic approach and philosophy of manpower development which appear to be emerging in Nigeria and some of the other new nations of Africa. This particular paper is part of a more comprehensive treatment of the subject which may be found in the book entitled, Education, Manpower and Economic Growth, by frederick Harbison and Charles A. Myers (McGraw-Hill Book Co., New York, 1964).

The Objectives, Machinery and Methodology of Manpower Planning.

By

Frederick H. Harbison

1. OBJECTIVES OF MANPOWER PLANNING

The central objective of manpower planning is to construct a strategy of human resource development which is consistent with a country's broader aims of social, political and economic development. At the outset, let us be clear about the scope of manpower planning. At the very minimum, manpower planning includes planning of the formal education system, planning of in-service training and adult education, analysis of the structure of incentives and the utilization of manpower, as well as surveys of manpower requirements. It should also include the analysis of unemployment and underemployment and appropriate measures for alleviating them. All of these things, I am happy to note, come within the broad jurisdiction of the National Manpower Board in Nigeria.

In more specific terms, I would suggest that the objective of a manpower or human resource development strategy is to arrive at an effective balance in choices of policy objectives. Some of the critical areas of choice for the partially planned economy are the following:

1. In all areas of formal education, the relative emphasis on quality vs. quantity.

2. In secondary and higher education, the stressing of science and technical subjects vs. law, arts and humanities.

3. In skill development, the relative reliance on preemployment formal training vs. in-service or on-the-job training.

4. In building incentives, the conscious manipulation of wage and salary structures vs. dependence on market forces.

5. In the general rational of human resource development, consideration of the desires of individuals vs. the needs of the country.

A newly developing country cannot have everything it wants all at once. It is compelled to make difficult choices, and it should make these choices on the basis of rationally determined priorties.

The choice between quantity and quality in educational development may take many forms. In some countries, it is necessary to choose between primary education for all or high-quality secondary and university education for a smaller number of potential leaders. There is always a choice between educating fewer students with better-qualified teachers and larger numbers with unqualified teachers; and there is also the choice between a good but costly curriculum and a poor but cheaper one. In general, political and social pressures make for emphasis on quantity, whereas the achievement of rapid economic growth makes it imperative to emphasize the quality of high-level manpower required for development.

The choice between science and technology vs. the law, arts and humanities in secondary and higher education is a difficult one for all nations. In a country such as Nigeria, there are critical shortages of technical manpower. There are also pervasive shortages of good teachers, managers, administrators and social scientists. But there are also needs for artists, writers, musicians, jurists, historians and students of African culture. In part, the choice is one between expensive education and cheap

education, as we have noted above. But, in important respects it is also related to the values and ideals of the nation. Social and political pressures tend to stress the importance of the more liberal, non-scientific type of education, whereas economic considerations demand greater concentration on science and technology.

In building technical skills, particularly at the craft level, countries may choose to place primary responsibility for training on the formal educational system or they may attempt to shift most of the burden to the employing institutions. In practice, training and re-training is a continuous life-time process of human development, and thus the employing institutions cannot escape responsibility for some training. Ideally, the role of the schools, particularly at the secondary level, is to produce broadly-educated persons who are readily trainable. But some training probably must be provided prior to employment by the schools and more can be offered through various kinds of "sandwich," extension and part-time courses for those already employed. A strong case can be made, of course, for pre-employment sub-professional and professional training in higher education, but an euqally strong argument can be made for continuation training and retraining conducted by joint efforts of employers, labor unions and educational institutions. In this area, the national choices are essentially technical in nature, but they are also influenced significantly by social and political pressures. For example, in some countries labour organizations have not only developed leadership training and worker education programs, but have also pressed for broader access to formal education.

No country today can rely completely upon market forces to provide the incentives for its people to engage in the kinds of activities most critically needed for development. In some cases, the status and compensation of engineers, scientists or agricultural specialists are too low.

In nearly all contries, the pay of teachers is inadequate, and the rewards of sub-professional personnel and technicians are far from sufficient to attract the numbers needed. The preferences for urban living, the forces of tradition, and historical differentials all tend to distort the market for critical skills. Thus, all countries must take some deliberate measure to influence the allocation of manpower, and these measures may range from outright compulsion to various kinds of financial and non-financial inducements. In general the more rapid the pace of planned development, the more deliberate these measures must become .

Finally, there is the crucial choice between the interests of the individual and the interests of the state in virtually all phases of manpower development. Does the state exist for the individual, or the individual for the state? The answer is never simple. A manpower strategy may have as its central goal the enchancement of the freedom, dignity and worth of man, but man has some obligations to help build the kind of economy which can provide decent living standards and protection of basic freedom. In all societies, therefore , there must be some compromise, or perhaps blending of the interests of the state and the individual. The actual blend will vary with the political and ideological character of the society.

As already noted, the objective of a manpower strategy is to strike the right balance in these critical areas of choice. The nature of this balance depends upon the goals of a society, its level of development, and its leadership. A country which fails to achieve a proper balance will produce the wrong kind of high-level manpower; it will invest in the wrong kind of education; it will allow the perpetuation of the

wrong kind of incentives; and it will emphasize the wrong kind of training. In reality, no society achieves a perfect balance, but some do much better than others. And, as economies progress, the forces which make for an effective balance are constantly changing, so there must be a continuous process of successive adjustment.

11. THE MACHINERY OF MANPOWER PLANNING

There is now emerging some experience in the establishment of governmental machinery for manpower palnning. Among the non-communist countries, India has probably done more in this field than any other country. Ghana, Nigeria, and Tanganyika and one or two other countries are in various stages of establishing human resource planning boards. The time has come for more intensive study of this process as well as exchange of significant experience.

There are many potential participants in both the formation and the implementation of a strategy of human resource development. Within the central government the ministries of education and labor obviously have major roles to play. Many other ministries, however, are vitally concerned with education, training, and development of particular categories of manpower. The government establishment office is concerned with personnel in the public sector; the public health ministry more particularly with doctors, dentists, nurses, and medical technicians; the agriculture ministry with agronomists, veterinarians, foresters, and their various assistants; the ministry of industry and commerce with manpower for private and public enterprises; the armed forces with military personnel; and so forth. In addition, employer organizations and labor unions are intimately concerned with manpower problems.

This diffusion of interest and responsibility for human resource development highlights the need for organizational machinery which will (1) coordinate the activities of these various bodies, (2) encourage forward planning on the part of each within its particular area of intrest , (3) assume responsibility for human resource assessments on a continuing basis, (4) relate human resource programs to palnning in all other areas, (5) construct and periodically revise a master strategy, and (6) promote and review the implementation of the strategy which has been agreed upon. In the newly-developing countries, there are perhaps three major components of this machinery.

1. The first is the establishment of a human resource or manpower development board. It should have representation from the appropriate government ministries and also from private employer and labor organizations. The functions of the board should be to allocate responsibility for various aspects of human resource planning to the appropriate ministries or groups, to review their plans and programs, and to provide for coordination.

2. The second is the establishment of appropriate planning staffs within the main participating bodies to shoulder the responsibilities agreed upon by the human resource development board. The ministry of education needs its own planning unit, as does the ministry of labor and perhaps others as well. And employer organizations should certainly be encouraged to set up staffs to work on programs for training and manpower development.

3. The third is the creation of a general human resource plarning secretariat. In most cases, this secretariat can serve the human resource development board. It can also constitute the human resource

staff of the national planning organization, if one exists. In any case, the key to success is the competence of this staff, because deliberations of busy and powerful political leaders on human resource or general planning boards can be only as sophisticated as the quality of their secretariat services.

The chairmanship, or location, of the human resource development board and the secretariat serving it are matters which are likely to be determined in different ways by particular governments. In some cases, the leadership of the board is viewed as a logical extension of the responsibility of the ministry of education, and in others it has been loged in the ministry of labor. Where strong general planning organizations exist, there is a compelling reason to put the human resource planning machinery under its jurisdiction. In a few countries, human resource planning may be undertaken before the creation of general planning organizations, and here a case can be made to put it directly in the office of the prime minister. And in some countries, the staff-work on planning of all kinds is conducted by semi-independent organizations which are removed in part from the formal government machinery. The decision as to where to locate the planning function in a particular country may be made quite rightly in accordance with political criteria rather than with administratively-logical organization charts.

In the end, the crucial question is whether the machinery works. The precise location of a planning unit in an organization chart is not a matter of major consequence; it is far more importnant to link the planning function to clearly identified centers of power wherever they may be. Particularly in the human resource area, the palnning process needs to involve local and regional as well as national government bodies

and influential private groups. This is important to create "systems of consent-building" which are essential if plans and strategies are to be implemented effectively.

The major tasks to be performed by the human resource planning staff, therefore, are not narrowly technical. To be sure, statisticians, theoretical economists, engineers, or pedagogical experts may be needed to work on pieces of the problem, but the most critical skills required in the secretariat are organizational and political. The leading figures in the staff perhaps should be experts in their own right in particular fields of knowledge, but their principal functions are to act as "transmission belts" for concepts, ideas, and programs in all fields of human resource development. They need social perspective, political insight, and broad knowledge of their country's economic and social institutions. They must be promoters as well as judges. And above all they must be integrators and generalists. A human resource program which consists of unrelated pieces is hardly better than no program at all. The top staff men in the organizational machinery for human resource development should be strategy-builders rather than purely technical specialists.

III. THE METHODOLOGY FOR SETTING MANPOWER DEVELOPMENT TARGETS

In order to formulate a strategy of manpower development for a particular country, it is essential to make a systematic assessment of its human resource problems and requirements. Such an assessment is much more comprehensive than a manpower survey or a study of formal education. It should include, at minimum, an analysis of the following:

(1) manpower requirements;
(2) the system of formal education;
(3) institutions for in-service training and adult education; and

(4) the structure of incentives and the utilization of high-level manpower. It might also include some appraisal of problems of health improvement and nutrition. And, of course, it must be based upon an analysis of demographic trends and be related realistically to the social, political, and economic environment of the country.

In assessing the problems of human resource development, the most difficult task is estimating the future requirements for manpower. If these can be specified, it is then possible to plan programs for the building of educational and training institutions, and to estimate the costs involved. Also, if net requirements for manpower are estimated, it is possible to calculate the annual rate of withdrawal from the labor force because of death, retirement, or other causes during a planning period, thus arriving at figures for gross requirements. In the discussion to follow, therefore, let us assume that the policy planner is in position to handle such tasks, and that his major problem is the estimation of future manpower requirements as a basis for the other decisions which he will have to make. Stripped to its essentials, the estimation of manpower requirements involved a reasonably comprehensive analysis of the present situation, and using this as a base line, a forward estimate of long-run requirements for a period of perhaps 10 to 20 years. We shall discuss both in some detail.

A. The Analysis of the Present Situation

The assessment of present and short-term manpower requirements, while fundamental as a basis for longer-range estimates, presents few serious methodological problems. Short range is considered here as a period of one to three years. The essential elements are the following:

(1) an inventory of employment and short-term requirements for manpower;
(2) a general appraisal of the educational system;
(3) a survey of existing programs for on-the-job training; and
(4) a brief analysis of the structure of incentives and the utilization of high-level manpower.

1. The Inventory of Employment and Short-Term Requirements

An analysis of the present situation starts with a review of the available facts about the population and an inventory of the existing labor force. Where possible the probable or actual labor force participation rates for males and females should be obtained. Then an inventory of employment and short-term requirements should be made for each major sector of the economy. These should include as a minimum: agriculture, construction, mining, manufacturing, public utilities, transportation and communication, trade and commerce, education, and government services (exclusive of education). Where appropriate, a more detailed choice of sectors can follow the classification used for the national accounting system or the economic development plan.

Within each sector, an estimate should be made of total employment as well as the extant of unemployment or underemployment.[2] In addition, employment should be broken down by major occupational categories in order to indentify various classes of high-level manpower. Here the following categories made by Parnes for the "Mediterranean Regional Project" of OECD are useful:[3]

Class A: incudes all ocupations 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 (12 years) or its equivalent may be required.

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

A fourth category, Class D, encompasses all occupations not included in the above three classes. Parnes has grouped all of the 1,345 occupations defined in the International Standard Classification of Occupations into these four classes.

There are, of course, obvious difficulties involved in the use of this or any other system of occupational classification which attempts to relate occupations to formal education requirements. For example, the educational requirements for a graduate engineer, a physical scientist, an agronomist, or a doctor are reasonably clear. But those for teachers are not. In an advanced country, most primary school teachers would fall in Classes A or B since they would have a minimum of 14 to 16 years of formal education. But in many underdeveloped countries, the majority of elementary school teachers may have no more than primary school education. In this case, they would fall in Class D and would not appear in the high-level manpower categories. The requirements for managers, technicians, and foremen likewise are difficult to define in educational terms. Indeed, the educational level of persons in a wide variety of high-level occupations depends in part on the available supplies of educated manpower. In a relatively advanced country, employers can and do insist on higher