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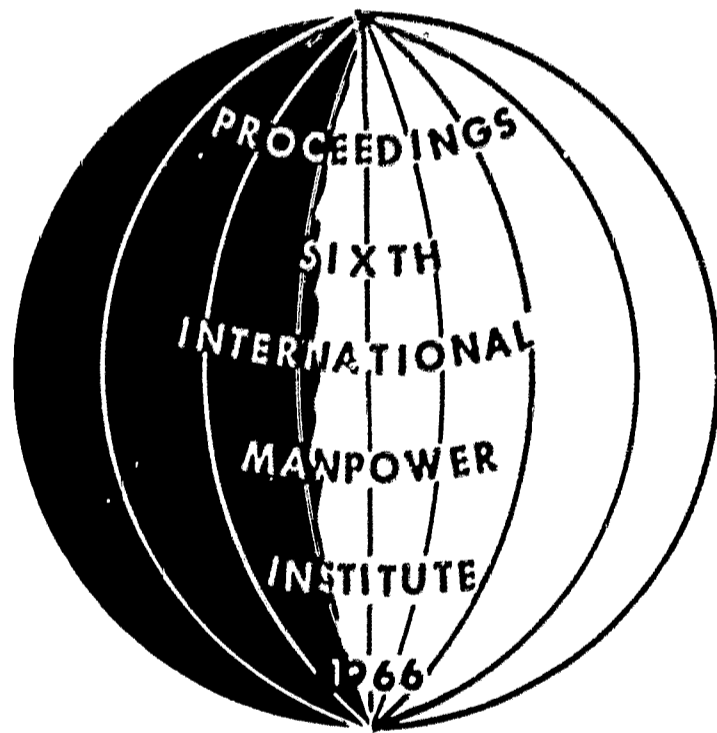
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Summaries of 62 papers presented at the Sixth International Manpower Seminar are given. Four major topics were emphasized: (1) "Human Resources in Economic and Social Growth" dealt with basic concepts of human resources, natural resources, and economic resources, (2) "Manpower Planning and Allocation in Economic Development" covered principles, policies, and general guidelines in manpower planning and distribution, (3) "Population and Employment Policies and Measures" focused on population pressures, employment opportunities and policies, and improvement of individuals, and (4) "Manpower Strategy, Administration, and Institutions" developed alternative strategies in manpower development and utilization, administrative and institutional arrangements, education and training, manpower policy, and policymaking research. Twenty-one of the summaries report case studies of manpower experience in developing countries. Twenty-seven government executives and advisors from 18 countries attended, representing such fields as economics, manpower planning, education, and employment security. (EM)

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MANPOWER IN ECONOMIC AND SOCIAL GROWTH;

Proceedings of  
Sixth International Manpower Seminar  
June 1 - August 13, 1966

Agency for International Development

Office of Labor Affairs  
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Prepared and edited by Sanford Cohen,  
with the assistance of the staff of the  
International Manpower Institute

U. S. Department of Labor  
Manpower Administration  
International Manpower Institute

## PREFACE

Summaries of the papers presented before the Sixth International Manpower Seminar are reproduced here in the hope that they will be helpful to those who study and those who work in the area of economic development. The papers, however, should not be construed as a total summary of the Seminar's proceedings. The lively discussions generated by the several speakers and the equally lively spontaneous corridor debates contributed much to the tone as well as the content of the Seminar. Unfortunately, limitations of space plus the difficulties of reproducing the quality of bilingual argumentation and discussion circumscribe the extent of what is presented in this volume.

Full academic freedom was enjoyed by all Seminar leaders, speakers, and participants, and the reader will note in several of the papers the conflict of opinion that inevitably is associated with free discussion. Perhaps it is necessary to add the familiar precaution that the opinions expressed in this volume are those of the individuals expressing them and do not necessarily reflect the positions of any government, university, or private organization.

The Sixth Seminar was conducted in English with simultaneous translation into French. What is surprising, perhaps, is how little this clumsy arrangement impeded the flow of communications.

Sanford Cohen

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# FOREWORD

The Sixth International Manpower Seminar was held in Washington, D.C., from June 1 through August 12, 1966. It was conducted by the International Manpower Institute of the U.S. Department of Labor and was sponsored by the Agency for International Development.

This was the sixth in a series of annual Seminars which have brought together 151 government officials and advisors concerned with their countries' economic and social policies. They represented 45 developing countries. In the Sixth International Manpower Seminar there were 27 government executives and advisors, including university professors, from such fields as economics, manpower planning, education, and employment security. They came from 18 countries:

The Republic of China, Democratic Republic of the Congo (Kinshasa), Republic of Dahomey, Empire of Ethiopia, Republic of India, Republic of Liberia, Malagasy Republic, Republic of Mali, Kingdom of Morocco, Islamic Republic of Pakistan, Republic of Senegal, Republic of the Sudan, Kingdom of Thailand, Republic of Togo, Republic of Turkey, Uganda, United Arab Republic, and the Republic of Vietnam.

The objectives of the Seminars have been consistent with the views expressed by President Lyndon B. Johnson in an address, "The Noble Adventure," at the Smithsonian Institution on September 16, 1965, when he outlined a program for the United States Government in international education. He said that one of the program's purposes was "to assemble men and women from every discipline and every culture to ponder the common problems of mankind..."

The current Seminar provided the participating members with an opportunity to exchange views and experiences on social and economic questions and to discuss strategies and plans for developing viable economies in their own countries. It stressed the development of methods and techniques for identifying manpower problems and for formulating effective manpower policies and programs.

The daily sessions emphasized four major topics, each dealing with a key dimension of manpower elements:

(1) Human Resources in Economic and Social Growth

This dealt with basic concepts and was descriptive and analytical. It covered the relation of human resources to other basic requirements for economic growth, including capital and natural resources; levels of human resource development in relation to stage of economic growth; social, cultural, and institutional factors in industrialization and urbanization; labor force distribution, utilization, and incentives; investment in human resources, and human values and social goals in development.

## (2) Manpower Planning and Allocation in Economic Development

This covered principles, policies, and general guidelines in manpower planning and distribution. Included were the following topics: the integration of manpower planning with overall economic and social planning; forecasting of manpower requirements and supply; planning to meet the gaps between requirements and supply; and planning for effective distribution and utilization of manpower.

## (3) Population and Employment Policies and Measures

This included population in relation to food and other resources, national policies related to population growth, employment, and migration (internal and international); and policies and measures of full employment or increasing employment levels. Special attention was given to examination of specific policies and actions which are calculated to reduce population pressures, to provide new employment opportunities, and to improve capability of individuals in relation to such opportunities.

## (4) Manpower Strategy, Administration, and Institutions

This developed alternative strategies in manpower development and utilization, and administrative and institutional arrangements for manpower planning, distribution, utilization, training, and productivity. It also developed approaches to education and training for high-level, middle-level, and skilled manpower; manpower policy formation; information and research needed for policy-making; specific structures for manpower administration; and institutions concerned with planning, allocation, distribution, utilization, protection, and guidance of workers. Special emphasis was placed on strategy and administration of education and training institutions, including on-the-job training.

The final weeks were devoted to the presentation of reports prepared by the participants during their stay in the United States. This brought into focus and perspective the ideas developed in the course of the Seminar. Each report dealt with some phase of manpower planning and administration as related to the developmental needs and programs of a particular country.

To supplement the formal sessions in Washington, D.C., several field trips were arranged. These gave the members of the Seminar an opportunity to observe the practical application of manpower programs in the United States. The first trip was to Pittsburgh, Pennsylvania, where they attended the 53rd Annual Convention of the International Association of Personnel in Employment Security. Here they met with manpower specialists from all parts of the United States and other countries. They also visited the Connelly Vocational and Technical High School, a public high school which works very closely with the local employment service, businessmen, and trade unions to develop skills for the immediate and long-range needs of the community. Another trip was to New York City where the participants visited offices of the State employment service to observe the administrative

procedures of that service, particularly the testing and placement activities and the overall recordkeeping systems. They also visited training projects operating under the Manpower Development and Training Act. Several members of the group traveled to Tennessee where they discussed manpower planning and implementation with officials of the Tennessee Valley Authority. In Tennessee they also toured experimental farms, the Atomic Energy Museum at Oak Ridge, and the University of Tennessee.

Sanford Cohen, Professor of Economics at the University of New Mexico, served as Faculty Chairman. Outstanding authorities in the manpower and economics fields served as the Seminar leaders; they were drawn from academic institutions, private organizations, and government agencies. Guest lecturers addressed the participants on specific topics within their area of specialization.

In addition to their Seminar activities, while in the United States the participants were afforded an opportunity to learn about America and Americans. They attended the theatre and concerts, and visited points of cultural and historical interest. They were guests of American families where they were able to learn about American home life. They also attended a number of social functions-- Secretary of Labor, W. Willard Wirtz, gave a reception for them. In Pittsburgh, they were the guests of honor at an international breakfast at the IAPES Convention. Ealton L. Nelson, Manpower Advisor for the Agency for International Development, and Mrs. Nelson, gave an international party for them at Lake Barcroft, Virginia.

During the last week of the Seminar, on August 10, a special luncheon at the State Department was arranged by the Agency for International Development. William S. Gaud, Administrator of the Agency for International Development, addressed the participants and presented certificates of completion. In his remarks, Mr. Gaud stressed the importance of trained and educated manpower, together with active manpower and employment policies in economic and social development.

George L. P. Weaver, Assistant Secretary of Labor for International Affairs, was the principal speaker at the closing ceremonies in the Department of Labor on August 12. He expressed the hope that the participants would maintain the friendships that had been established during the Seminar and that they would consult and work with each other in seeking solutions to manpower problems in their respective countries. He emphasized the need for continuing education, research, and cooperation in the manpower field. Assistant Secretary Weaver presented certificates to the members of the Seminar on behalf of the Department of Labor.

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**PART I.**

---

**HUMAN  
RESOURCES  
AND  
ECONOMIC  
DEVELOPMENT:  
PROBLEMS  
AND  
APPROACHES**

## PART I. HUMAN RESOURCES AND ECONOMIC DEVELOPMENT: PROBLEMS AND APPROACHES

### INTRODUCTION

In one way or another, many developing nations have recognized the need for a systematic approach to the problems posed by inadequate supplies of skilled manpower, rising levels of unemployment, and the variety of labor market inefficiencies that are subsumed under the heading of underemployment. The first part of this report is devoted to a general analysis of these problems and to specific features of the human resource experiences of developing economies.

In the first paper Cohen describes the current situation in relation to the efforts of the developing economies in the manpower and employment area. He stresses the rising levels of open unemployment, recent reappraisals of the significance of the agricultural sector, the problem of determining precise relationships between quantities of labor skill and rates of development, and the difficulties associated with manpower planning. His next paper (2) analyzes the concept of human capital and discusses the utility of the concept in the developing economies. In his final paper (3) he analyzes the distinctions between unemployment and underemployment and notes some of their implications. Lee (4) describes rates of population growth and details the relationships between prevailing rates of growth and development efforts. He also emphasizes the significance of population structures in the developing countries. In a second paper (5), Lee discusses national policies concerning population growth and planning. Barnett (6) describes the population policies of the United States. In this paper he notes the evolution of United States policy, the main features of domestic policy, and present activities being carried on by the Agency for International Development in the population field.

A variety of factors produces unemployment in the modern sectors of developing economies. Harbison (7) details these factors and analyzes possible policies for dealing with the problem. Heavy rural-urban migration has resulted from wage disparities, education, and population growth. Urban population has expanded beyond the number that can be absorbed in employment. Harbison places heavy stress upon the need to retain people in the agricultural sector by making the rural area attractive to them. He argues for balanced economic growth through a wholesale transformation of the rural economy. In a second paper (8), Harbison outlines the elements of a strategy of human resource development and describes critical areas where alternatives must be weighed and policy decisions made. An important recommendation is that the manpower strategist consider his various problems within the context of a system.

Parker (9) and Shearer (10) discuss problems associated with the development and utilization of high-level manpower. Shearer's paper includes an analysis of the migration of skilled persons from rural to urban areas in the developing economies as well as from less-developed to more-developed states. In the succeeding paper (11) Cohen describes the attributes of the labor force in the traditional sector.

In the final paper (12) in this section Bell describes some of the critical decisions that must be made by the developing nations, and the divergence of values and attitudes among different elements of the elite in these nations. He derives his conclusions from empirical studies done in former British colonies in the West Indies and Latin America.

## RESOLVING MANPOWER AND EMPLOYMENT PROBLEMS IN THE DEVELOPING ECONOMIES: THE LESSON OF EXPERIENCE

Sanford Cohen

Very few nations are so fortunate as not to be afflicted with some type of unemployment problem. A number of the more highly developed industrial economies, faced simultaneously with shortages of labor and a rising demand for both skilled and unskilled workers, have attempted to resolve their problem by using labor drawn from countries where there are labor surpluses. In Great Britain, a combination of inefficient labor utilization practices and unimaginative management has posed an exceptionally strong challenge to the viability of the nation's economy. In the United States, class unemployment, or unemployment that is prevalent among specific classes of the population, has persisted in the face of prolonged prosperity and a number of novel policy measures have been undertaken in an effort to equip certain population subgroups for productive work. Among the highly industrialized economies, relatively little unemployment in recent years has resulted from weaknesses in the final demand for goods and services.

The developing economies suffer from several of the manpower and employment problems mentioned above plus others that are peculiar to their economic situation. There is now an accumulation of more than a decade of experience in dealing with these problems. The discussion that follows will attempt to summarize this experience through a description of where we seem to be at the present time. We can note at the start that many of the ideas that were generally accepted ten years ago have been abandoned and that few have survived without modification.

### Employment Opportunities

In the literature on economic development, relatively little attention was paid to the quantitative characteristics of employment in the modern sector until the past few years. Most students of development appeared to work on the assumption that if development occurred at a satisfactory rate, i.e., if the national product grew faster than population, the employment problem would resolve itself. The labor force problem was visualized primarily as one of reducing the size of the traditional labor force and transforming it into a modern work force.

A decade of development experience has shown the weakness of the assumption described above. Nations which have had a satisfactory development experience in other respects have suffered an increase in the amount of open unemployment. In almost all of the developing states, unemployment has been rising to such a degree that the problem of providing more employment opportunities can no longer be ignored. Today, economic planners are much more concerned about the relationships among employment targets and other development targets, and it is possible that many of the developing nations will come to regard job creation in the short run as a more pressing target than maximization of income in the long run.

There are several reasons why unemployment has emerged as a major feature of the development experience:

(1) Many forms of industrialization do not create a significant number of employment opportunities. When investments take the form of large-scale, mechanized industries, the increment in labor demand is usually small. A study of the economic development of the Central Asian Republic of the Soviet Union made by the Secretariat of the United Nations Economic Commission for Europe, for example, found that the labor force in manufacturing decreased during a 20-year period despite a strong industrialization effort. Many other nations can cite similar examples from their own experiences. It appears that, in many cases, a significant rise in industrial employment occurs only after the nation's industrial base has reached substantial proportions.

(2) While modern industry usually provides some new employment, it may also destroy employment in certain traditional sectors. Mechanized manufacturing methods, for example, may eliminate handicraft jobs.

(3) Rapid growth in labor force size, reflecting rapid population growth, poses a severe challenge to the capacity of the developing states to absorb additional labor.

(4) Large-scale migration from rural to urban areas frequently results in a trade-off between rural underemployment and open urban unemployment. In virtually all countries the population stream moves toward the cities where there are not enough jobs to accommodate the in-migrants. The result is the well-known phenomenon of the urban slum, where a population sub-culture becomes increasingly alienated from the mainstreams of both urban and rural life.

(5) Economic planning has not, to date, proved to be especially adept at coordinating employment and manpower planning with general economic planning.

(6) In certain respects, the labor market operates in a perverse manner. For a number of reasons, urban wage rates are usually higher than rural wage rates by a greater amount than that which would be established by the interplay of market forces. The appropriate policy, consequently, would bring the differential more into line with productivity differences. Political considerations, however, frequently inhibit the adoption of such a policy. In any event, the pull of the city reflects sociological as well as economic forces, and there may be no viable economic policy that will make population movements conform to what is economically optimal.

#### Reappraisal of the Role of Agriculture

Today, there is a tendency to attach greater importance to the agricultural sector in economic development. In a recent article, for example, W. W. Rostow observed that "...We are now going through an important shift in development

thought and policy. Agriculture is no longer regarded as an alternative to industrial development but as an essential part of the development process." Similarly, Gunnar Myrdal has argued that agricultural development is the keystone of economic development.

This new look at agriculture reflects an awareness that the early stages of industrial development will not relieve the massive unemployment in many countries and that growth in labor force size presents an employment challenge even where industrial growth is rapid. In many nations there appears to be no short-run alternative to more effective absorption of a large part of the labor force in the agricultural sector.

The labor market problem in the agricultural sector is usually described as underemployment, a situation in which laborers are ineffectively employed according to some measure of economic efficiency. Underemployment in the agricultural sector has been debated extensively and inconclusively by economists. Recent research indicates that in some nations the agricultural sector is capable of absorbing additional manpower, and there is less tendency today to assume that the agricultural sector of developing nations is characterized by widespread underemployment. Conditions vary considerably among nations, however, and it is dangerous to generalize from the experiences of individual nations.

#### Manpower Requirements

Ten years of development experience challenges the notion that shortages of labor skills have been a significant bottleneck in economic development. The major exceptions to this statement are a number of African nations where skill shortages have been severe. In some Asiatic countries and in many South American states, however, shortages of occupational skills have not been important barriers to economic development, and in quite a number of these countries there has been some underutilization and waste of the available skilled labor. There are several examples of nations at a low level of development which actually export skilled labor. Such experiences call for a reappraisal of some standard ideas of the relationship between manpower training and economic development.

W. Arthur Lewis estimates that when half the population is in agriculture, the number of jobs that require secondary education is less than ten percent of the total population, and the number requiring a university education is probably less than two percent of the population. Education, of course, can be defended as a social end entirely apart from the requisites of the development process, and the expenditure of national resources for education may be validated in social terms. The precise relationship between quantities of labor skills and development rates, however, is unclear and this places an especially heavy burden upon manpower planners. Complicated questions like how much education, what kind of education, the relative merits of education and other expenditure possibilities, and the timing of educational expansion, cannot be resolved by simple mechani-



cal projections. Furthermore, political considerations may limit the discretion of authorities who would sharply alter an existing pattern of expenditure in favor of a dramatic rise in outlays for education.

Of all the problems of manpower development, economists are perhaps most in accord as to the pressing need for management personnel. However, a solution to managerial shortages is difficult to find because of the lack of a universally valid management training method. The fact that the manager in a developing nation must act as a vital link between the traditional and the modern society, and be at home in both, helps to explain the severe shortage of qualified managerial personnel.

### Manpower Planning

Manpower planning is a special branch of economic planning, and it suffers from the same general deficiencies that have characterized economic planning. Development plans have suffered from the disinclination of nations to carry out their plans, from a lack of unity among planning bodies and government units involved in specific projects, from a tendency to set overambitious targets, and from a preoccupation with macroplanning at the expense of sound project selection. In addition, manpower planning has suffered from lack of coordination with general planning, partly because manpower experts have not usually been included in the planning team and partly because of the vague state of knowledge about manpower planning. The situation has improved somewhat, but a good deal of additional work has to be done to sharpen manpower planning techniques and also to integrate manpower planning into general economic planning.

What have we learned from past manpower planning efforts? First, it is clear that the agencies concerned with manpower development, such as the International Labour Organization and the Agency for International Development, have not been very successful. Early efforts were preoccupied with small pieces of the overall manpower problem. Today the role of the manpower planner is visualized in broader terms. We realize that he should be concerned with the national employment situation, with the national training system, with the economic planning procedure; in short, with almost all national political and economic activity, since none of it is without consequence for human resource development.

Secondly, manpower planning, as the youngest of the economic specialties, clearly suffers from a lack of expertise. In a technical sense, the ideal manpower planner should be an economist with knowledge of such diverse subjects as economic planning, occupational classification, educational procedures, labor mobility, and social patterns. Since manpower planning is a new field, it is not surprising that the number of qualified experts is small and that many persons who have gone on missions have lacked the ideal qualifications.

Another significant problem is that nations have failed to utilize fully the manpower technicians available to them. There are three main explanations for this

failure. First, because of the noninstitutionalized nature of manpower planning, there is often no way for the manpower planner to gain the attention of all agencies involved in the manpower planning process. Since manpower planning cuts across the ministries of labor, agriculture, and education--as well as the social security and public works administrations, among others--there are often serious conflicts of interest which hamper efficiency. Second, within the planning process itself there may be severe difficulties because of the gap between macroeconomic and microeconomic planning. Too often there is no real connection between those involved in the two aspects. The result is that important investment decisions have been made without adequate consideration of the manpower and employment implications of such investments. Finally, a serious obstacle to efficient manpower development is its complexity and the difficulty of assessing the present situation, let alone the future. A great deal of personal judgment is required on the part of the planner, and the number of people qualified to make sophisticated judgments of this nature is limited.

## HUMAN CAPITAL

Sanford Cohen

How do changes in the "quality" of people contribute to economic growth? This is a longstanding question but one, nevertheless, neglected by most economists until very recently. About 1960, students began to raise questions about the role of human skills in the economic growth process. Once the subject was broached, intensive study of human resources began and a flood of literature poured forth. As frequently occurs when a new avenue of inquiry is opened, many were tempted into careless statements about the applicability of the concept of human capital. On the whole, however, the curiosity has been healthy, since it has drawn attention to the critically important role of people in the economic development process.

The expression "human capital" implies an analogy to physical capital. Both are produced means of production and both are powerful instruments for effectuating economic growth. There are, of course, a number of obvious differences between human and physical capital but there are also similarities which currently preoccupy growth theorists.

Perhaps the best way to show what modern writers mean by human capital is to cite the example used by Professor Theodore Schultz, whose name is prominently associated with the subject. Suppose, says Schultz, that we had an economy with the land and the physical capital that we now have in the United States, but that there were no persons who had had any on-the-job training or formal schooling. Obviously, production would be far below the current output of the United States. Or suppose, somewhat less drastically, that capabilities per man were what they

were in 1929. Even in this case, there would be a large decline in output. Suppose, on the other hand, some developing country were suddenly to find itself with a highly-skilled technical and professional labor force. Would it not be likely that dramatic output increases would occur? There are some difficulties with this type of example which will be mentioned later. The main point here is that the quality of human resources is a key factor in the growth process and that it can stimulate or retard growth.

### Recent Developments That Have Aroused Interest in Human Capital

Several distinctive features of recent history have aroused interest in the subject of human capital. The job of restoring the industrial capacity of Western Europe took less time than most people supposed it would, whereas bringing many of the developing economies to a position of self-support is taking longer than was originally anticipated. Many observers have concluded that the difference in the two situations is the existence of a large stock of human capital--professionals, technicians, skilled craftsmen, managers--in the European countries, compared to the scarcity of such talents in the developing nations. Expanded research in the economics of developing areas has produced specific evidence of the critical importance of human capital in the development process and of the damaging results of the lack of human capital. Various writers, for example, have stressed the special importance of the "creative personality" or the "binding agent," in mobilizing human and material resources.

Recent studies of the growth in economic output of the United States have suggested that some part of the growth has resulted from factors other than quantitative increments in labor and capital inputs. The approach in most of these studies has been to take the economic output of the United States over a given period of time and to associate as much of the increase as possible with measurable inputs such as labor or capital. In his study, "Productivity Trends in the United States" (National Bureau of Economic Research, 1961), John Kendrick found that an input index increased at an average rate of 1.9 percent per annum from 1889-1957, and an output index increased at a rate of 3.5 percent. The residual, thus, was 1.6 percent. Others, using different measurement methods, have found residuals that varied somewhat in either direction from Kendrick's findings. Many analysts have concluded that the residual is explained in part by the increased education and training of workers in the recent periods. The human capital stock, in other words, has risen.

### Formal Application of Problem of Human Capital

In a broad sense, the current preoccupation with human capital is simply a recognition of the importance of the quality of the human agent in the economic process. In a narrower sense, however, what is involved is the efficiency of economic resource allocation. Let us assume that the specific question is how much of the economy's resources should be devoted to education. Education absorbs scarce

resources; therefore, more investment in education leaves fewer resources for other uses. If the goal of national economic policy is to achieve a certain growth rate, the problem of allocation is to determine the optimal combination of investments, including investment in education, to achieve the desired growth rate with minimum sacrifice of current consumption.

Were all the necessary information available, it would be possible to elaborate a master plan relating inputs to output targets. The data for a perfect plan are not available, so it is necessary to approximate by one means or another. Through rough guesses or manipulation of available data, the returns attributable to investment in education can be compared with returns to investment elsewhere in the economy. Such comparisons serve as a guide for channeling the flow of investment resources.

To estimate the returns to investment in education--or other investments in human capital such as health programs and subsidized migration--it is necessary to determine the present value of all individuals' lifetime earnings which would result from the investments. This involves an estimate of the lifetime earnings discounted by a selected interest rate. (Examples of computations of this type of estimate can be found in pp. 101-103 of the final proceedings of the 1965 International Manpower Seminar.)

The benefits, of course, must be weighed against the costs. The formal analysis of human capital formation, thus, is a form of cost-benefit analysis that has attracted a good deal of attention in recent years. Cost-benefit analysis has been described as a method of comparing the desirability of alternative projects when it is important to take a long view. The aim of such analysis is to provide guidelines for maximizing the amount by which benefits exceed costs.

We should note some of the difficulties in making accurate cost-benefit analyses. First, cost-benefit techniques are less relevant to large investment decisions than to small ones, since the former are likely to change outputs and relative prices throughout the economy. Thus, cost-benefit analysis may not be applicable to developing countries. Next, it is difficult to take account of all relevant costs and benefits. The benefits of education, for example, are not limited to vocational preparation, and the costs of education include earnings foregone during the students' schooling. It is hard, furthermore, to determine the costs of informal education such as on-the-job training. The difficulties involved in the application of cost-benefit analysis could be discussed at some length, but perhaps enough has been said to suggest that efforts to apply this technique to investment decisions must be supplemented by qualitative judgments, especially in developing nations where empirical information on costs and benefits is scarce.

Given the absence of high-quality statistics, the inherent difficulties of cost-benefit analysis, and the vagueness of the concept of human capital, what are the implications for developing nations? Several possibilities may be suggested. The preoccupation with human capital does call attention to what has, all too often, been a neglected dimension in global investment planning. Investment in

human capital--primarily in health and education--can be sound according to economic as well as social and cultural criteria. It is not enough, however, simply to conclude that there ought to be more investment in education, health, or recreation. Although benefits flow from such investments, they also involve costs. In economies where investment resources are in critically short supply, even a primitive effort at cost-benefit analysis may temper enthusiasm about the potential benefits and neglect of potential costs of investments in human capital and lead to a more economically rational investment pattern than would otherwise occur. Finally, an intense concern with human capital and an effort to determine optimal amounts and types of educational investments may eventually encourage the accumulation of the kind of data helpful for a more rational ordering of a nation's resources in pursuit of growth targets.

### Measuring Benefits of Investments in Human Capital

Several methods of estimating the benefits of investment in human capital are presented below, with education being used as the example of an investment in human capital. (Good discussions of these methods can be found in Part I of W. G. Bowen's Economic Aspects of Education, Princeton University, 1964.)

1. The simple correlation approach. This method can be used for inter-country comparisons at specific points of time. It involves an estimation and comparison of enrollment ratios (the ratio of students of a given age in school to the total population in the age group) to GNP or GNP per capita. As might be expected, such correlations are positive and rather high; the higher a nation's GNP per capita, the higher its enrollment ratio. While this method facilitates comparisons among countries and provides some rough guideposts, the following limitations should be noted:

(a) the difficulty of obtaining internationally comparable GNP data;

(b) the difficulty of finding comparable and reliable data on education participation rates;

(c) the weakness of the assumption that investment in education has the same rate of return in different nations; and

(d) the difficulty of relating cause and effect. Correlation does not show causation. Countries may merely be buying more education as a consumption good as GNP rises.

2. Intertemporal correlation. This method correlates the growth of GNP within a country over time with increases in literacy rates and in expenditures for education. The difficulty of relating cause and effect (mentioned in 1 above) is the greatest drawback to this approach.

3. Interindustry and interfirm studies. This method attempts to compare an industry's emphasis on education and on-the-job training with some measure of its performance, such as profits. Again, the cause and effect criticism holds, and valid measures of firm and worker performance are difficult to find.

4. The residual approach. This approach is associated with the name of John Kendrick and was discussed previously. The difference between the growth of output and input is attributed to other factors, such as education. While this approach is stimulating and suggestive, it has one primary defect aside from difficulties in measurement. It is difficult to attribute the residual to any one factor. Education is, without a doubt, of great importance, but other factors such as incomplete analysis, religious and cultural traits, and on-the-job performance, also have a great impact on output patterns.

5. The direct returns to education approach. In this method, lifetime earnings of educated citizens are compared with the lifetime earnings of those who have had little or no education. There are several problems connected with this approach:

(a) There is the problem of aggregation. What is true for the individual is not necessarily true for the economy as a whole. That is, for the individual, a college degree may lead to a significant increase in earning power. College education, however, may lose much of its economic significance if the entire population possesses university degrees.

(b) It is doubtful that exogenous factors, such as motivation of the groups compared, are equal.

(c) It is doubtful that earnings alone are an accurate measure of productivity. The correspondence between earnings and productivity may hold in the highly-developed money economies, but is less applicable to developing economies where wages and salaries are often institutionally determined.

6. Forecasting or projection of manpower needs. This approach supplements other types of analysis and is not a direct means of measuring benefits. Projections of manpower needs can be made in aggregate terms (e.g., the total number to receive secondary education) or it may be disaggregated (e.g., the number of people needed in specific occupations). The advantage of forecasting manpower needs is that it provides direction and a quantitative basis for decisions about human capital formation.

In spite of the variety of methods available to the manpower planner, there are some limitations to effective forecasting. The forecast may be considerably off target. It is impossible, for example, to foresee the impact of scientific developments upon manpower needs. It is difficult to judge the elasticity of technical substitution between capital and labor and among different grades of labor. For example, there are many duties which doctors normally perform that could be performed just as well by nurses. In some functions, technicians can be substituted

for professionals when shortages arise; mechanical draftsmen can perform many of the duties of engineers. The possibility of factor substitution can affect the accuracy of forecasts of the need for various manpower skills. It is possible to overstate the importance of some occupations, the need for which may not persist beyond the early stages of economic development. For example, the need to inventory forest resources calls for very specialized personnel, but once the forests have been inventoried there is little further need for such people. Manpower forecasting is essentially physical rather than financial in nature and does not take account of costs and benefits.

In summary, given the importance of human capital in the development process, it is necessary to consider how available resources may best be allocated to raise the stock of human capital to a level consistent with development goals. Several analytical techniques may be employed in making these determinations, but the planner must always be aware of the inherent weaknesses of each.

## ASPECTS OF UNEMPLOYMENT AND UNDEREMPLOYMENT

Sanford Cohen

Problems of unemployment and underemployment are plaguing the developing countries--problems which appear to be growing worse. While not all developing economies face these problems to the same degree, they are generally among the more critical areas of concern.

### Measuring Unemployment

Although definitions vary from nation to nation, the basic statistical descriptions of the labor force usually classify persons as being "in the labor force" or "not in the labor force." Those in the labor force are classified as "employed" or "unemployed." Subclassifications of the employed may show occupation and industrial characteristics of the employed, while subclassifications of the unemployed may provide data concerning various significant characteristics of the unemployed. Those who are classified as not in the labor force are usually further described as "in school," "keeping house" or "retired," or by some other classification which indicates why they are not in the labor force. The usual statistical description of the labor force, thus, differentiates those in the labor force from those not in the labor force and then differentiates the employed from the unemployed.

Since the boundary lines between these categories are often vague, there are many classification problems which frequently are resolved arbitrarily. For example, should a student who loses his part-time job be classified as unemployed or as not

in the labor force? Or should a person who works only five hours a week be classified as employed or unemployed? Depending upon how these and many similar questions are answered, the totals in the major classifications may be inflated or deflated by significant amounts. Despite problems of this nature, however, a carefully executed set of labor force statistics will provide a reasonably accurate picture of the amount of unemployment in an economy.

### Measuring Underemployment

While unemployment has come to be a problem of major dimensions in many of the developing economies, in others the more pressing problem has been that of underemployment, a phenomenon that constitutes a serious challenge to growth aspirations.

Open unemployment may be defined as a condition in which persons available and able to work are unable to find work. Underemployment is less easily defined since it refers to persons who are actually employed but whose work performance is deficient when measured by criteria of efficiency or income. In order to show what is involved in underemployment, the major ways in which it is manifested are described below:

Agriculture--Most discussions of underemployment have centered around the agricultural sector where the output of the marginal worker is low or, in some cases, zero. Low marginal productivity means that the worker can be withdrawn from his activity without loss of output.

Among students of economic development, there is some controversy about how much agricultural underemployment exists. Those who tend to minimize the amount of agricultural underemployment point out that agricultural activity is seasonal and that there are times when there is not much to do on the farm. Thus, estimations of underemployment should not be made on the basis of whether people are doing anything at a given point of time, but on how their removal would affect output over the entire course of the production cycle. While it is true that the extent of agricultural underemployment has sometimes been overstated, the high rate of population growth found in many of the developing economies suggests that underemployment exists or will soon exist in these nations.

Petty Street Trades--Small-scale service and selling activities conducted in the streets conceal another form of underemployment. Inefficient work activity in this case is hidden behind a thin veneer of low-productivity employments.

Labor Redundancy--This phenomenon may be found in both the public and the private sectors, although it may be more prevalent in the public sectors of the developing economies. Labor redundancy implies that there are more workers than are necessary to do the job. This type of underemployment, while undesirable, is perhaps understandable. Increased productivity will benefit the economy, but individuals will be hurt if redundancy is eliminated. In this situation, those affected will do all within their power to retain their jobs.



Social Underemployment--In the developing nations the existence of many national holidays, and the large amount of work time lost as a result of demonstrations, absenteeism, etc., may mean that from 10 to 20 percent of the work-year is lost to these nonproductive activities. Many of the causes of social underemployment are to be found in deeply ingrained traditions and will probably not be eliminated for a long time.

Disguised Unemployment--This classification refers merely to those who are working below their skill or professional level, e.g., a Ph.D. in economics working as a clerk. The loss from such underutilization of skills is obvious.

Although underemployment exists in the developed nations, the problem is more severe in the developing states since a large proportion of the labor force in the developing economy, usually well over half, is concentrated in agriculture where some of the most serious manifestations of underemployment are found. The extended family system ties many workers to one region or to one occupation, even when opportunities in this region or occupation decline or when employment opportunities appear elsewhere. The family arrangement in the developed economies is quite different and can be described as a conjugal family unit. This conjugal unit includes only the husband, wife, and minor children. Other relatives of any degree are not included in the unit and have no formal right to support. For example, an adult male has no financial obligation to an adult brother or sister. While such relatives often do help each other, the aid is voluntary. By contrast, in the extended family system, the adult male may do insignificant work while depending upon an elaborate kinship network for support, rather than risk open unemployment by putting himself at the mercy of the market system. Such a family system is not confined to those at the lower end of the occupational scale. Many in the upper strata choose to indulge their preferences for certain types of employment regardless of income because they rely primarily on the family system for support. The result is that in industrialized nations where the conjugal system is found, manpower is more responsive to changes in job opportunities.

In the developing countries the unemployed often drift into petty street trades. While such manpower is classified as employed under the standard definition of employment, this classification is not meaningful in terms of identifying the problems of developing nations. There is a considerable waste of labor in many developing nations, and the degree and character of the waste is not revealed by labor force participation statistics. Waste is certainly not unknown in the developed nations, but it is not as endemic as in developing nations.

As noted above, underemployment is manifested in many ways and these variations make it difficult to devise a comprehensive definition of underemployment. Not everyone in petty street trades, for example, is underemployed. The statistical boundary line that separates the underemployed from the more productively employed, thus, is less easily drawn than the one separating employment from open unemployment.

The point of the above discussion is that the labor force statistics commonly used to describe a labor force must be supplemented with other data if the employment problems of the developing countries are to be analyzed comprehensively. Measurement of underemployment is difficult, but it may be possible to analyze it sufficiently if we have a range of data. If the range of agricultural incomes or industrial incomes is known, for example, it may not be necessary to determine the precise point where underemployment exists. The range can be used as a basis for making a decision about the point where it is thought that underemployment prevails. Income, of course, is not the only possible measure. Efficiency criteria could also be used.

## POPULATION GROWTH RATES IN RELATION TO RESOURCES

Everett Lee

The rate of world population growth is higher than ever before; the latest figures show it to be more than two percent per year. At this rate, by the year 2000, world population will be seven billion. We must keep in mind, furthermore, that all previous projections of world population have erred on the low side.

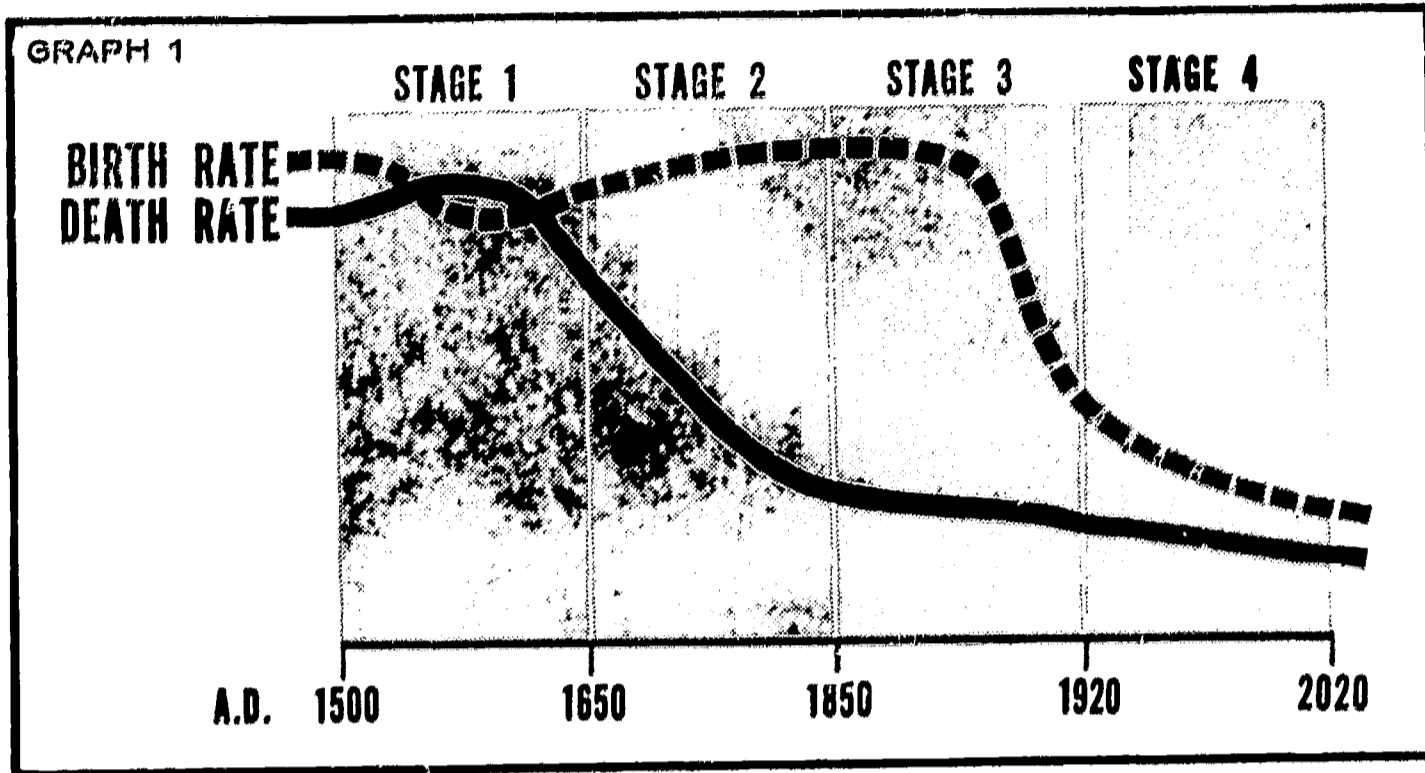
Populations in developed countries are growing at a rather slow rate, around one percent per year, and there is no real pressure on their resources. The opposite is true of many developing countries where the rate is around three percent per year. It is important to note that at a rate of 3.5 percent per year, population doubles in 20 years. Pakistan's demographic situation is typical of the underdeveloped countries. It has 50 births per year per 1000 population but only 23 deaths per year per 1000 population, giving a 2.7 percent growth rate. The proportion of world population found in the developed and developing countries is changing rapidly.

Table 1. DISTRIBUTION OF WORLD POPULATION

Year	Developed nations	Underdeveloped nations
1900 .....	36%	64%
1966 .....	30%	70%
2000 (est.) .....	20%	80%

Between 1750 and World War I, European peoples dominated the world. In 1750 they accounted for 20 percent of the world population and today they account for considerably more. This trend is beginning to be reversed as non-Europeans, especially Asians, are establishing their dominance in world population.

Let us now look at population growth from an historical perspective and in terms of what demographers refer to as the "vital revolution."



Before 1500 A.D. world population grew very slowly. During Stage I both the birth rate and the death rate were high. They balanced each other at a high level and there was little net growth in population. Around 1650 (Stage II) the death rate began to fall in Europe because of economic progress which brought better housing, hygiene, and diet. A sharp increase in population occurred because the birth rate did not fall concurrently.

In Stage III the birth rate declined and the death rate approached its minimum. In Stage IV the birth and death rates are both low and in approximate balance. In the early stages of Western development few children reached adulthood, so parents tried to have as many offspring as possible in order to perpetuate their lineage. In Stage IV, 95 percent of the children born reach at least 12 years of age. As a result, parents now plan family size on the assumption that their children will survive to adulthood.

Stage IV described above is typical of developed countries, but much of the rest of the world is in Stages I and II. The question demographers are pondering is whether it is possible to shorten the period of rapid population growth which all nations apparently go through. Clearly, it is possible to lower the death rate dramatically in a short period. In Ceylon, for example, the rate was reduced by 50 percent in a decade.

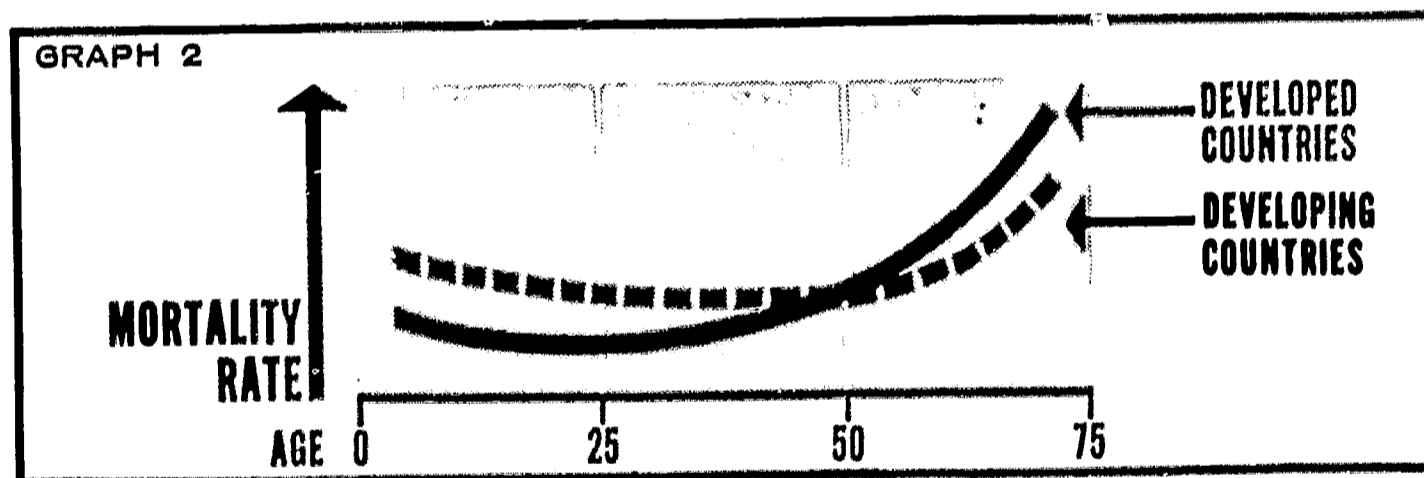
As the following table demonstrates, different age groups in the population do not grow at a uniform rate.

Table 2. PROJECTED GROWTH OF NATIONAL POPULATIONS, 1960-1975

Country	Working age 15-59	Children 5-15	New workers entering the labor force, age 15-19
Mexico	57%	60%	66%
Indonesia	40%	62%	70%
India	36%	50%	45%
(Mainland) China	46%	60%	83%

In each of the four countries cited, the active labor force is burdened by the need to educate a large proportion of children. In addition, the high percentage of new workers indicates that the national economy must grow rapidly to absorb them.

If changes in the mortality rate are uniform for all age cohorts, the age structure of the population is not altered. The fact is that more has been done to decrease the mortality of the young than of the old. For developing countries the mortality rate of children is important because a large part of their population falls into this category. For example, 50 percent of the Sudanese population is under 15 years of age. Of every 100 babies born, 20 to 25 die in infancy and one-half die before reaching 12 years of age.



Graph 2 illustrates the fact that the death rate of older people in developed countries is higher than in underdeveloped countries because better health conditions permit people who are constitutionally weak to live longer, whereas only the constitutionally strong survive to old age in the latter.

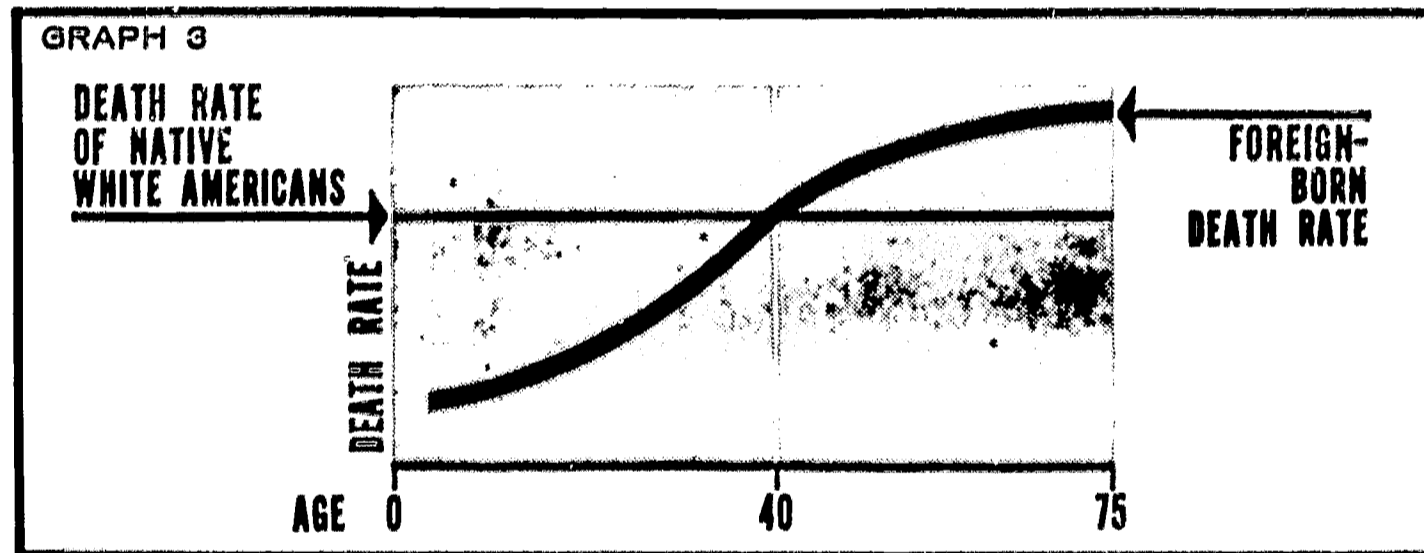
In developed countries the population structure is such that you have a low proportion of children relative to the number of workers. In Europe, the working-age population (age 15-65) accounts for 60 to 70 percent of the population. In contrast to nations such as the Sudan, provision for education of children is a relatively small financial burden.

In the United States it costs \$500 per year to educate a child. Over a 12-year period this amounts to \$6,000, which is roughly equal to one year's salary of a worker. Education becomes a larger burden when there are three children in the family. The problem is even more acute in developing countries where the average family has six children. Thus, where the ratio of children to total population is high, the ability of a nation to generate savings for its development plan is limited because so much of its income is allocated to the consumption and educational needs of children.

The rate of population increase also affects women in their role as economic agents. When pregnancies are frequent, female labor force participation is limited.

It is not generally possible to avoid the economic drag of rapid population growth through migration because there are many barriers such as immigration laws. What is more, the typical emigrant is in the most economically productive years of life and is usually more skilled than the average person in either the receiving or the losing country.

The popular assumption that immigrants to the United States were of inferior quality, incidentally, is proved false by the graph below which shows that migrants were in better health than native Americans; their death rate was much lower for the 20 to 40 year age group which comprised the bulk of immigrants.



The children of these immigrants, furthermore, surpassed native Americans in their drive for education and in intellectual pursuits. Migration from developing to developed countries has the adverse effect of taking scarce and economically valuable human resources from the developing countries.

High birth rates and heavy population concentrations are not uniformly harmful, however. In the late 1930's, Hitler insisted that the Germans needed living space in neighboring territory, but today, with a smaller territory and a larger population, West Germany is having an economic boom and imports labor. Similar patterns of economic growth exist in Japan and Hong Kong where the populations have also grown very rapidly.

## NATIONAL POLICIES REGARDING POPULATION GROWTH AND PLANNING

Everett Lee

It is difficult to put many laws specifically into the category of population policy because legislation in many fields--migration, child health, and education--affects population either directly or indirectly. Some nations, however, have laws that are deliberately aimed at regulating population size and growth or improving the quality of the population. In many instances the two goals interact, and it is not uncommon for policies tailored to achieve one goal to obstruct the other.

### Laws Regulating Population Size and Growth

There are three primary approaches to population control: 1) regulating emigration and immigration; 2) lowering the mortality rate; and 3) action to augment or diminish fertility rates.

Population migration. Several nations seek to attract immigrants, either because they are underpopulated or because they lack people with particular skills. Many others encourage emigration because the population is too large relative to land and resources. Still others permit no legal migration whatsoever.

In the 20th century, in-migration was important to the expansion of many of the developed nations. Australia has encouraged the inflow of white settlers by subsidizing transportation and by furnishing employment services. The Government of Canada has a contract with the Netherlands whereby excess Dutch population, particularly in the agrarian sector, is encouraged to emigrate by means of subsidies and information regarding Canadian opportunities. The situation of the Netherlands itself is unique, for the nation is both overpopulated (primarily in agriculture) and undersupplied with some specific skills. Consequently, it fosters both emigration of families in its declining sectors and immigration to increase the supply of labor in expanding sectors. The massive flow of refugees from East to West Germany in the post-war period has had more of a political motivation than the examples previously cited. The movement has been largely of highly-skilled people in the peak of their working lives and has been a great boon to West Germany. The loss of a large proportion of its labor force (50 percent of the refugees have been under 24 years of age) has seriously hampered the East German economy, and is a major motive for the enforced limitation of emigration in the past few years.

Virtually all nations regulate the number and types of persons who are permitted to emigrate or to immigrate. Characteristically, immigrants into major industrial countries are concentrated in particular skill groups and economic sectors. In the United States in 1910, for instance, foreign-born people composed 14 percent of the population, but 21 percent of the work force. They provided 75 percent of workers in the garment industry, 66 percent in steelmaking, and 48 percent in coal mining. Moreover, particular nationality and religious groups tended to dominate many

activities; 80 percent of the foreign-born engaged in the clothing industry were Jews; over 90 percent of California string bean production, as well as most of its fruit and flower retail trade, was controlled by Japanese immigrants. Fifty percent of the construction workers in France in the 1930's were Italian, and a large proportion of British miners were of Polish origin. Thus, people who were willing to work for relatively low wages or to accept difficult working conditions were attracted to the rapidly-expanding economies because of the lack of opportunity in their native countries.

Mortality rates. Since all nations are interested in lowering their death rates and because this is relatively easy to accomplish, in the sense that technical means are available by which most of the major causes of death can be controlled, it is not necessary to dwell at length on this aspect of population policy. To illustrate the type of progress possible, the example of Ceylon might be cited. That nation halved its death rate in a decade, largely through malaria control.

Fertility rates. Before examining birth control policies actually practiced, it must be acknowledged that the subject of state intervention to affect fertility raises important religious and ethical questions which governments must answer--explicitly or implicitly--by their actions.

Several industrial nations have acted to encourage a higher birth rate. France took steps to raise its birth rate after its population stagnated in the mid-19th century, a stagnation which continued into the 1930's when the net reproduction rate fell drastically. As early as 1920, laws were enacted to stimulate the birth rate. Abortion was made illegal as were the sale of contraceptives and the distribution of birth control information. To encourage larger families, the State undertook to subsidize child rearing to the extent that a family with three children was eligible to receive a stipend equal to 99 percent of the average per capita income. Large families were granted railroad rate reductions, free vitamins, free child care, reduced educational costs, and even limitations on the military conscription of sons. In brief, the State, and indirectly the smaller families, bore part of the cost of raising children. Confronting the same problem of underpopulation, Sweden has undertaken a somewhat different program to encourage larger family size. In addition to providing free medical services at childbirth, the State grants mothers with many children a two-week "paid" vacation and free maid service. As with France, Swedish policy reflects the belief that the nation's economic and political future will be enhanced by a growing population. Consistent with the Communist doctrine that all value inheres in the contribution of labor, the Soviet Union has long pursued policies fostering large families. In addition to tax relief and other forms of subsidy, the Soviet Government plays on patriotic sentiment by presenting citations to mothers who contribute many children to society. In the post-Stalin decade, however, the trend has been toward greater autonomy in family planning.

The problem for most developing countries is not insufficient fertility, but rather that the population is growing so fast that most of the expansion of output is offset by the added population. Too high a rate of population increase inhibits both growth of per capita income and expansion of savings which must be channeled into investment in order to insure a continuing rise in output.

In the recent past, several nations have undertaken measures to stabilize or diminish their birth rates. With a very high fertility rate and with the inflow of its nationals from lost overseas colonies at the end of World War II, Japan faced a severe overpopulation problem. Largely at the request of mothers, anti-abortion and anti-contraception laws were repealed and a policy of active support of family planning was adopted. Since 1947 the Japanese birth rate has fallen from 35 per thousand per year to 17 per thousand, largely through abortion. (By some estimates there have been more abortions than live births in Japan since the end of the war.) Contraception, as a far safer and easier method of birth control, is rapidly superseding abortion in the 1960's. India's population problem has become extremely grave and has motivated the introduction of several means of family planning. Notable among them is the program for sterilization of males in certain of the Indian States. Fathers who consent to be sterilized are offered a small money bonus but thus far the program has had only a few thousand participants (less than .01 percent of the adult male population) in a few localities. The South Korean Government is distributing intra-uterine devices at a rate of over ten thousand per month, and its prospects are good for achieving the objective of a 50 percent decline in the birth rate within a decade. In these countries, as in most others which want to limit population growth, policies are designed to permit families to have two or three children, but to provide both means and incentives to prevent additional births.

The point to be stressed is that there is a wide range of effective devices which make it technically simple to prevent conception. If used properly, they can facilitate population control in countries where the people are both literate and aware of the consequences of overpopulation. As a result of increasing biochemical knowledge, we are on the verge of major breakthroughs in contraception which will make birth control cheap and readily available in all countries. Hormone pills to disrupt ovulation are being perfected and it is likely that in the near future a pill taken only once a month will be ready for general use. The means of contraception which may prove most successful for largely illiterate populations is the intra-uterine device (IUD). The IUD costs two to three cents and can be made still cheaper. It can be inserted in five minutes by persons of limited medical training; and most importantly, it is a positive birth control in that positive action--i.e., removal--must be taken to permit conception. With other devices, continuing positive action is necessary for prevention of pregnancy. For 85 percent of users, IUD is not expelled and has no ill effects. There is 98 percent certainty that they will not conceive, and there is no injury to the fetus in the unusual case where the user does conceive. It is noteworthy that for the first time a state can, without permanent sterilization or separation of the sexes, forcefully impose birth control on its people by use of IUD, because once inserted the device cannot be removed except by trained persons.

#### Affecting Population Qualities

Discussion thus far has centered on means of controlling the size and growth of population, but the qualities of a population are also important. To an increasing extent population qualities are controllable. With the proliferation of studies in



genetics, forecasting of congenital deficiencies has become more accurate. Although scientific knowledge is, as yet, insufficient to predict and control intelligence and particular aptitudes, the perpetuation of some undesirable qualities can be limited. This raises extremely important ethical questions, however, for every person is a mosaic of characteristics, a mixture of abilities and disabilities. In preventing births which might result in unwanted characteristics, society not only impinges upon the freedom of its members to have children, but also is likely to forfeit good qualities along with the bad.

In conclusion, it is important to bear in mind that the quality of a population, its skills, and its vitality are, to a great extent, functions of its environment and especially of its educational system. The great international differences among peoples are much more the product of environmental differences than of genetic dissimilarities, and it is primarily by improvement of living conditions rather than by selective breeding that populations of higher quality will evolve.

## POPULATION POLICY AND THE UNITED STATES GOVERNMENT

Robert Barnett

In the post-war period government policies with regard to the population problem have changed from a position of denial or avoidance of the problem to nationwide family planning programs. While there may be other means of limiting population growth, family planning has been the major approach taken. The issues surrounding effective control of population increases are still somewhat clouded by emotional and religious considerations, but it is clear that governments no longer fear discussion of the problem or consideration of positive action to solve it.

### The Problem

The countries of the Far East may serve as a fairly representative example of the problems that exist with regard to population pressures. It is safe to say that no greater problem exists for these countries than unwanted population growth, i.e., population increases which divert a large part of potential saving and investment away from the growth process. Such unwanted population growth means that output must expand merely to maintain consumption levels and, thus, resources available for development programs are diminished.

Only one country in the Far East has a population growth of less than one percent per annum; the others have rates over two percent and several are over three percent. The significance of these rates is reflected by the fact that with a one percent per annum increase in population, it takes 70 years to double a population; with a two percent increase, 35 years; and with a three percent growth rate, 23

years. Thus, there are several countries in this region whose population will double in the next 20 to 30 years. These figures are even more troubling because current per capita national income for most of the countries is less than \$150 per year. Under these circumstances, there can be little doubt that unwanted population growth restricts efforts to improve per capita income.

In terms of the relationship between growth and capital formation, it is estimated that a one percent increase in per capita national income, given a stable population, requires a three percent increase in saving. With a population growth rate of three percent, saving may have to be increased to 18 percent to raise per capita national income three percent--a common target figure.

What is remarkable about the Far East is that in the last few years there has been widespread recognition of the problem of population control and positive attempts to cope with it. This is true even of countries which formerly denied the existence of population pressures. Korea, Taiwan, Malaya, and Singapore all have national or seminational programs. Thailand and Indonesia, formerly against any birth control, now recognize the problem and are beginning to respond.

#### United States Domestic Policy

The policy of the Government of the United States toward others can only be real and relevant if it reflects what Americans are willing to do at home. The following six basic aspects of our population policy recognize that fact:

1. Participation in family planning is completely voluntary. The government has no right to control such matters.
2. Use of family planning information is not required for participation in any other government program.
3. To protect the freedom of choice of the individual, the government makes available information on a variety of family planning methods and techniques.
4. Family planning programs must conform to high medical standards and be supervised by competent medical personnel.
5. When discussing family planning as a program, the government does not advocate in a propagandistic manner any particular philosophy or technique.
6. Federal family-planning activities must not conflict with local or State law.

#### Population Policy Abroad

Up to 1960, the Government did little more than participate in the Population Commission and show interest in some of the research activities of the United

Nations and the larger research and philanthropic foundations. There were no administrative guidelines or defined policies. From this initially neutral approach, the Government began to give financial support to the technical programs and research activities of organizations in the United Nations (FAO, UNICEF, WHO, etc.) and work being done by foundations. The Agency for International Development began to assume responsibility for research and program studies for several nations.

At the present time, AID missions are expected to include officers familiar with population dynamics and population control programs being developed in mission countries. Considerable sums of money were appropriated last year to finance research, to analyze individual country programs, and to set up the Latin American Population Office. Three specific aspects of AID policy may be noted:

1. There is no advocacy of any particular type of program.
2. The host government must request population research.
3. AID will not entertain requests for contraceptive devices or their means of manufacture, since the facilities to manufacture such articles can be built inexpensively enough by local governments.

In the future, the United States Government will be guided generally by the following principles:

1. The problem of unwanted population increase can be treated scientifically without provoking ideological dispute on the propriety of birth control.
2. There will be no development of a comprehensive national policy on the population question, but the Government will stand ready to provide financial, scientific, technical, and personnel assistance when the request for assistance originates in foreign countries.
3. The greatest contribution to foreign countries can be made by improving and diversifying methods of contraception, by demonstrating humane and effective family planning within the United States, and by providing public monies to finance the cost of effective family planning activities.

## STRATEGY OF HUMAN RESOURCE DEVELOPMENT: UNEMPLOYMENT

Frederick H. Harbison

Manpower problems can be considered under two categories: 1) lack of skilled and educated persons, and 2) labor surpluses, especially of the unskilled type. Today's lecture will deal with the second of these two categories, i.e., unem-

ployment. Most developing countries are experiencing unemployment in the modern sectors of their economies. This is true even of the wealthier ones such as Venezuela where unemployment has reached 15 percent of the labor force. In the cities, particularly, unemployment is a major cause of political agitation.

### Reasons for Unemployment in the Modern Sector

Developing countries have "dual" economies, i.e., both traditional and modern sectors. In the latter we find the government ministries, wholesale and retail services, factories, modern transport, and a money rather than a barter economy. Since wages in the modern sector of developing nations are four to five times higher than those in the traditional sector, there is an influx of the skilled people into the former. In advanced nations the wage differential is on the order of two to one. Education has a modernizing effect. As the people are educated their aspirations are raised and, therefore, they leave their traditional society for the city. Surveys show that in those countries where rural education has been stepped up, unemployment has risen in the cities. People who go to the city seeking wage-paying jobs often do not find them, but, because they feel that the job they eventually expect to get will be worth waiting for, they remain unemployed. For the duration of the wait they are cared for under the extended family arrangement.

In most developing nations the population is increasing by 2.5 percent per year. For developed nations the figure is without exception below two percent and in some instances as low as one percent. Never before has the population of the world grown two percent per year. When today's developed nations were industrializing they did not have to cope with the population pressures that face today's developing states.

When developing nations set up modern industries, employment frequently does not rise because these industries are capital-intensive, not labor-intensive. As the textile factories of Egypt and the jute mills of India modernize, for example, production increases but employment remains stable. There is a limit, furthermore, to the extent to which the government can absorb the unemployed. The conclusion that may be drawn from all of these facts is that economic progress generates unemployment.

In the modern sector of the economy of the developing countries the increase of the labor force is greater than the increase of the population. If the population increases 2.5 percent per year, the labor force will increase about three percent. Also, in the modern sector the rate of new job creation is slower than the rate of increase in national income. If GNP grows about five percent per year, then the rate of new job creation will be around 2.5 percent. Moreover, the increase in the labor force will be three percent. Though the economy may be growing, unemployment will rise. Venezuela, for example, is one of the wealthier of the developing countries with her vast oil and iron ore resources. Yet this nation, with its high rate of industrial growth, has a serious unemployment problem. Her population is increasing 3.5 percent per year, but the labor force is increasing

by four percent in the same period. The GNP increase is eight percent but the rate of new job creation is only three percent. When new job creation is less than the growth in GNP, productivity is rising. Only when productivity is stable does the rate of new job increase equal the rise in national income. A Princeton study of 25 countries shows that, on the average, for every three percent rise in national income, employment increases one percent. In many countries the ratio of rise in national income to new jobs is higher. In others, employment has actually dropped with a rise in GNP.

### Employment Policies

Now we turn to possible policies for dealing with the employment problem.

1. An approach frequently used in Latin America is to prohibit the discharge of a worker hired in the modern sector. Not only is this system inefficient, but when there are too many people on the job there is little motivation to do a good day's work.

2. Another system was tried in Kenya where unemployment was 15 percent. Employers in the modern sector agreed to increase employment by the same percent, but the result was a flood of new workers entering the labor force. Employment did rise 10 percent, but unemployment rose to 30 percent.

3. In Tanzania the unemployed were moved from Dar es Salaam to the country but soon found their way back to the city.

4. The ILO has suggested that we use labor-intensive production methods. This approach is feasible only if wages are kept at a low level. This system has not worked well in practice.

5. Youth brigades may be formed to provide the young unemployed with work on public projects. For such a project to be successful, wages must be low and the men must be trained or educated. Such projects have been tried in several African countries on a very small scale.

6. It has been suggested that the unemployed be put in the army. First of all, to equip a man for the army is expensive, and army officers are more interested in training fighting men than a skilled labor force.

7. One approach to urban unemployment would be to make the rural areas attractive to the unemployed by transforming the primitive society. This entails modernizing agriculture, improving housing and health facilities, and promoting handicraft industries. More funds for these purposes should be allocated to the rural areas.

There are several reasons why this approach is attractive. Agriculture is a labor-intensive enterprise. But, to make the rural setting attractive, all of it must be transformed. The fact that agriculture does not produce enough food is more sig-

nificant to developing countries than the lack of resources to industrialize. In parts of Latin America, as elsewhere, food production per capita is falling. Instead of squeezing agriculture to get funds for industrialization, the opposite must be done. This change of emphasis is hard for politicians to accept, but in some nations such as Nigeria, Kenya, and Tanzania, an agricultural revolution is in progress.

Rural transformation refers not only to the development of modern agriculture, but also to other widespread changes in the traditional sector. Such changes must include the introduction of modern agricultural techniques and the development of food processing and light industry such as meat, dairy products, or canning. The development of such light industry may well be preferable to building steel mills, etc. For example, several of the developing nations have beer bottling plants. In most cases, all the ingredients--hops, bottles, and even caps--are imported and, in effect, the beer is merely "assembled" in the country. There is not much to be gained from such an arrangement. In terms of employment and development, it is far better to grow and produce the components within the native economy. Sugar can be refined locally. The point is to relate the light industries to the local agricultural products.

One of the major problems which the developing countries have faced is a shortage of food for local consumption. Many food needs have been met by imports. The need to import food has not been considered too great a handicap, for several of the developed countries faced the same problem and solved it by exchanging their industrial output for food. But the theory that the developing economies can concentrate on industrialization and forget the development of agriculture has not been proved. Moreover, decreasing the number of people in agriculture does not mean progress, if unemployment rises and if output does not increase. On the other hand, growing more and better quality food not only will assist the development of a strong and healthy work force, but also will mean employment opportunities for thousands.

It should also be mentioned that there is a close connection between rural transformation and education. Increased education often leads people to seek better opportunities in the cities and, thus, there is more urban unemployment. It is necessary to retain manpower on the farm and to increase farm output. This does not mean, however, that education in the rural areas should be discontinued, nor does it mean that curriculum changes alone can solve the problem. No education can convince a child to remain in a traditional occupation using traditional methods, for once aspirations are raised they must be satisfied. The flow to the cities has to be stemmed in another fashion.

A reduction of migration to the city can only be accomplished by making the rural areas so prosperous that people will want to stay. Rural transformation can achieve this, but it means a major shift in investment patterns so that the terms of trade between industry and agriculture will improve--a more balanced type of growth.

The Aswan Regional Development Plan is an example of this type of rural transformation. Tied in with the huge Aswan Dam complex has been the creation of new opportunities in agriculture and also much investment in agriculture, light industry, housing, etc. While this structure has been developed, educational programs have been geared to assist people to take advantage of the new opportunities. Multi-purpose or comprehensive schools assist students to acquire skills in modern agriculture and industry. Not all developing countries, of course, have projects such as the Aswan Dam around which they can build such programs.

With regard to balanced versus unbalanced growth, the concept of one dynamic sector spreading its influences throughout the economy does not seem to be generally accepted as it once was. The result of many attempts at unbalanced growth has been a greater disparity between the industrial and traditional sectors of the economy. While enclaves of modern industry have raised GNP, GNP is not as sensitive a measure of progress as might be desired. It does little good for the developing country to raise GNP rapidly for the benefit of a few, especially if such growth increases the differentials between urban and rural areas.

Maximization of GNP has, to some extent, been a false goal. The failure to invest in agriculture because it promises low returns means, for example, that the capacity of the nation to feed itself is limited and, in the long run, so is its potential growth. It is perhaps better to think in terms of a combination of goals such as raising GNP, decreasing unemployment, and increasing food production capacity. Given goals such as these, it is then possible to establish priorities. Consideration of priorities may then lead to lower rates of growth in GNP, but to higher human welfare in terms of better health, a greater food supply, and increased education.

Finally, with regard to unemployment, education may be one means of solving the problem. Education is a highly labor-intensive industry and, as it develops, it becomes even more labor-intensive. In the United States it ranks as the third largest single industry in terms of employment. By investing large amounts in education it may be possible to reduce unemployment and raise satisfaction considerably. No solution to the unemployment is possible, however, as long as the population growth rate is 2.5 percent or more. At no time in history has there been prosperity with such a high rate of population increase. When the rate of population increase reaches such dimensions, the care and education of the youth is an especially heavy drain on national income.

## STRATEGY OF HUMAN RESOURCE DEVELOPMENT: HUMAN CAPITAL

Frederick H. Harbison

In modernizing economies, economic wealth may best be expressed in terms of existing and potential stocks of human capital. It is the task of the manpower strategist to devise effective organizations and institutions to develop and utilize the stock of human capital.

Before attempting to discuss the strategy of human resource development, and several critical policy choices open to the manpower strategist, it is necessary to clarify several important concepts.

The "Wealth of Nations" is not so much related to material resources or material capital as it is to human capital. Human capital may be defined as the stock of skills, training, education, and capacities possessed by the labor force. In this respect, simple population statistics do not provide a sufficient basis for comparing the power and economic potential of nations. It is, rather, the quality of human capital--the extent to which the natural endowment of such capital has been developed--which reflects a nation's economic and political wealth and potential.

There are several processes of human capital development. Perhaps the most basic (but by no means the most important) method is education, including all formal education--vocational as well as academic. A second means of developing human capital is on-the-job training. On-the-job training is often underplayed in manpower and resource planning but, for the developing economies, it may well be as important as formal education. A third method of human capital development is the temporary importation of necessary skills. Such importation may take the form of immigration, although it is more common to use technical assistance. The importance of importing human capital should not be overlooked, but it will be useless unless the skilled personnel act as "seed corn" to induce the development of indigenous human resources.

Economic development calls not only for the development of human capital, but its utilization as well, for capital is productive only to the extent that it is effectively and efficiently utilized. For effective utilization of human capital it is necessary to match skills with the tasks that must be performed, that is, to utilize available skills. Matching jobs with men, of course, implies that human capital should not be used below its level of proficiency. To encourage efficient use of resources, both positive and negative incentives must exist to channel human capital into necessary and appropriate occupations for the realization of development goals. These incentives, both monetary (wage structure, wage differentials) and nonmonetary (prestige, coercion) are essential.

It is not enough to have a skilled labor force or to direct skilled workers where they appear to be needed. The efficiency with which skills are utilized often depends upon the effectiveness and efficiency of the organization or institution to which the skills are applied. Consideration of the effectiveness of organizations is somewhat distinct from the problem of human capital formation but unless skills can be applied, and applied effectively, investment in human capital formation is wasted. Examples of the advanced degrees of organization and planning are highly complex agricultural extension services or cooperatives.

### The Strategy of Human Resource Development

The strategy of human resource development involves devising a plan which provides for both the formation and utilization of human capital. The formation of such a



strategy involves considering alternative policies, making the necessary choices, and implementing them. An effective strategy must involve all three components-- especially the last. Without implementation there is no strategy, only a plan.

### Critical Policy Decisions

Six critical areas of human resource strategy may be considered. This list is not meant to be inclusive, merely suggestive. And, while emphasis is placed primarily on the various alternatives available, this emphasis is not meant to suggest that decisions do not have to be made nor that problems of execution do not exist.

First, no country, regardless of its economic maturity, can finance unlimited investment in education. Because both monetary and human resources are limited, priorities must be assigned to the various education levels. For example, is universal primary education to be developed at the expense of secondary and higher education, with resources diverted to higher education only after universal primary education is achieved, or are secondary and higher education to be emphasized at the expense of universal primary education so that high-level manpower requirements may be met? Or, is there to be some combination of the two alternatives? These are the types of choices which must be made.

The desirability of the second alternative is not as clear-cut as might appear at first glance. Although universal primary education is a widely-accepted and desirable goal, achievement of the goal may be impeded by attempting to achieve it too rapidly. Nigeria may serve as an example. Although 90 percent of the population received primary schooling, the quality of instruction is rather low. Only eight percent of the teachers have had secondary or university education, and the situation may be described as the blind leading the blind. Since, however, the cost of secondary education is three to four times that of primary education, increasing the number of teachers with a secondary education to improve the quality of the teaching staff means a considerable reduction in the number who can receive a primary education. Nonetheless, emphasizing secondary education at the expense of primary education means more able teachers, and thus enables a country to achieve the goal of high quality, universal education more rapidly.

A similar problem may be found at the university level. Once again the question of factor constraints indicates the decisions which must be made. There are limits to the education which can be provided, and resources must be allocated to develop the necessary combination of skills. The necessary combination of skills, needless to say, is not necessarily achieved by maximizing the number of university graduates. This question of the correct factor combinations is again illustrated by Nigeria. There, as in many developing economies, for every university graduate needed in the economy three technicians are needed. Yet in Nigeria there are 7,000 in universities and only 1,500 people in training for subprofessional jobs. Moreover, it should be noted that the Nigerian economy cannot absorb any more university graduates than will be forthcoming from the present system.

Not only is the correct combination of skills not being developed, but the cost of university education in Nigeria is extremely high. None of these comments is meant to imply that the quality of Nigerian university education is low; on the contrary, the standards are quite high. It should be recognized, however, that some valid questions can be raised with regard to the allocation of educational resources. To be more explicit, the cost per student of educating a Nigerian is nearly \$3,000 per year or 80 times GNP per capita. In the United States, on the other hand, the cost per student is less than \$3,000, and less than GNP per capita.

Several factors explain the relatively high cost of university education in Nigeria. The faculty-student ratio is high (1:5 in Nigeria as opposed to 1:12 in the United States) and the faculty itself is rather expensive, being composed primarily of expatriates who command and require higher salaries than native professors. Moreover, each of the five universities insists on maintaining or establishing similar schools of instruction. It would be much more economical if each of the five schools were to specialize in several areas rather than all five attempting to provide an entire academic and professional curriculum.

The point is simply that, due to factor constraints, choices of educational priorities must be made, and overemphasis on education at any level is possible. The question to ask is, "What distribution of educational funds provides the greatest productive output per dollar of expenditure?"

A second and related area of critical choice is the question of quality versus quantity. Increasing the number receiving education is not likely to be compatible with improving quality of education. Again the question probably cannot be answered by emphasizing either quality or quantity; some mix of the two is necessary. It should be clear, however, that to improve quality, some quantity may have to be sacrificed. Various alternative uses of resources must be weighed to determine which offers the greatest contribution to development plans. Moreover, as is true with all the critical areas discussed here, different countries will, for valid reasons, reach different conclusions about the ideal mix of quantity and quality. Nigeria has decided that a small, high-quality output of university graduates is desirable. Egypt and Latin American countries have made some sacrifice in standards of instruction so that more high-level manpower can be trained.

A third area of critical choice, again one broadly related to the quality-quantity trade-off, is the emphasis to be placed on technical education (engineering, science, medicine) versus nontechnical or academic education. This question, of course, is of primary relevance at the university level. As might be expected, the choice is between more technical education and more academic education; more of one means less of the other. Some comparative figures on the proportion in technical education are relevant:

	Percent in technical education
World.....	20 percent
Communist countries.....	40-50 percent
African countries.....	varies

Many of the developing countries are attempting to raise the proportion engaged in technical studies to more than 20 percent. This may be a valid goal, but the question must be asked, "How many scientists and doctors do we need?", and "How many can we educate?"

In many African countries the goal is considerably higher than 20 percent. Nigeria, for example, has a stated goal of 60 percent in technical studies. It is impossible to achieve such goals, for the teachers who are necessary at the primary and secondary levels to provide the required background in mathematics and the general sciences simply do not exist. Because of the scarcity of qualified applicants, Nigeria and other developing countries have had to settle for a much lower proportion in the technical fields, normally around 20 percent. Moreover, it is questionable whether job opportunities exist for as many highly-trained graduates in the technical fields as would be produced. In addition, it costs around three times as much to educate a person in a technical skill as it does to educate a person in the standard academic disciplines. This means that to expand technical education by one graduate, three nontechnical graduates must be forfeited.

Another closely related problem is the question of subprofessional education. Most of the modernizing nations underinvest in subprofessional education. Iran, for example, has nearly ten doctors for every medical technician. A feasible ratio is probably 3:1. Clearly there is a distortion in the factor proportions. The basic question that arises from such distortion is whether separate institutions should be provided for subprofessional education or whether existing universities should be encouraged to perform this task. In terms of facilities and faculty, it is clear that unused capacity exists in most of the developing nations and that, because of the relatively high fixed costs involved, the marginal cost of training subprofessionals at existing universities would be very small. In addition, building separate facilities means taking funds away from the universities and other development programs.

A fourth critical area of policy decision concerns vocational training at the craft level, i.e., electricians, carpenters, and mechanics. These skills are critical for the developing nations; this much, at least, is agreed. The controversy arises with regard to where such skills should be acquired. At vocational schools? On the job after a general secondary education? Or, should there be a mixture of the two types of preparation?

Most developing countries have not given enough intensive consideration to this question. Emphasis on education has led to an overstatement of the value of formal vocational training. The policy has been to provide vocational education and let the graduate find a job afterwards. While such a policy is reasonable enough, several countries had the experience of students attending vocational school not to learn skills but to obtain a sufficient degree of literacy to enter the civil service as clerks. These white-collar jobs are more attractive and prestigious than the jobs which vocational skills could lead to. Moreover, their sad experience has shown that the last place to send a boy to learn to work with his hands is a vocational school, for the student generally discovers that he wants to be a foreman or administrator, not a craftsman.

Cost considerations also suggest that vocational training must be reappraised. The expense of vocational training in a formal institution is three times that of a normal secondary education. If such vocational education is merely being used to gain a modicum of literacy, it is valid to question the role of formal vocational schools. Not only do they cost three times as much as secondary schools, but they do not provide as good a general secondary education.

Faced with these considerations, manpower strategists have increasingly considered providing general secondary education and subsequent training on the job. For smaller employers who do not have the training facilities, technical assistance can provide vocational night schools at considerably less expense than formal vocational training. An example of such training methods comes once again from Nigeria. Many, if not most, Nigerian auto mechanics are trained locally through unpaid, informal apprenticeships. In fact, the parents often pay to have their sons learn.

Regardless of the emphasis given to on-the-job training, it should be clear that formal vocational education, secondary education, and on-the-job training can be combined. The planner must weigh the costs of various mixes against their contribution to the development process. Far too little weighing and balancing has been done in this regard; far too little attention has been paid to a combination solution.

A fifth critical policy area is the individual's choice of occupation and education. In a free society men are at liberty to choose what type of education they will undertake and what occupation they will enter, but it may well be that for the developing economies such a goal, in and of itself, is both idealistic and simplistic. This statement is not meant to imply that coercion is necessary, for there are other means of encouraging people to enter various educational fields and various occupations.

In Malawi, for example, there is a critical shortage of high-level manpower. Only 60 youths a year are ready to enter the university and there are more than 900 civil service jobs a year available. Students who go abroad to study are not only given chances to serve on various international bodies as representatives of Malawi, but they are also tempted by the higher salaries and other benefits the more developed countries offer. In Malawi, unlimited free choice of education and vocation would be unrealistic in terms of the country's development needs. In Malawi and many other countries it may be necessary to tie opportunities for education with obligations to serve several years in a civil service job, or to undergo a specialized type of training. It must be recognized that interfering with free choice means that criteria for making distinctions must be established. The political and social difficulties in establishing such criteria and justifying them are significant, but so is the loss of manpower from the exercise of free choice.

The adequacy of existing wage and salary structures for allocating resources in terms of the requisites of development raises another set of problems, and this is the sixth policy choice. More is involved than just analyzing wage and salary differentials. The heritage of a colonial wage structure or tradition often means that the market mechanism will work inefficiently. Manpower strategists should attempt to adjust those differentials so that people will be encouraged to undertake

the tasks which must be performed. The salaries for medical assistants may have to be raised almost to the level of doctors' salaries to encourage men to travel through the bush to provide medical service. Agricultural assistants may have to be paid salaries close to those of professional agronomists in order to encourage them to train people in rural areas in the use of new techniques. Such decisions take courage and can be made only after the alternatives have been weighed, for the consequences, in terms of unrest and dissension, may be great.

In any case, it is obvious that differentials in incentives exist. Given these differentials, it is of little value to provide manpower training unless those trained are willing to enter the necessary occupations. The example of young men entering vocational school so that they could become clerks rather than craftsmen is a vivid one. Manpower strategy is not just raw statistics or even weighing and balancing alternative costs, but also consideration of the drawing power of existing incentives and willingness to change the wage configuration, if necessary. No manpower development plan can insure adequate allocation of skills unless incentives reflect productivities and opportunities.

### Conclusion

The task of the manpower strategist is a very broad one. It is considerably more than making manpower forecasts. The decisions facing such a strategist are critical and difficult.

Rather than lose sight of his task by attempting to perform all his functions at once, it is suggested that the strategist consider the problem in terms of a system. The analogy to a power-generating station is not unrealistic. Generating facilities may be likened to the schools, vocational workshops, and on-the-job training facilities. The transmission lines may be thought of as carrying incentives. It is the task of the manpower strategist to look for the critical sources of power failure. If the system appears to be out of balance, he must attempt to determine the source of the problem, be it in the schools, the incentives, or elsewhere. It is, thus, the relationship among all the components that must be considered, not each component separately. Such a systems analysis will enable the manpower strategist to approach his task with greater confidence and with greater probability of success.

## HIGH-LEVEL MANPOWER AND LABOR MARKET STRUCTURE

John E. Parker

As a nation develops, the role of its human resources becomes critical. Even where land and natural resources have been intensively exploited, human capital and hu-

man resources still have growth potential. As Harbison and Myers<sup>1</sup> show, a nation's development is closely correlated with the level of its human resource development. It is clear, also, that high-level manpower plays a key role in development, and shortages can constitute a "master bottleneck" to growth. As development proceeds and the economy becomes increasingly complex, additional demands arise for expertise in more and more sectors of the society.

A note of caution is in order before we plunge into a discussion of labor market structure and its implications for manpower policy. I am reminded of a remark made some years ago by the economist Kenneth Boulding during a discussion of the meaning of the term "manpower." He expressed the fear that manpower is an efficiency concept and indicates a desire to maximize our progress toward what he described as SWDE, a single well-defined end. He emphasized that we should be concerned with "not manpower but men" and he questioned whether a SWDE exists. There are, in fact, many goals at each level of development and the question of the relationship between goals and free choice appears at each step of the development process.

One of the basic transformations that occurs in developing countries is the appearance of relatively-structured labor markets as people move from rural to urban areas and acquire skills. Labor markets are difficult to define and different definitions have been developed for specific situations. A few are listed below:

1. The United States Department of Labor describes a labor market as the geographic area within which workers commute to their jobs.
2. Another method of defining a market is to ask people where they are working now and where they would look for a job. The worker then gives his interpretation of the market in which he operates.
3. Still another approach is to define a labor market through a study of the mobility patterns of workers in a particular occupation.

#### Structure of the Labor Market

The more skilled the labor force, the more highly-structured the labor market. In the United States, our migratory workers with very few skills and no attachment to specific locales work in an unstructured labor market. This is an unusual situation in the United States, but it is common in the developing countries. Important elements that condition the structure of a labor market are listed below:

1. Entry skill requirements; e.g., level of education, licenses.
2. Employee organizations, such as unions.

<sup>1</sup>Frederick H. Harbison and Charles A. Myers, Education, Manpower and Economic Growth (New York: McGraw-Hill Book Company, 1964).

3. Quality and quantity of information in the labor market.

4. Form and size of the enterprise.

5. Individual preference; e.g., people with high-level talents may dislike certain jobs or locations.

The degree to which each of these elements is present in a given market determines the labor mobility in that market. The more training a job requires the more exclusive it becomes, sometimes to the extent of being noncompetitive. Well-defined boundaries may be established and both entry and mobility restricted.

Not all the elements found in a particular market are necessary for the proper functioning of the market. Entry requirements, for example, should reflect only the technical requisites of the job. Social class distinctions and interest-group influences often bar entry of persons who are or can become technically qualified. Another point that should be made is that a formal education is not the only means of entry into many skilled or technical positions. The importance of on-the-job training should not be underestimated. More study is needed of the relatively unknown process of skill acquisition.

#### Labor Force Adjustment and Occupational Forecasting

Occupational forecasting is necessary to plan for future needs. Under the usual approach, present levels of skills and the ratios among them are calculated as a basis for plans to meet projected needs. It is not always wise for developing nations to use United States ratios as a standard, because occupational relationships are flexible. For example, occupational coefficients, i.e., the number of laborers of a particular type per unit of output, are not necessarily constant. Adjustments can be made in occupational composition without hurting the quality of the final product. Nurses may be able to carry out some duties for doctors, or technicians for engineers. At times, the need for certain skills has been underestimated but, through changes in size of training classes, new teaching methods, changes in curriculum, and substitution of less-skilled workers, the shortages have been relieved. Developing countries should be aware of these possibilities of meeting skill shortage problems and should not view occupational requirements as fixed.

In general, in the United States, a brief survey of our studies of manpower requirements over the past 20 years indicates that we may have overstated our needs for high-level manpower because of our failure to consider in sufficient detail the possibilities of change in the production coefficients resulting from various types of substitution. While engineers in the aerospace industry, for example, are in short supply, a recent study of mine found that many of them believe they are not performing engineering work. Their belief that technicians can handle many of their assignments indicates the existence of an "expectational shortage." A shortage of this type leads employers to overhire for fear of being caught short in the future.

## Policy Proposals

These, then, are some of the problems associated with forecasting high-level manpower requirements. Now we are prepared to look at a few of the solutions:

- 1) Jobs may be redesigned to utilize different levels of skills. For example, in some cases technicians could be substituted for engineers.
- 2) If the skill shortage problem is restricted to a geographical area, communication among different parts of the country might be improved.
- 3) An even more important technique involves standardization of job descriptions, requirements, and wages. If job characteristics are explicit, possibilities for substitutions may become apparent. At times, a country might not be able to wait until formally educated personnel is available. In the short run, employers may have to consider the possibility of substituting. The skill requirements for some occupations are of such a general nature that little, if any, special training is needed.

It should be stressed that unless some system of standardized occupational classification is used it will be exceedingly difficult to bring any order to manpower planning of this type. The International Standard Classification of Occupations published by the International Labour Organization, or modifications of it, is suggested as a starting point to facilitate country-to-country comparisons.

It is important to recognize that there are two types of mobility in the adjustment process. One type occurs when a person leaves one employer for another who requires similar skills. The second occurs when transfers and promotions are made within an organization and not from the external labor market. One must carefully consider both the external and internal market when adjustments are being made. Education and training facilities provided by an employer on a continuing basis enable the internal market to work more effectively. They also can maximize work force potential by increasing its flexibility. By emphasizing the use of training facilities at this level, we focus on the need to evaluate the whole "time structure" or "time sequence" of education. To obtain optimal deployment of resources in the short run, informational services should be expanded and more effective use made of wage incentives. This specifically means the avoidance of irrational or unjustified wage rates. Other short-run alternatives are to import human resources and/or to pool local high-level skills so that they may be used on a consultant basis by a number of enterprises.

In the long run, wage and salary incentives are highly effective in getting people into specific areas of training. An educational strategy, thus, is especially important. Plans must be made for future occupational needs by providing for instructors, facilities, and curricula in the areas where trained personnel will be needed.

In summary, as labor markets develop, particularly those for highly-skilled manpower, they must be watched closely to prevent unnecessary rigidity. The linkages among skills and the possibilities for substitution are of paramount importance in



the short run. Finally, there must be skill acquisition studies and continuing evaluation of the relevance of education and training opportunities at each career stage. The development of human resources to pursue a single well-defined end or many interrelated goals is a major item on the agenda of every economy. An understanding of market structure and skill relationships is an important element in any human resource strategy.

## MOBILITY OF HIGH-LEVEL MANPOWER<sup>2</sup>

John Shearer

In order to bring the problems of high-level manpower movements immediately into focus, the major conclusions of the lecture will be presented at the beginning:

1. Rich countries and rich regions within countries act as magnets attracting human resources, especially high-level human resources, from poor countries and regions.

2. These movements are a major form of subsidization of the rich areas by the poor ones.

3. The cost to losers of skills, in part, offsets the aid--often in the form of highly-skilled manpower--which is given them by the rich areas.

4. The exodus of highly-trained people from poor areas is one cause of the wide and growing disparity between rich and poor regions and nations.

In resource allocation theory, labor mobility in response to economic opportunities is rational, i.e., it enhances world productivity. But since concern of the poor regions and nations is with their own economic expansion and elimination of the gap between themselves and the rich, the outflow of highly-trained people is definitely undesirable.

### Intranational Flows of Highly-Skilled Manpower

One of the prominent characteristics of development is the increasing concentration of population in urban areas. In all Latin American countries the largest metropolitan area is also the wealthiest in per capita terms and has a very high

<sup>2</sup>The conclusions of this lecture are based largely upon empirical studies of population movements within Latin American countries and between Latin America and the United States; nonetheless, because of the comparability of the Latin American situation to that of many other developing nations, these conclusions appear to be valid for these nations as a whole.

proportion of the nation's highly-skilled personnel. Typically, the largest city is five to ten times the size of the second largest city and is expanding at at least twice the population growth rate of the whole country.

Increasing concentration of human resources is primarily the result of in-migration and not of a difference in birth rates between the center city and the periphery. For example, in Santiago, Chile, where the population growth rate is 2.5 times the rate for the rest of Chile, 37 percent of the populace was born outside the city and fully 53 percent of the labor force come from the hinterland. A major implication of the increasing concentration of population and economic activity in a few urban centers is that the outlying regions subsidize the expanding ones. In particular, the poor areas bear the cost of rearing and educating children, but do not receive the benefit of their skills. Since high-level skills are more expensive to develop and have a higher payoff, the more highly skilled the migrant group, the greater the subsidy to the recipient regions.

The relevant question, then, is to what extent the higher density of skills in a few urban centers reflects an inflow from the provinces. To return to the example of Chile, the percentage of highly-skilled persons among migrants to Santiago is five times that in the regions from which they emigrate, and is even 1.25 times the ex ante proportion of highly skilled in Santiago. This pattern exists in other countries as well and it not only contributes to, but is also caused by, the economic disparity among regions. For example, facilities for higher education are concentrated in a few centers which, therefore, attract the brightest youths away from provincial areas that need their talents most, but to which they are often unwilling to return.

#### International Flows of Skills

In the movement of highly-skilled people between Latin America and the United States, the latter is the counterpart of the capital city within an individual country. Even discounting the politically-motivated inflow of Cuban refugees in recent years, net immigration to the United States of highly-trained Latin Americans for social, economic, and political reasons has increased. From 1949 to 1961, 33,000 engineers and 10,000 scientists migrated to the United States. These are small numbers relative to the total persons with these skills in the United States, and thus are a limited contribution to the American economy. For the donor countries, however, the loss of 33,000 technical experts is catastrophic. Another indication of the disproportionate loss of the Latin American countries relative to the United States' gain is that, whereas people in high skill categories comprise only nine percent of the United States' population, they are 27 percent of the Latin emigrés.

Another outflow of talents from developing countries results from what might be called the "international organization syndrome." Staffing in these bodies is proportional to the populations of member countries. Because the poor nations have far fewer people with the skills needed by the institutions relative to the wealthy countries, proportionate participation from all member countries represents a far

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2  
greater drain on the high-level manpower of the poor nations. The organizations' great demand for personnel from the developing nations makes such jobs an attractive alternative to returning home for students who have completed their studies abroad.

The outflow of talents from developing countries is countered by an inflow from developed countries, but seldom to an extent sufficient to compensate for their losses. Permanent immigrants have been important in Latin American development, but have not been a reliable source of supply of needed skills for most countries. In many cases the bulk of in-migration of professional talents consists of the management personnel of foreign firms and their contribution to the long-run expansion of high-level skills is dubious. A study of 52 American corporations with subsidiary operations in Latin America revealed that, in all but a few cases, the highest level occupations were monopolized by Americans and very little was being done to recruit and train nationals to replace Americans. Although foreign firms invariably claim that they attempt to maximize the number of nationals employed as a means of avoiding the higher cost of using their own citizens, they also claim that the dearth of qualified nationals stymies their development of indigenous economic and technical leadership. Yet the foreign firms make little effort to recruit scarce talent. In Brazil and Mexico where nationals held only 14 and 9 percent, respectively, of the top five positions in the foreign subsidiaries studied, the mistaken assumption of parent firms that their own often second-rate personnel will be better than local talent, and the jealousy with which the second-raters protect their jobs, combine to limit the employment and development of local talent. It is incumbent upon the governments of these countries to spur the transformation of foreign firms from potential to actual developers of high-level national skills by requiring firms to recruit, train, and promote nationals with the aim of minimizing alien employment.

Importation of foreign specialists into the public sector is one means by which skill bottlenecks can be overcome temporarily, but it has several drawbacks. Reliance upon technical aid has often led governments to understress development of indigenous supply of technical skills, and aid projects tied to the use of engineering and contracting personnel from the donor countries stifles utilization of local talents and generates much ill will. Importation of highly-skilled manpower can result in important contributions to economic development, but its value will be greatly enhanced if its orientation is toward training nationals rather than substituting for them.

Sending students abroad to acquire skills is an important way of importing high-level skills. Because most developing countries cannot provide high quality, specialized, graduate education, export of students--to be reimported after they have acquired critical skills--is often cited as an alternative to investment in domestic universities. The question that arises, however, is the extent to which the fields in which students do advanced work are relevant to the manpower needs of their countries. Unless and until basic structural changes occur in many nations' social and political relations, specialists trained in technical fields will not be able to contribute fully to their countries' economic development. In light of this limitation it is possible that social and economic transformation will be furthered by

the short-run policy of sending more students abroad to gain expertise in sociology, economics, and political science fields, which have direct bearing on the structure of society, rather than in more technical areas. The preliminary results of a study of Latin American students in the United States, which reveal a strong bias toward technical curricula, lead to the tentative conclusion that patterns of study abroad are ill-advised in terms of the optimal sequence for development of high-level talents.

In conclusion, patterns of high-level manpower movement in and from Latin America have some implications for policy which may be relevant to the problems of other countries. Planners must exploit pecuniary and other incentives to induce talented people to remain in--and to enter--their countries, and to lure them away from the metropolitan centers to peripheral areas where their skills are in shortest supply. Prohibitions may be necessary to reinforce the incentives; e.g., required indemnification for education costs incurred by the state can serve as a deterrent to emigration, and limitation of the freedom of students to remain abroad can lessen the extent of expatriation. In the final analysis, incentives and prohibitions affecting the mobility of high-level manpower are only one facet of a strategy of development and allocation of social, economic, and political leadership talents. They cannot substitute for improvement of educational infrastructure at the university level.

## THE LABOR FORCE IN TRADITIONAL AND AGRICULTURAL SOCIETIES

Sanford Cohen

If we consider the arguments that have been made concerning the critical importance of both human capital and the agricultural sector of the developing economies, we are forced to the conclusion that building up the human capital stock in the agricultural sector is a problem that requires a higher priority than it has hitherto enjoyed. To focus the discussion more sharply, let us first identify some of the important attributes of labor as it is employed in nations where agriculture follows traditional forms.

(1) In the national occupational structure, well over 50 percent of the labor force is in agriculture.

(2) Little or no change is occurring in agricultural technology. From generation to generation, people farm in the same way.

(3) Marginal productivity of labor is low, perhaps zero. Another way to put this is that workers can be withdrawn from the agricultural sector with no resulting reduction in the output of the sector.

(4) A good part--sometimes all--of agriculture is on a subsistence basis, i.e., output is consumed by the producer and never enters commercial channels.

(5) In place of the conjugal family unit found in modern industrial society, the extended family unit is typical.

(6) Occupations are likely to have significant status connotations. Certain types of work, for example, may be performed only by particular castes or indigenous populations.

(7) Per capita income is low, mortality rates high, and illiteracy general.

(8) Traditional agriculture may be associated with a variety of urban economic structures. There may be an advanced industrial sector with an urbanized work force, a light industry with mainly semiskilled or unskilled labor, or practically no industry with the major nonagricultural occupations in public employment, handicrafts, and the services.

It should be noted that the above attributes describe the usual conditions found in the traditional agricultural sector, but they are not necessary conditions. Marginal productivity of the traditional sector, for example, is not necessarily zero, nor is agriculture always subsistence in character.

Economic development aims to improve the traditional labor force. Before a program can be launched successfully, however, it is necessary to know something about the quality of the labor force. To clarify the problem, it is necessary at this point to summarize through the use of categories which are oversimplifications but which, nevertheless, describe important qualities frequently imputed to traditional laborers. From the literature on the subject, three different pictures of the traditional laborer emerge. These are the noneconomic man, the inefficient man, and the economic man. The policy most appropriate for transforming a traditional labor force into a body of modern workers will depend upon which of the pictures is the closest approximation to the actual condition within a nation.

The noneconomic man is a character who emerges from the pages of the anthropological literature. By contrast with the economic man, his activities are not consistent with rational patterns of economic behavior. Where economic means are tied to ceremony and ritual, and where economic ends are connected with elaborate prestation systems, it is obvious that we are not dealing with people who stalk through the pages of Western economic literature. Recent anthropological writing has stressed the fact that primitive societies are concerned with maximization but, again, it is a type of maximization that is out of phase with the cultural conditions of the modern society.

The problem from the employment standpoint has been summarized by the English economist, E. H. Phelps Brown:<sup>3</sup>

The difficulties that arise at many points (when modern technologies are brought into a primitive economy) show that the whole way of life of the worker--his customs, values, habits of thought, his ties of kindred and his notions of obligation and authority--must undergo deep changes if he is to serve the uses of a developed economy.

<sup>3</sup>E. H. Phelps Brown, The Economics of Labor, page 50 (New Haven: Yale University Press, 1962).

If this, then, is the most accurate picture of labor in the traditional society, transforming the worker to make him an efficient economic agent involves little less than a drastic reacculturation of the man and his society. This would seem to be a precondition of a manpower take-off into those spheres where the economist's advice about human capital and vocational and technical education would be pertinent. Of course, reacculturation occurs when physical investments are made, educational programs instituted, and traditional village economies disrupted, but without sufficient consideration of the cultural setting, rapid change in the economic structure is likely to create an anomic situation and the human price of modernization will be high.

The most popular assumption of the economist concerning labor in the traditional society has been that of the inefficient man. Inefficiency is assumed to arise from either or both of two factors. One is the characteristics of the worker himself. He has a low labor force commitment, resists change, and is undependable or lazy. He lives from day to day, and spends too much time enjoying fiestas or in aimless political posturing. The other factor producing inefficiency is found in attributes of the economy. The worker is inefficient because of a lack of cooperative resources such as land or tools. As a result of these scarcities the worker frequently finds himself living in the halfway house between employment and unemployment, that has been called underemployment.

A large part of the concern with underemployment has been with the phenomenon as it is manifested in traditional agriculture. The popular image of the labor force in agriculture is that of large numbers of workers who contribute little or nothing to output. The notion of a surplus labor force in agriculture, for example, was used by W. Arthur Lewis to demonstrate the possibility of recruiting an industrial labor force at no real cost to the economy. Since large numbers of persons could be withdrawn from agriculture with no reduction in farm output, the departing workers, in effect, would carry their own bundles of food with them as they moved to the cities. If we accept the view of the traditional laborer as inefficient, certain conclusions for development policy follow. The size of the agricultural labor force should be reduced, a large part of the labor force should be educated to improve its economic efficiency, and policies such as land reform should be instituted to alleviate shortages of cooperative resources.

Another view of the traditional laborer is that of the economic man. By this we mean that the farmer uses land, makes investments, and exerts labor power up to the point where the income from these activities covers the costs. If the expenditure of "X" money units on capital equipment will yield a return of "2Y" while the same expenditure for labor will yield only "Y" he will invest in capital. There are studies which indicate that, in some primitive communities, the economies are small-scale models of more complex societies. The study by Sol Tax of an Indian group in Guatemala, for example, was entitled "Penny Capitalism"<sup>4</sup> to emphasize the economic rationality which the author discovered in the producing, buying, and selling activities of this particular group of Indians.

<sup>4</sup> Sol Tax, Penny Capitalism (University of Chicago, 1953).

If the traditional laborer is rational, why is his living standard so low? The answer given by Professor Theodore Schultz, who has been a strong proponent of the economic man thesis, is that the traditional laborer lacks the human capital to take advantage of technological progress. In his world, in other words, the state of the arts is constant. Investment is a process of adding more wooden plows to the wooden plows he already has. He is usually not aware of and never is equipped to take advantage of the benefits of scientific agriculture or mechanization. According to this point of view, the traditional laborer is neither inefficient nor inhibited by primitive social patterns. Within his technological milieu he is a good farmer but he has come, as it were, to the end of the string. He can improve his living standard significantly only through a change in the state of the arts, and a change in the arts can only come about if he develops the capacity to absorb and put to use some part of the existing store of knowledge about modern agriculture.

This analysis, it should be noted, is not consistent with the notion that a large army of unproductive workers is to be found in the agricultural sectors of the traditional economies. As might be expected, Professor Schultz does not accept the idea of a vast supply of underemployed persons. His basic argument in this respect seems to be that many agricultural workers who appear to be surplus are actually needed, but only on a seasonal basis. Their productivity might be low or even zero for part of the year, but it is positive during the planting and harvesting periods. Without their help at these times, he argues that total agricultural output would decline.

The policy implication of this view of the traditional laborer is quite clear. Priority should be placed upon increasing the stock of human capital. Extension services, vocational schools, primary and secondary education, and agricultural colleges must be expanded and modernized to produce the human capital to transform the agricultural sector from traditional to modern.

### Conclusion

I have tried to summarize three popular views of labor in a traditional economy. What we find in the real world is a bit more complicated, since the real world never fits neatly into the categories that students derive for analytical purposes. Pushed to its extreme, any one of the three views becomes nonsense. Taken as a partial view and the one that might be the most relevant in a particular setting, any of the three can be helpful toward understanding the nature of the problem at hand.

The existence of conflicting views should serve as a forewarning against overgeneralization. What might be effective in some circumstances will be a total failure in others. Mechanical approaches to manpower and employment planning are rarely sufficiently flexible to permit all the necessary adaptations required by local circumstances. Large-scale investments in education may be productive in some circumstances and totally unproductive in others. Vocational schools may be

the answer in some settings, but not in others. A large population in agriculture might include many underemployed persons in some cases and very few in others. Traditional behavior patterns might be a barrier to rapid industrialization in some regions but not in others, and so it goes. Labor practices in traditional economies are not constant. Instead, we find a maze of variations that complicate development efforts no end.

## DECISIONS OF NATIONHOOD<sup>5</sup>

Wendell Bell

The Democratic Revolution which swept the Western World in the 18th and 19th centuries was founded upon the international diffusion of Enlightenment ideals of the rights of man and representative government in the interests of the people. In the 20th century a new wave of democratic revolutions, inspired by the same ideals of liberty, equality, and fraternity, has spread to the developing areas of the world. Man's increasing mastery over his physical environment enhances his ability to design the future according to social and economic goals. In shaping the future of their countries, leaders of the new democratic revolution must make critical decisions on social, economic, and political objectives and on the means of achieving them. The focus of this lecture is on some of these decisions of nationhood and on how the values of the democratic revolution shape them.

Should we become politically independent? The fundamental question of independence versus continued colonial tutelage is an obvious decision of nationhood. Generally, leaders in a particular territory are not unanimously in favor of political independence. For example, a survey done in 1961-62 of 112 of the West Indian elite in politics and government, education, industry, trade, agriculture, and professions, demonstrates this divergence.

True Nationalists	39%
Acquiescing Nationalists	25%
reluctant	11%
dutiful	5%
opportunist	9%
Colonialists	36%

<sup>5</sup>The empirical studies upon which many conclusions of the lecture depend were done in former British colonies in the West Indies and South America from 1956 to the present. The hypothesis is that the results of these studies are also valid for many developing nations outside the Caribbean area.



True nationalists are leaders who demand immediate independence and who are actively involved in achieving it. Among the acquiescing nationalists, the reluctant ones feel that the colony is not yet ready for sovereignty, but still desire the end of colonial rule; the dutiful believe independence to be inevitable and have decided to do what they can to make it a success; opportunists publicly support, for personal reasons, but privately oppose independence. The colonialists are against any movement away from colonial rule.

Persons within each group tend to have certain characteristics. Colonialists, for example, are predominantly white and near-white planters and merchants. Although typically they have only a secondary school education, they are economically well-off and display an Anglo-European life style. True nationalists, on the other hand, are mostly dark brown or black skinned and are found in the middle classes. They choose life styles that are local variations of Anglo-European tradition. Nationalists are younger than colonialists and are divided between grammar-school educated and university-educated persons with few in the secondary-educated group. True nationalists also tend to be leaders of emerging mass organizations such as political parties and labor unions.

True nationalist attitudes can be traced to the disparity between their ideals--the neo-Enlightenment values of the rights of man, the belief in progress and in the use of reason in the conduct of human affairs, and the perfectibility of human nature--and inequitable social and economic conditions under colonial rule. On the basis of their acceptance of the values of liberty, equality, and fraternity, an Index of Enlightenment was constructed to correlate the nationalist sentiments of the 112 leaders with their convictions on the three values:

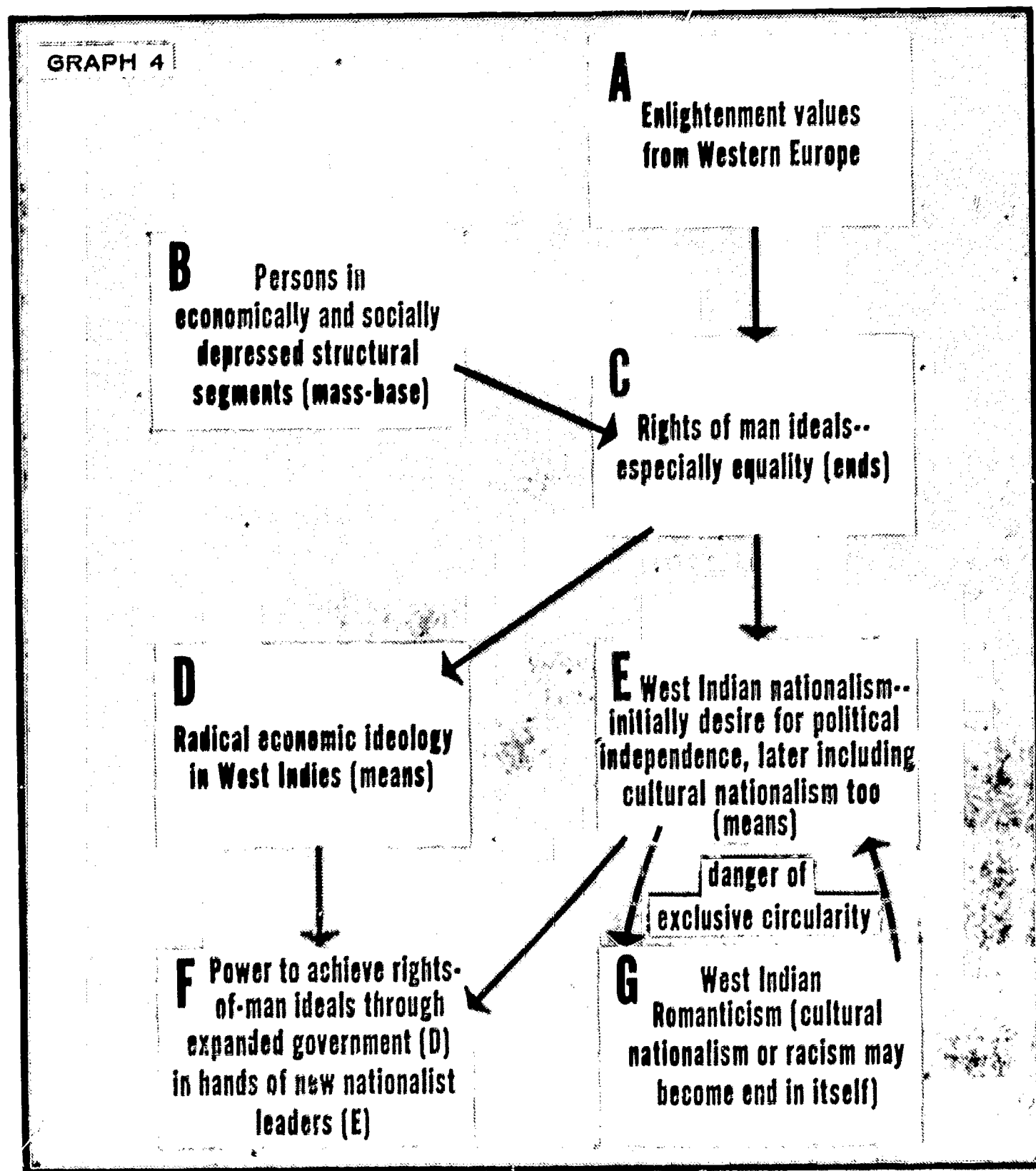
Table 3. INDEX OF ENLIGHTENMENT AND NATIONAL SENTIMENTS

Index of Enlightenment	Colonialists	Acquiescing Nationalists	True Nationalists	Total	Number of cases
3 (Enlightened)	0	0	100	100	29
2	0	22	78	100	18
1	25	71	4	100	24
0 (Unenlightened)	83	17	0	100	41

(Key: Figures are given in percents. An index number of 3 indicates acceptance of all three values; 2 indicates acceptance of two values, etc.).

Granting that there are many complex factors that must be considered, the Index of Enlightenment test shows a very high positive correlation between nationalism and democratic ideals. Additional survey results not shown reinforce this conclusion.

The following graph demonstrates schematically the causal sequence in the rise of West Indian nationalist ideologies from the inspiration of democratic ideals and dissatisfaction with colonial domination and economic underdevelopment:



How much national sovereignty should the state have? One of the important decisions which state-builders must make is the extent to which the nation should sacrifice its independence in return for the benefits of international cooperation. In particular, for local leaders in the different areas of the British West Indies,

the decision was whether to "go it alone," join in a federation, allow the United Kingdom continuing control of defense and foreign affairs, or remain a British Colony. Like most other nationalist drives toward equality since World War II, the West Indian movements generally opted for full sovereignty. Jamaica, Trinidad, Guayana, and Barbados each chose complete independence, although the smaller islands of the Leeward and Windward chains may stay in close association with the United Kingdom.

What should be the boundaries of the new state? It is most often the case that the boundaries of emerging nations are established by the former colonial power. The typical result is that the new state, the legal and political entity, does not coincide with the nation, a group of people fairly homogeneous in racial, ethnic, religious, and cultural characteristics. State boundaries which encompass several nations or exclude parts of a nation are one of the greatest causes of social and political tension in developing regions. The alternatives to such sociopolitical instability are juggling state boundaries to fit national borders, encouraging or forcing interregional population movement, or promoting national unity among initially heterogeneous groups.

What form of government should be adopted? In most emerging nations democratic ideals are the rallying cry of the independence movement, but when nationhood is achieved some of the nationalist leaders may be persuaded, despite their original commitment to representative government, that the nation is not prepared for it, nor for civil liberties. Democracy is often viewed as a means rather than an end in itself, and more or less given up in the name of rapid economic development, national integration, or social mobilization. Thus, between the original anti-democrats who opposed independence and the original democrats who favored independence but who become persuaded, generally falsely, that democracy is less effective than authoritarianism in achieving national goals, the future of democracy in the new states is precarious.

In every developing country there are groups which pose a threat to democracy. Authoritarians, the old colonialists, and reactionaries distrust the masses and do not believe in the universal rights of man. They want authoritarian government. Cynical parliamentarians favor representative government but believe that the electorate is incompetent and can be manipulated by politicians and civil servants for their own and the new nation's good. This group often includes many old-style politicians and government workers. Formerly in the vanguard of nationalism, they turn conservative in the face of competition from new political leaders who have massive popular support. Authoritarian idealists oppose parliamentary government because they fear that reactionaries, cynics, and opportunists will turn it to their own uses, thereby obstructing rapid economic growth, but they have faith in the electorate.

Additional questioning of the 112 West Indian leaders showed the divergence of attitudes toward democracy.

<u>Political Type</u>	<u>Percentage</u>
Democrats	22
Authoritarian Idealists	6
Cynical Parliamentarians	28
Authoritarians	44
Total	<u>100</u>
Cases	(111)

The leaders were asked two questions: 1. Are parliamentary government and extensive civil liberties best for the nation? 2. Is the mass of the population responsible and enlightened enough to vote wisely? (Those who answered "yes" to both questions were called "Democrats;" those answering "yes" to 2. and "no" to 1. were called "Authoritarian Idealists;" those answering "no" to 2. and "yes" to 1. were "Cynical Parliamentarians;" and those replying "no" to both questions were called "Authoritarians.")

How much of a role should the government play in the affairs of the society, especially of the economy? Decisions on the extent of public participation in economic and social development do not constitute a choice of the form of government. A democratic government can be deeply involved in economic planning, just as an authoritarian government can have a very small economic role. Most new nationalist leaders, compared to colonialists, wished an expansion in the role of government as the transition to self-government put the reins of rule in their hands.

What kind of social structure should the new nation have? It is the universal desire of developing nations to create a "new" society better than the colonial or pre-colonial one. The primary value in decisions to alter the pattern of social relations is equality. A common goal is to destroy the old hierarchical social structure, based upon privilege and servitude, and to replace it with a new order in which all citizens have equal rights and liberties and in which merit supersedes ascribed barriers as the determinant of social and economic position. A related value is social inclusivism, i.e., assimilating all groups into the society and eliminating alienation.

What kind of cultural traditions should the new nation have? By their choice of archetypal national heroes, leaders can affect the values of the population. They can induce greater effort and sacrifice by fostering heroes who favor hard work, civic responsibility, and education, which the population will admire and emulate. It is through images of past and present heroes, and significant events, that national ideals and a national character develop.

Cultural traits and values are only partly determined by unconscious evolution. The choice of heroes and the interpretations of the past outlined above is an example of the way in which conscious decision can create a cultural heritage. The selection of national symbols and the rewriting of social and cultural history to empha-

size indigenous rather than colonial events are also keys to the development of national pride. In a sense, the future causes the past in that the nationalist images of the future are determinants of how they interpret the past.

What should the national character of the people be? Similarly, the development of typical basic personality structures is to some extent subject to decision and conscious manipulation. Who are the new men and women needed to create and maintain the new society? Decisions involving education are particularly important.

What relations should the nation have with other states? For ideological reasons or in pursuit of economic, political, and military objectives, new states establish relations with other nations or groups of nations. In the post-World War II setting this has meant, in part, a choice among the alternatives of alignment with the Western nations, the Communist nations, or the neutralist bloc. One aspect of the 1961-62 survey was a correlation between West Indian leaders' acceptance of the Enlightenment values and their choice of external political alignment:

Table 4. INDEX OF ENLIGHTENMENT AND CHOICE OF POLITICAL ALIGNMENT

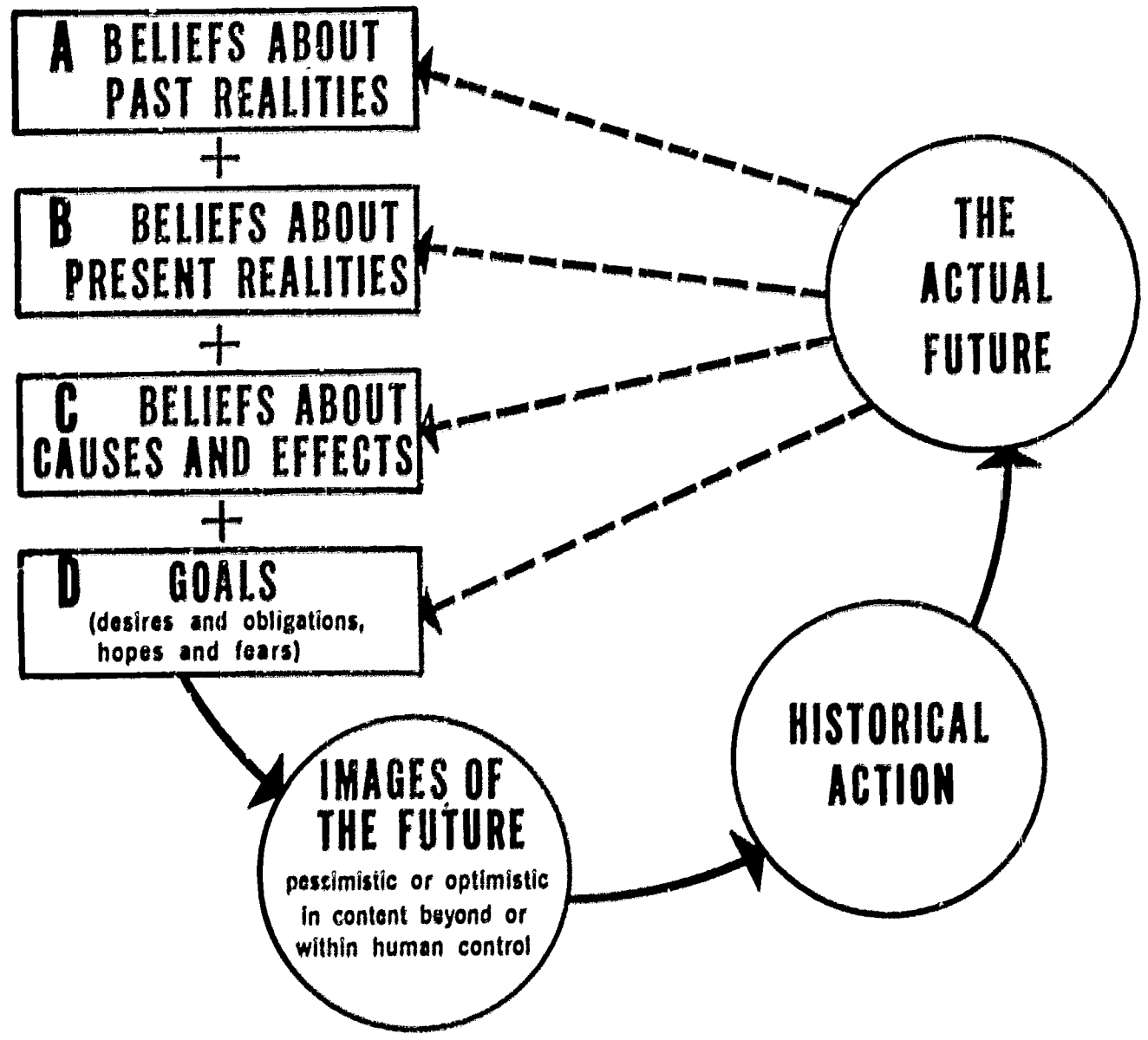
Index of Enlightenment	Western nations	Neutralist bloc	Communist countries	Total	Number of cases
3 (Enlightened)	50	43	7	100	30
2	41	47	12	100	17
1	96	0	4	100	24
0 (Unenlightened)	100	0	0	100	41

The data from this simple table lead to an ironic conclusion, one from which Western nations might learn: the desire for alignment with the West was strongest among those groups which least advocated the democratic values that had originated in the West and, inversely, those who were least attracted to the Western bloc were the staunchest supporters of the Enlightenment values of liberty, equality, and fraternity.

#### The Causal Sequence of Social Change

Acting on current decisions, men do create the future. Because leaders' decisions reflect their images of the future, we might also say that the future creates the present. The sum of men's interpretations of past and present realities, their goals and their beliefs about the relationship between cause and effect, give rise to images of the future. These images, translated into action within the organiza-

tional structure of society, becomes more or less the actual future through historical action. The relationships among the parameters of social change are clarified by the following schema:



Causal Cycle operates within and with consequences for:

THE ECOSYSTEM	RESOURCES	TECHNOLOGIES	ORGANIZATIONAL SETTING (familial, educational, religious, political, social, economic, etc.)
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- ▶ Produces fairly determinate effects.
- - - - -▶ Effects depend upon differential perception and evaluation.

**PART II.**

**MANPOWER  
PLANNING**

## PART II. MANPOWER PLANNING

### INTRODUCTION

Many of the developing nations have turned to manpower planning in their efforts to produce sorely needed technical and professional skills and increase employment opportunities. Although planning methods vary considerably, they typically begin with an attempt to analyze systematically the existing labor market and to forecast the state of the market at some future time. The differences in future labor supplies and requirements thus revealed are then used as a basis for formulating appropriate policies.

Two popular methods of forecasting manpower requirements are the establishment survey approach and an analytical method in which the economy is examined on the basis of assumptions about the rate of economic growth and other variables. In the first paper in this section, Kuptzin describes the major features of area manpower skill surveys which are based upon data derived from establishment surveys. The analytical method used by the Bureau of Labor Statistics, U. S. Department of Labor, in its forecasts of manpower requirements is described by Sugg in a series of papers (2 through 4). In the first two she discusses the purpose of forecasts and the data needed for forecasting. Her final paper describes the five steps of the forecasting procedure.

In his first paper (5), Parnes points out that the human resource planner is interested in two major categories of activity. One consists of activities designed to increase the productive capacity of the individual and the other involves institutional arrangements which promote optimum allocation and utilization of human resources. In a series of papers, he discusses selected aspects of both types. He notes (5) that while human resource planning and educational planning overlap, each has concerns which are exclusively its own. As education is a distinct sector with goals that are to some degree independent of human resource planning, a nation cannot base its educational planning solely upon manpower considerations.

Parnes analyzes the problems involved in converting estimates of an occupational structure into educational needs in his paper (6) "The Relationship Between Occupational Function and Education." In succeeding papers he discusses distribution and identification of talent (7), occupational choice and personnel selection (8), and labor markets and labor mobility (9). The last includes an analysis of types of labor mobility and a discussion of factors motivating job-to-job movements of workers. An important conclusion argued by Parnes is that wages and wage differentials are not nearly as significant in motivating mobility as economic theory implies.

In the final paper of this section (10) Kassalow analyzes wage policy and manpower planning in developing nations. Major characteristics of wage structures are described and policies suggested.



# OVERVIEW OF MANPOWER FORECASTING--THE AREA SKILL SURVEY<sup>1</sup>

Harold Kuptzin

Area manpower skill surveys (establishment surveys) are designed to provide information in individual labor market areas on current employment and future manpower requirements by specific occupations, and to determine training needs to fulfill these requirements. The manpower skill survey and its abbreviated counterpart, the training needs survey, are the basic occupational documents of the community. These data make it possible to appraise trends and developments in occupations selected for study. Much of the raw data for these surveys is provided by individual employers. Hence the name, "establishment surveys."

Area skill survey procedures recognize that nationally aggregated data may obscure regional economic developments. For example, while the general level of unemployment in the United States may be four percent, unemployment in various metropolitan areas may vary from less than two percent to over seven percent. Regional diversity and local imbalances in labor supply and demand demonstrate the need for the detailed local information that the area skill survey can provide.

## The Bureau of Employment Security Area Skill Survey

Bureau of Employment Security establishment surveys have three basic goals:

1. To provide estimates of current employment and future manpower requirements in terms of specific occupational categories. (An area survey may attempt to project all occupational requirements or it may concentrate on preselected occupations.)
2. To provide estimates of current and future manpower supplies by occupation.
3. To compare projected manpower requirements and supplies in order to evaluate the need for various educational and training programs.

## Methodology

One of the first steps in a manpower skill survey is to select occupations to be studied. Because of the time and expense involved in conducting an establishment survey, most area skill surveys do not attempt to cover all occupations. Instead, a list is compiled of 50 to 150 occupations in which large numbers of workers are employed and for which demand is expected to increase.

<sup>1</sup> See: "Techniques for Determining Manpower Skill Needs and Training Requirements," United States Department of State, AID, May 1963.

Next, a sample of local employers is selected. Generally, this sample consists of all the large firms in the area and a proportion of the smaller firms in each major industry group. The basic information collected from each employer is:

1. Current and anticipated employment in two, three and five years for each surveyed occupation, and total employment in the establishment.
2. Number of workers replaced yearly in each occupation surveyed as a result of promotion, retirement, death, disability, and withdrawal for military service.
3. Number of workers completing in-plant training in two years and in five years for each surveyed occupation.

Manpower requirements are expressed in terms of expansion (growth) demand and replacement demand. Due to high manpower turnover in some occupations, replacement demand is of considerable significance in manpower planning.

### Manpower Supply

The second important aspect of an area skill survey involves estimating the labor supply which will become available in the surveyed occupations during the succeeding two years and five years. These supply estimates are compared with the estimates of labor demand provided by the employers in order to derive net labor needs.

The supply data are refined by estimating new workers who will be entering the surveyed occupations over the forecast period from public and vocational schools, private and parochial schools, business schools, apprenticeship organizations, trade unions, and various training courses established under such legislation as the Manpower Development and Training Act. Supply estimates are further supplemented by an evaluation of occupational qualifications of unemployed workers registered at the public employment service.

### The Training Needs Survey

An abbreviated area skill survey, the training needs survey, provides data for area forecasts of occupational needs and supply quickly and at a relatively low cost. This modified technique has several applications and in the United States is used to validate the need for manpower training programs. By limiting surveys to a few occupations, shortening the projection period, and using abbreviated survey methods, an inexpensive "broad brush" indication of occupational shortages and surpluses is possible. However, area totals cannot be extrapolated from these data.

### Validity of the Area Skill Survey Forecasts

Independent verification of establishment surveys in Battle Creek, Michigan, and Trenton, New Jersey, indicates that the projections have been surprisingly accu-

rate. In only a few minor occupations would training have been wasted had the projections of the survey been used as a basis for establishing training facilities.

### Drawbacks of the Survey

While the area skill survey is an important tool for human resource forecasting, some drawbacks should be noted. In the first place, it is relatively costly and time-consuming. Second, it is based upon the employer's ability to forecast his needs.

Where structural changes are occurring rapidly, as is the case in most developing economies, employers may not have sufficient insight to make sound, long-range projections. In a developing economy the survey results should be adjusted to take into account occupational demands engendered by the economic development plan.

### Area Surveys and the Developing Economies

Despite the drawbacks, area skill establishment surveys are effective tools for manpower planning in developing economies. Since an establishment survey does not depend upon historical data, it can be applied under widely varying conditions. Experience has shown that modifications may be called for when the basic survey methodology is applied to another country, but due to the flexibility of the approach, coverage can vary by industry, occupation, and geographical region. Moreover, sampling techniques may be modified and supplementary information gathered. In addition to their flexibility and their lack of dependence upon historical data, area skill surveys provide substantial by-products. They can be used to provide information about job duties, working conditions, salary and wage scales, outlooks for promotion, and the training necessary for various occupations. Moreover, where the survey is the first industry-occupation inventory of a country, comprehensive occupational coverage can be obtained with the objective of identifying priorities as well as imbalances in the occupational structure.

## AN OVERVIEW OF MANPOWER FORECASTING

Matilda R. Sugg

### Purpose and Use of Forecasts

Manpower policies must not only surmount current problems, but also anticipate future ones. As a country develops and high-level manpower resources become scarce, it is necessary to know the size and nature of the future labor force. Projections of the labor force and its structure by industry and occupation can serve as guides for manpower and economic policies designed to achieve maximum use of a country's resources.

There are two general methods of making forecasts of manpower requirements. One is the establishment survey in which employers are asked to estimate their future needs for manpower in specific occupations, usually no more than two years in the future. The other is an analytical method in which the economy is examined on the basis of assumptions regarding the rate of economic growth and other variables. The manpower requirements of the economy, as far as 20 years in the future, are estimated by industry and occupation.

The Bureau of Labor Statistics uses the analytical method in its manpower forecast. As an example of the Bureau's statements on future manpower requirements, reference may be made to Chapter 3, "The Manpower Outlook," pages 37 through 47 of the 1966 Manpower Report of the President.

#### Summary of the Bureau of Labor Statistics' Forecasting Method

The Bureau of Labor Statistics (BLS) begins its analytical method of manpower forecasting with estimates of the total population by age and sex at the future date (prepared by the Bureau of the Census), and of the future labor force by age and sex, based on population estimates and estimated labor force participation rates.

The forecasting of manpower requirements proceeds in the following manner:

Step One: Derive a first approximation of the future employment structure by economic activity, consistent with anticipated increases in the labor force.

Step Two: Make a detailed study of every important economic activity. This study should analyze anticipated changes in demand for the products or services of the economic activity, hours worked, and productivity.

Step Three: Modify the first approximations in accordance with the results of the detailed analysis described in Step Two.

Step Four: Derive an occupational breakdown of employment in each economic activity in the future period by applying the best available occupational composition patterns, with particular attention to all occupations requiring specialized training or education. Sum the estimates of each occupation from the various economic activities.

Step Five: Estimate training requirements for each major occupation by analyzing the probable supply of qualified workers under existing training programs and facilities and labor requirements indicated by the occupational estimates.

#### Assumptions Required for Forecasts

A forecast of manpower requirements entails making a variety of assumptions. The Bureau of Labor Statistics' forecast, for example, assumes there will be no natural

disasters or disruptive political events and also incorporates assumptions about levels of economic activity. In nations with development plans, the goals of the plan provide a variety of guidelines for the essential assumptions of the manpower forecast.

The goals of an economic development plan may be expressed in a number of ways. Gross national product targets, output goals for specific commodities or services, and international trade targets are obviously of critical importance to the derivation of an estimate of future manpower requirements. The manpower forecaster will also find it necessary to make some assumptions concerning output per man-hour, number of working hours, unemployment level, size of the Armed Forces, and other characteristics of the economy.

### Choice of a Forecast Year

The year for which manpower resources and requirements will be forecast should be chosen with several considerations in mind. If there is an official development plan, the forecast year should be the target year of the plan, since manpower requirements will be related to the targets expressed or implied in the plan. The forecast year should be sufficiently far in the future--perhaps 10 years--to allow adequate time for the training and education of professional and technical personnel. Although the reliability of the forecasts diminishes the farther away the forecast year--a forecast 15 or even 20 years into the future may be justified in order to gain insight into long-run problems. Population and labor force projections are usually made for every fifth year after the most recent census of population. It is more convenient, but not essential, to forecast manpower requirements for one of those years. If there are good reasons for choosing other years, population and labor force estimates for intervening years can be derived by interpolation. Forecasts can be made for more than one future year if desired, for instance, 1965, 1970, and 1975.

## DATA NEEDED FOR FORECASTING

Matilda R. Sugg

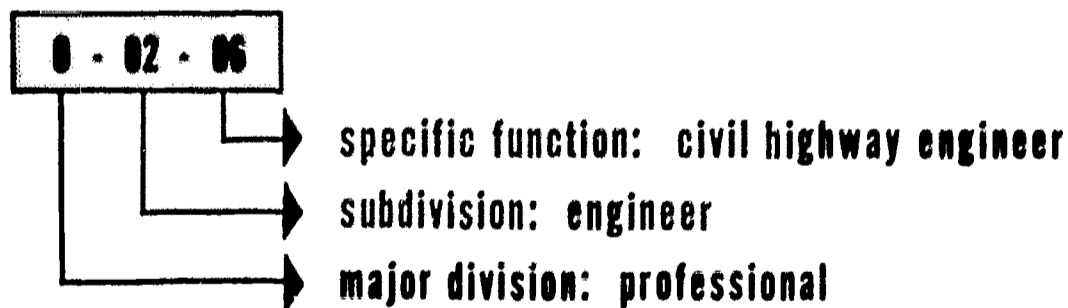
In collecting manpower statistics for forecasting it is important that all sources of information be exploited. In the United States, the Bureau of Labor Statistics of the Department of Labor collects data from all Federal agencies, from State and local governments, and from private organizations. In some countries, it is hard to collect all the existing information because of the lack of communication among the various agencies of the government. Nevertheless, it is desirable that a large mass of pertinent empirical data be collected before a manpower forecast is attempted.

## Tools of Analysis

**Industry Classification:** Manpower forecasting depends very heavily upon knowledge of the industrial attachments of persons in the labor force. It is essential, consequently, for the manpower analyst to have some systematic method of differentiating significant industries. One of the most widely-used systems of industrial classification is the International Standard Industrial Classification (ISIC). This system, which is similar to the one employed by the United States Government, divides economic activities into 9 major groups. These are: agriculture, forestry, hunting, and fishing; mining and quarrying; manufacturing; construction; electricity, gas, water, and sanitary services; commerce; transport, storage, and communication; services; other activities not elsewhere classified.

The ISIC uses a one-digit code to identify major industrial divisions and additional digits up to a maximum of three for finer breakdowns. For example, manufacturing is designated by the code number 2, manufacture of food by 20, and manufacture of meat products by 201. While the international classification system should be useful in most countries, peculiarities in the organization and products of enterprises may necessitate special adaptations of the coding system.

**Occupational Classification:** Each establishment employs workers with different skills to do different jobs. The purpose of an occupational classification is to group individuals according to their economic activities and, as with the industrial classification, such grouping can be done at several levels of specificity. The International Labour Organization's International Standard Classification of Occupations (ISCO) groups the work force into 9 primary occupational categories: professional, technical, and kindred workers; administrative, executive, and managerial workers; clerical workers; salesworkers; farmers, fishermen, hunters, loggers, and related workers; miners and quarrymen; transport and communications workers; craftsmen, production process workers, and laborers; and service, sport, and recreation workers. The ILO uses a five-digit code to classify a man by his specific occupation. The code number for a highway construction engineer, for example, is



It is important for manpower forecasters to have current information on the occupational structure of an economy, but there are hazards associated with indiscriminate use of occupational classification codes. For one thing, job titles are often misleading because a single title, such as engineer, can be used to refer to un-

related occupations. Furthermore, with technical progress and economic transformation, job descriptions become outdated. Workers' functions and requisite skills change rapidly as a nation industrializes. Careful redefinition and updating of job classifications are frequently required.

Census of Population: One of the richest sources of the data essential for meaningful manpower analysis is the national population census. In addition to information about basic population characteristics, a census frequently includes data on income, employment, and educational attainment. In a number of countries, a relatively recent census may be the only reliable source of national labor force data.

The analyst should be aware of a number of deficiencies that frequently characterize census data. Census-takers may be hastily trained and, thus, lack the expertise required for eliciting accurate responses. Respondents may give inaccurate information because of lack of knowledge and poor memory, or they may deliberately falsify their responses. Despite its imperfections, a population census is usually a nation's most complete source of population data and often the only source of evidence about historical population movements. In many of the developing economies where establishment survey methods are relevant only in a small industrial sector, census data are all the more important for aggregate analysis.

Labor Force Survey: Periodic sample surveys of the employment status of members of households provide current information on labor force characteristics between census dates. The Bureau of Labor Statistics uses the results of a monthly survey of 35,000 households to ascertain total employment, Armed Forces and civilian employment, unemployment, and agricultural versus nonagricultural employment. Labor force survey statistics are also the source of information on labor force participation rates of various population sub-groups. The major contribution of the labor force survey to long-range manpower planning is as a tool for tracing the effects of political, social, and economic changes on the structure and size of the labor force. In the United States, for example, data from monthly surveys of the labor force have been used to measure such structural changes as the decline in the size of the agricultural work force and the declining labor force participation rate of men over 65 years of age.

Establishment Survey: Surveys of employing establishments provide data on occupational and industrial characteristics of employment, and can be used for analyzing future manpower requirements in local labor market areas. Such data are essential complements to the aggregated data derived from a census or from periodic household surveys.

Other Data Sources: In addition to data available from the sources described above, a variety of less-formal data can usually be found through a canvass of organizations such as trade associations, labor unions, and universities. These data may vary widely in quality, but it is important that the manpower analyst familiarize himself with all that are available.

## FORECASTING MANPOWER REQUIREMENTS

Matilda R. Sugg

### Introduction

A basic purpose of manpower forecasting is to quantify the stock of human resources to determine its consistency with the goals of a development program. Such goals will vary from country to country depending upon the needs, resources, and government policies of the countries. The blueprint presented in Bureau of Labor Statistics Report No. 248,<sup>2</sup> for example, is designed for the special needs of the United States. Other nations must consider their own needs and resources.

### Background

The original goal in forecasting manpower requirements in the United States was to provide data for vocational guidance in high schools and colleges. Accordingly, these forecasts focused on occupational structures and outlooks. Initial attempts at statistical estimation of long-term occupational requirements revealed the complexity of economic interrelationships. Structural changes in one sector of the economy had profound repercussions in many other sectors. The need for a comprehensive model, which accurately reflected sector interdependence, led to the development of present BLS forecasting techniques.

While statistical and econometric models are not yet highly sophisticated, available techniques can be used to predict the general direction of important economic variables. In some cases it has been possible to make consistent and reliable projections. Formal manpower forecasts may not be possible in every country because developing nations often do not have reliable historical data. Some attempt must be made, however, to forecast manpower requirements despite the lack of reliable data, and it is the job of the human resource planner to analyze the quality of available statistics to determine what modifications of the general forecasting method must be made. The character of data available to a country can usually be described under one of the three headings below:

1. Little historical data available. National census data are extremely limited or not available at all, and no labor force or establishment survey data exist. Employment statistics may be available for a few industries. In this case, the forecaster must attempt an impressionistic survey on the basis of data at his disposal. Available data, no matter how crude or sparse, must be utilized. Sharing of statistics among government agencies is essential. By and large, systematic manpower forecasting is not possible in this case.

<sup>2</sup>The Forecasting of Manpower Requirements, (Bulletin 248), Bureau of Labor Statistics, U.S. Department of Labor, April 1963.



2. Some historical data available. Several population censuses may exist and labor force and establishment surveys may have been made in selected years. Comprehensive industry data may be available. As in case 1, the forecaster must collate all available data and must encourage government agencies to exchange statistics. Nations in this category may use the forecasting methods of the Bureau of Labor Statistics, although considerable analytical skill is required.

3. Reliable statistics available. Census data are comprehensive and statistics of employment by economic activity exist for a number of years. In this instance, BLS forecasting methods are applicable and maximum use may be made of available data.

### The Forecasting Procedure

#### Step One: First Approximation of Employment by Economic Activity in a Future Year

First approximations of projected employment structure by economic activity entail estimations of increases in labor force size and a rough industry breakdown of employment. The initial step is to determine total population in the forecast year. Census data and known birth and mortality rates permit approximation of future total population. The forecaster may wish to incorporate anticipated changes in birth and mortality rates into his study, but unless the projections are for a period longer than 15-20 years, such modification is usually not necessary. By applying labor force participation rates (by age and sex) to the population estimates, aggregate labor force projections may be derived. Trends or anticipated changes in participation must be considered by the forecaster, so considerable judgment and sophistication are required.

Estimating Total Civilian Employment in the Future Year: The total civilian labor force may be estimated by deducting from the total projected labor force an estimate of the number of persons in the Armed Forces in the future year. It is customary to assume that the size of the Armed Forces will remain constant.

Civilian Employment: Although future levels of unemployment are uncertain, the forecaster must include estimates in his projections. He may assume a figure consistent with the official target figure under the national development plan or he may assume no change from the current level of unemployment. Deducting unemployment projections from the total civilian labor force yields an estimate of civilian employment.

Civilian Employment by Major Sector: The next step is to estimate the proportions of civilian employment in agricultural and nonagricultural economic activity. In contrast to developed nations, developing economies have a large proportion (60-75 percent) of their manpower engaged in agriculture. As development proceeds, this proportion--although not necessarily the absolute amount--normally declines. This almost universal downward trend, due to increased productivity per worker and improved agricultural methods, must be integrated into the manpower forecasts.

Two possible methods of estimating the decline in agriculture may be summarized:

1. Estimate future developments on the basis of past trends in agricultural employment. Since the rate of change in the agriculture-industry ratio depends upon economic development, the forecaster must judge whether past trends will accelerate, continue at their present pace, or decline over time. This method is applicable, of course, only if historical statistical data exist.

2. If historical data are not available, or to verify estimations, examine trends in agricultural employment in other countries. Such comparisons should be made only after careful analysis of the stage of development in the countries examined. Needless to say, countries will vary widely in their rates of change in the agricultural-industrial ratio, and generalizations must be qualified.

Estimating Nonagricultural Employment by Industry Division: Total nonagricultural employment is the residual after estimated agricultural employment is deducted from total projected employment. The next step is to estimate the distribution of future nonagricultural employment by industry divisions. When no historical statistics are available, the simplest procedure is to apply the percentage distribution of current employment by industry divisions to the estimate of the future total of nonagricultural employment. This procedure is based upon the assumption that employment in every industry division will undergo the same percentage increase as total employment. This assumption may not be as extreme as it appears, since the proportions tend to remain relatively stable, especially over the time span of the typical manpower forecast.

Available historical statistics may be studied as indicators of the future employment mix by industry division. Possible procedures for estimating on the basis of historical statistics are extrapolation of past employment trends, analysis of trends in the percentage distribution of employment by industry division, and correlation analysis. (For a detailed description of these methods see BLS Report No. 248, pp. 18-30<sup>3</sup>).

#### Step Two: Detailed Analysis of Important Activities

In step two a detailed analysis must be made of each important economic activity so that estimates of future employment by industry may be refined. Anticipated changes in the demand for products or services of industries, hours worked, and labor productivity must be considered carefully. In order to estimate future employment structure as accurately as possible, technical skill and common sense must be brought to bear on the analysis and evaluation of each important economic activity. As a practical matter, it may be best to concentrate on a few important industrial sectors and to accept the first approximation of employment for others.

<sup>3</sup> Op. cit.

The Selection of Economic Activities for Detailed Analysis: The industries chosen for detailed analysis are those which usually require substantial numbers of persons with high-level skills and education and for which data are available. Industries should be chosen if they fulfill the following conditions: 1) new construction is underway or specifically scheduled, 2) specific targets have been established in an economic development plan, 3) production and manpower requirements can be related to population growth, and 4) activities for whose products and services additional demand will be generated by the above.

Data Helpful for Analysis of Each Economic Activity: Where possible, the following information should be obtained for each activity to be studied:

1. Present economic strength, rate of growth, and general financial condition of the activity.
2. Past statistical trends including such items as total employment, occupational composition, hours worked, total output, output per worker, and output exported.
3. The type of demand for the product or service. One industry's output may be demanded as an input of another industry or may be used as a consumer good by individuals who have particular age, income, occupational, or educational characteristics.
4. Factors which may influence progress toward goals for the industry set by the government. Included in this is public sector demand for the industry's products or services.

Possible sources for the type of information described are government publications, publications of international agencies, trade journals, and union periodicals. In short, major industries should be studied intensively so the forecaster can judge the level of industrial output at the forecast date, productivity changes, and number of hours worked weekly and annually. By considering these factors, the analyst derives an estimate of future employment.

### Step Three: Modification of the First Approximation

It is highly likely that the detailed analysis will indicate a need for a revision of the approximations made in step one. These adjustments are made in step three. The result is the best answer to the question, "How many people will be required in each industry at a given date?" To test the reasonableness of the industry employment projections, an attempt should be made to determine whether they are consistent with projections of other economic magnitudes. If, for example, a national development plan calls for an annual increase in GNP of four percent, the projection of employment by economic activity should be consistent with that rate. (For a description of a methodology that may be used to make such a check see BLS Report No. 248<sup>4</sup>).

<sup>4</sup>Op. cit., pp. 44-46.

#### Step Four: Estimated Future Employment by Occupation

In this step, an attempt is made to estimate future employment by occupation. The occupational structure will change, of course, as economic development proceeds. Consequently, a judgment must be made regarding probable occupational upgrading and the extent to which additional high-level manpower will be required. Even if there appears to be no reasonable expectation of fulfilling the requirements, there is a need for estimating the shortages which are likely to occur. Therefore, the following analysis explains how to gauge the anticipated demand for each occupational category.

The Application of Occupational Composition Patterns to Industry Forecasts: It is possible to forecast the number of persons who will be employed in each occupation by applying the available occupational composition patterns to previous estimates of employment. The analyst must first obtain an occupational composition pattern for each economic activity, that is, a count of the number employed in each occupation or occupational group in the current or base year. He must then compute a percentage distribution by occupation. Next, he must modify the occupational composition pattern to take into account anticipated changes in occupational structure during the forecast period. The projected industry total is multiplied by the percentage to derive the estimated number in each occupation. Finally, occupational estimates from all economic activities are totaled.

In each industrial category the analyst must make judgments about likely changes in the relative importance of occupational classifications. This involves estimates of the future occupational structure of each industry. In the textile industry, for example, a technological improvement in the form of better looms will probably mean that fewer weavers and more loom repairmen will be needed. One factor that may affect the amount and type of employees needed in a given industry is a change in the total number of hours worked in each occupational classification. Another factor is the potential need for specialized personnel. Through an analysis of the number of skilled workers required, it may be possible to anticipate basic changes in the occupational structure of a given industry. This helps planners to pinpoint future manpower needs.

Factors which affect change in the occupational structure include the following:

1. Technological progress alters the pattern of labor inputs through the introduction of new machinery and raw materials.
2. Population increases and changes in age group distribution affect the size and composition of the labor force.
3. New government policies affect cost and availability of capital and labor.
4. The quantity and quality of technical and vocational training fluctuates over time, resulting in various degrees of occupational preparedness.

5. Change in demand for products related to changes in family income levels is one of the most dynamic factors. As income rises, proportionally less is spent on food, and more on less-essential items.

The complexity of factors to be considered in forecasting can be illustrated in the case of teachers. Of prime importance is the number of children expected to be in school during a given period. In making this estimate, such factors as the status of compulsory school attendance and the birth rate are important considerations. Also, new methods of teaching may change student-teacher ratios. In these estimates, precision is not expected as the projections need only point out the general characteristics of future manpower needs.

In the absence of an occupational composition pattern for a certain industry, a country may utilize the pattern found in another country at a similar stage of development. For example, in the early 1960's the sophistication of the textile industry in Puerto Rico was considered to be at about the same level as that of the United States in 1950. The percentage distribution of occupations of this industry in the United States for 1950 was used in forecasting occupational requirements for Puerto Rico.

#### Step Five: Estimating Training Needs for Each Occupation

In this step, training requirements to meet projected occupational needs are estimated. First, the current level of employment by occupation is determined. Then increments to these occupations are estimated. In calculating withdrawals, estimates for deaths, retirements, transfers, and emigration must be included. The number of entrants from colleges, training schools, and immigration must be estimated, determining new personnel. Such analysis should indicate surpluses and shortages of trained personnel as well as the adjustments needed in the educational system.

In estimating the training needs, it should be remembered that people become qualified workers not only through formal education but also through on-the-job training.

## DIMENSIONS OF HUMAN RESOURCE PLANNING AND EDUCATIONAL PLANNING

Herbert S. Parnes

This lecture paves the way for succeeding ones by investigating human resource planning and its relationship to educational planning. Although they are interrelated, human resource planning and educational planning are distinct processes. Let us start by analyzing the term "human resource planning."

## Human Resource Planning

"Planning," in the context of economic development, has been defined in many ways. One definition that I regard as fruitful is "the process of preparing a set of decisions for future action aimed at achieving a specific set of goals." One implication of this definition is especially significant. In any context--be it the family or the economy--the concept of planning is meaningless without specification of the goals toward which action is directed.

"Human resources" is a rather new term for an old concept, but it is used in at least two different ways. In its narrower sense, human resources are conceived as factor inputs in the production process. Analogous with capital and natural resources, human resources are considered in terms of their cost and productivity. A broader conception of human resource centers upon the knowledge, skills, and capacities of men in all their social functions. In economic terms, development of human resources is creating what has been called "human capital;" in political terms it is preparing the mass of the people for responsible participation in public affairs; in sociocultural terms it is enabling people to lead fuller lives by releasing them from their narrow heritage. To avoid ambiguity, the term "human resources" will be used here in its narrower sense. This is not to assert that man's most important role is as an economic input, but that, for analytical purposes, it is helpful to focus on man as a productive agent. Use of the broader concept causes confusion, since distinctions between human resource planning and general economic planning, and between human resource planning and educational planning are lost, if "human resources" is defined so as to encompass man's qualifications for all social functions.

## Dimensions of Human Resource Planning

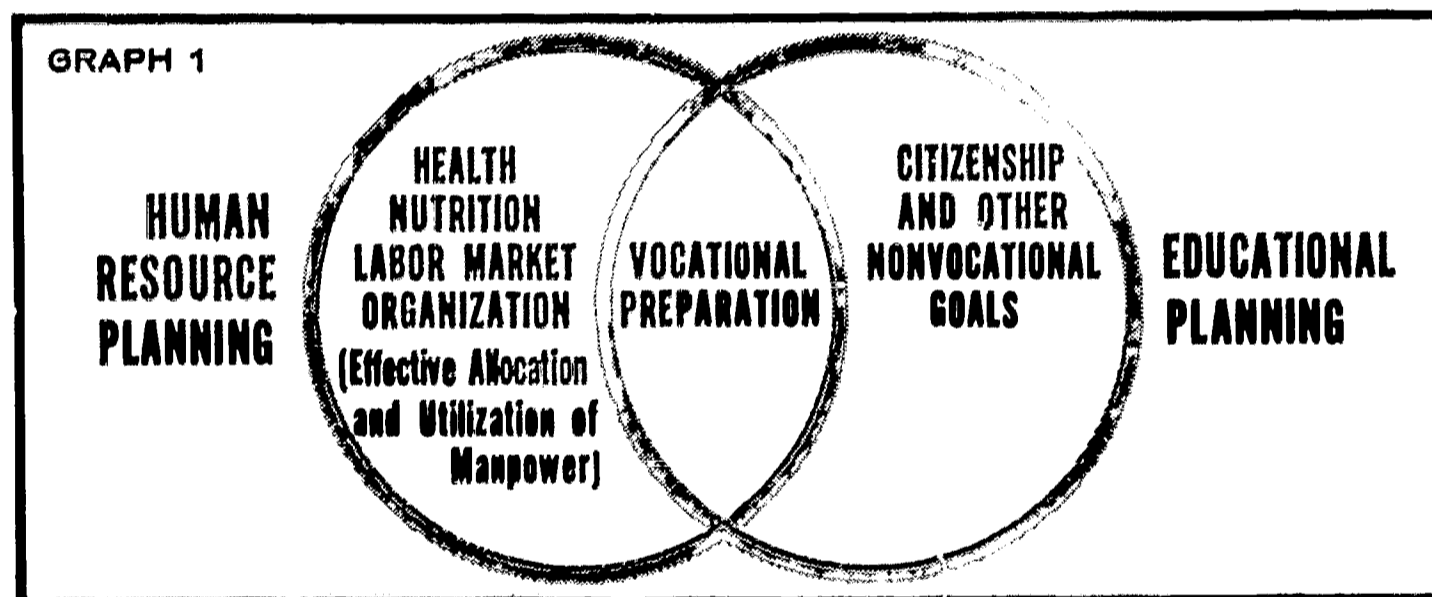
Planning human resource development involves all those measures designed to improve the population's productivity. We can recognize two broad categories of human resource development. First, there are activities designed to strengthen the productive characteristics of the individual. Vocational preparation, broadly defined to comprehend all learning experiences which affect individual job effectiveness, involves the acquisition of the skills and knowledge required for the world of work. Improvement of nutrition and health services increases the potential economic contribution of individuals. Creation of attitudes toward work which are consistent with the needs of an industrializing economy insures better utilization of newly-acquired skills.

The second category of activities relates to those institutional arrangements which promote optimum allocation and utilization of human resources. These include the expansion of employment opportunities to minimize unemployment and underemployment of skilled people, an incentive structure which will encourage individuals to move into those occupations and geographical regions where they are most needed by society, dissemination of job information, and promotion of effective use of labor by policies designed to improve working conditions, reduce absenteeism, and encourage higher morale.

The sum of these activities oriented toward development of individuals and institutions, is the total sphere of the human resource planner's interest. Because of its relationship to economic growth, a plan for the development of human resources must be integrated with the global development plan.

### The Relationship Between Educational Planning and Human Resource Planning

Education is a distinct sector which has its own goals independent of those of human resource planners. Vocational preparation, as defined above, is but one function of an educational system which is concerned with developing the "whole man." In particular, nonvocational goals of the educational system are to create an enlightened citizenry, to perpetuate desirable social values and traditions, and to promote receptivity to change. Human resource planning and educational planning overlap, but each has some functions which are exclusively its own. This relationship can be conceptualized in the form of two intersecting circles, as depicted below:



This schematization involves several oversimplifications which require clarification. First, not all vocational preparation takes place within the formal educational system. Apprenticeship programs, on-the-job training, and military service make significant contributions to the development of skills. On the other hand, the economic contribution of education is not confined to the specific function of vocational preparation. It is of utmost importance for human resource planners in developing countries to realize that exclusive emphasis on skill development in educational planning may not be in the interests of maximizing economic growth. The sociopolitical activism and enlightenment that can be engendered by appropriate education may make important contributions to economic development and growth. This is true even in the so-called advanced countries. To illustrate, United States' economic growth in the 1950's could doubtless have been considerably greater had the American people been cognizant of the policy implications

of the "Keynesian Revolution" and, thus, willing to insist upon expansionary fiscal and monetary policies. It is a mistake to assume that education contributes to economic development solely through the preparation of manpower. Even if a nation wishes single-mindedly to pursue the objective of economic development, it cannot afford to base its educational planning solely on manpower considerations. If the noneconomic goals of education are acknowledged, the importance of non-vocational criteria is even clearer.

## THE RELATIONSHIP BETWEEN OCCUPATIONAL FUNCTION AND EDUCATION

Herbert S. Parnes

Previous lectures in this Seminar have dealt with the problem of making long-range estimates of occupational structure. In this lecture I will deal with the problems of converting these estimates into needs for education. After one has approximated the occupational structure at a future target date, the problem becomes that of describing the required distribution of the labor force according to types and levels of formal training. An occupational classification differentiates functions performed in the productive process. An educational classification differentiates people on the basis of how much and what kinds of education they have had. Although there is obviously a relationship between these two classification systems, the relationship is, unfortunately, not a rigid one. Very few occupational categories--generally only those requiring legal certification--can be defined unambiguously in terms of the level and type of education they require for several reasons. In the first place, an occupational category--no matter how narrow--is really an abstraction from a large number of specific jobs with varying functional requirements. Second, even for a single function, the required skill or knowledge can be acquired in a number of different ways. Finally, individuals differ in native capacity and ability, so that varying amounts of education may be required to produce a given level of competence.

The fact that there is generally a range of educational achievement associated with even rather specific occupational categories is illustrated by Table 1, which shows the distribution of men in selected occupations in the United States in 1950, by number of years of school completed.

While these data are not conclusive, since they are subject to reporting errors and since they purport to show actual rather than required educational attainment, they nevertheless provide strong support for the notion that the formal education required for an occupational category realistically must be expressed in terms of a range rather than in terms of a specific figure. Thus, for most occupational categories, the relevant question is not "how much education must persons in this occupation have," but rather "what proportions of persons in this occupation must have various amounts of education."



Table 1. PERCENTAGE OF MALES IN SELECTED OCCUPATIONS BY NUMBER OF YEARS OF SCHOOL COMPLETED, U.S., 1950

Occupation	8 or fewer	9-11	12	13-15	16 or more
Authors .....	3.7	5.8	15.0	28.2	47.2
Mechanical engineers.....	9.1	7.2	16.2	17.0	50.5
Salaried managers in manufacturing ....	14.7	14.1	29.3	18.9	23.0
Photographers .....	14.3	18.0	40.8	18.4	8.5
Salesmen in manufacturing .....	14.5	15.5	33.6	20.3	16.0
Bank tellers .....	6.4	11.7	51.1	22.2	8.6
Carpenters.....	56.9	21.2	17.4	3.6	.9

Source: United States Census, 1950

One method of answering this question is to apply the present educational achievement distribution of each occupational category to the target year. But this method has obvious limitations, as it assumes that the existing occupation-educational achievement relationship is satisfactory, whereas in many cases it is not.

Another method of determining the relationship between occupation function and education utilizes international comparisons. For example, a developing country may assume that the educational attainment distribution of each occupational category in the target year approximates that which currently exists in a more advanced country. There are difficulties in this approach, also. For one thing, data relating occupation to number of years of schooling are not available for many countries, and even when they are, differences in classification systems make them difficult to use. Nevertheless, such data may be used as rough guides to prevent gross errors. For example, the data in Tables 2 and 3 should make it clear to planners in developing countries that not all persons in the "professional" category need university degrees.

Table 2. PERCENTAGE OF WORKERS WITH 13 OR MORE YEARS OF EDUCATION BY MAJOR OCCUPATION GROUP, SELECTED COUNTRIES

Occupation Group	Canada (1951)	England and Wales (1951)	France (1954)	United States (1950)
Professional workers .....	65	64	51	78
Semiprofessional workers .....	38	23	41	45
Administrative, executive, managerial workers .....	19	23	20	32
Clerical workers .....	14	12	5	20
Sales workers .....	12	6	3	20
Service, sport, and recreation workers .....	5	6	1	6
Farmers, farm managers, and workers .....	2	5	-	4
Other workers .....	3	1	1	5

Source: H.S. Parnes (editor), Planning Education for Economic and Social Development (Paris: OECD, 1962), p. 152.

Table 3. PERCENTAGE OF WORKERS WITH 13 OR MORE YEARS OF EDUCATION IN SELECTED OCCUPATIONS, SELECTED COUNTRIES

Occupation Group	Canada (1951)	England and Wales (1951)	France (1954)	United States (1950)
Engineers .....	92	47	72	72
Physicians and surgeons .....	100	97	n.a.	97
Pharmacists .....	n.a.*	64	n.a.	78
Teachers (total) .....	61	82	n.a.	92
Lawyers and judges .....	95	75	n.a.	94
Accountants and auditors .....	44	43	n.a.	58
Artists, writers, journalists .....	38	32	14	55
Nurses .....	45	23	n.a.	53
Photographers .....	18	12	n.a.	27
Watchmakers, jewelers, and related precision workers ...	7	5	n.a.	12
Barbers, hairdressers, and manicurists .....	3	3	n.a.	7

Source: H.S. Parnes, Forecasting Educational Needs for Economic and Social Development (Paris: OECD, 1962), pp. 112-113.

\*n.a. not available

A third approach to the problem, more satisfactory but also more time-consuming than those previously mentioned, involves estimating optimal relationships between occupations and educational attainment by means of labor force surveys. For certain crucial occupational categories, surveys might be made of establishments employing substantial numbers of workers in the occupations in question. The interview schedule might include questions about:

1. educational qualifications of employees currently filling the occupations under investigation;
2. formal hiring requirements that the establishment currently imposes, or would like to impose;
3. employer judgments about the adequacy of preparation of employees currently filling the occupations in question;
4. employer opinions about maximum and minimum levels of education required for effective performance; and
5. employer opinions about likely changes in job content and their implications for required educational preparation.

However one derives the projection of the "required" structure of the labor force by educational qualification, it is these data which provide the manpower criteria for the educational plan. Comparison of the required numbers of persons in the labor force as of the target year with the projected supply of workers in each of the educational attainment categories permits the calculation of the net increase required in each category over the planning period. These figures, adjusted to take account of the fact that not all persons enter the labor force upon completing their education, provide estimates of the extent to which "output" of the various levels and branches of the educational system must be expanded during the planning period (see Table 4 for a hypothetical illustration). On the basis of required expansion in number of graduates, required increases in enrollments can be estimated. These, in turn, provide the bases for estimating needs for additional facilities and teachers.

## POTENTIAL MANPOWER RESOURCES: THE DISTRIBUTION AND IDENTIFICATION OF TALENT

Herbert S. Parnes

This lecture concerns factors that limit expansion of the supply of university-trained manpower. The potential constraints on education of high-level manpower

are of three types: economic, biological, and institutional. The economic limitations on a nation's capacity to provide funds for education have been discussed in previous lectures, and therefore will not be treated here.

### Biological Constraints

The term "biological constraint" is a shorthand way of saying that native intelligence and aptitudes limit the number of people who would profit from higher education. In developing countries an extremely small percentage of the population has a university education. Assuming a normal and equal distribution of intelligence in all countries, far more youths are qualified for college than actually attend.

Table 4. HYPOTHETICAL CALCULATION OF REQUIRED ADDITIONAL "OUTPUT" OF EDUCATIONAL SYSTEM, 1966-1980, TO MEET REQUIRED QUALIFICATION OF THE LABOR FORCE, 1980

(Thousands of persons)

Level and type of educational attainment	Projected required number of workers	Projected actual number of workers	Shortage in number of workers	Cumulated shortage in number of workers <sup>1</sup>	Required expansion in number of graduations, 1966-1980	Required increase in annual number of graduations, 1971-1980
University graduates .....	1,200	1,000	200	200	286	28.6
Science curricula .....	500	400	100	100		
Other curricula .....	700	600	100	100		
Higher secondary school graduates ....	5,200	4,000	1,200	1,400	2,120	212
Scientific and technical .....	2,800	1,600	1,200	1,300		
Commercial and general .....	2,400	2,400		100		
Lower secondary school graduates .....	10,000	9,000	1,000	2,400	4,000	400
Less than 8 years of schooling .....	3,600	6,000				
Total labor force .....	20,000	20,000				

<sup>1</sup> Shows adjustment necessary to take into account that graduates of one level of education must also have graduated from the preceding levels.

<sup>2</sup> Shows adjustment necessary to take into account that not all graduates will enter the labor force. It is assumed that university graduates are normally distributed between men and women in the ratio of 2 to 1. It is also assumed that the labor force participation rate for men in the age group 20 to 24 who are not in school is 90 percent and that the corresponding rate for women is 30 percent. In the case of higher secondary school graduates, the ratio between boys and girls is assumed to be 6 to 4, and the same labor force participation rates are used as above. For lower secondary school, the two sexes are assumed to be equally represented, and an overall labor force participation rate of 60 percent is used.

<sup>3</sup> Shows the required increase in the annual number of graduates between 1971 and 1980 for each part of the educational system. The increase has been obtained simply by dividing the total requirements by the last 10 years of the planning period, on the assumption that 5 years will be required to build facilities and to fill the educational "pipeline." Actually, however, it is important to phase the graduations during the planning period since, for example, it may be necessary to expand the output of secondary schools before university enrollments can be increased significantly. Once the required increase in graduations is scheduled among the years of the planning period, the required increases in enrollments can be calculated taking attrition rates into account.

Even in developed countries, where much higher percentages of young people attend college, it will be a long time before the supply of people capable of doing college-level work is exhausted. This is true in the United States, for example, where only 33 percent of the population aged 20-24 are in college and a large percentage of those with above-average intelligence do not attend college. The data in Tables 5 and 6--which relate to the situation in the United States about 15 years ago--illustrate this point.<sup>5</sup>

Table 5. INTELLIGENCE RATING OF COLLEGE STUDENTS IN THE UNITED STATES

<u>Group</u>	<u>Average intelligence rating</u>
Total population	100
Those entering high school	105
High school graduates	110
Those entering a college	115
College graduates	121
Ph.D.'s	130

Table 6. INTELLIGENCE RATING OF COLLEGE GRADUATES AND OF AGE GROUP 20-24 IN THE UNITED STATES

<u>Average intelligence rating</u>	<u>Percent of age group 20-24</u>	<u>Percent graduating from college</u>
160	Top .1	69
147	Top 1.0	59
133	Top 5.0	50
126	Top 10.0	42
119	Top 20.0	34

<sup>5</sup>Dael L. Wolfe, America's Resources of Specialized Talent, New York, 1954, Harper Publishing Co.

The data in Table 6 show that among the most intelligent one percent of the age group 20-24, with an average I.Q. higher than that of the average Ph.D., only 59 percent were college graduates. The implication is that university enrollment could have increased greatly without a decrease in the quality of students. In the early 1960's, data were presented at an Ability and Educational Opportunity Conference, sponsored by the Organization for Economic Cooperation and Development, that suggested similar conclusions for a number of European countries. If the biological constraint is not a relevant limitation in advanced countries where university education is widespread, we can safely conclude that it does not constitute a problem in developing countries.

### Institutional Constraints

Of far more importance are institutional constraints, social and cultural factors that influence the likelihood of an individual's pursuing higher education. In open-class societies where economic status is in some measure a function of native talent, children of professional people are likely to be more intelligent, on the average, than children of unskilled persons, and are more likely to attend institutions of higher learning. The strong correlation between socioeconomic status of parents and university attendance by children is further explained by the relative affluence of this group and by cultural influences in the home life of wealthier groups.

Organizational characteristics of the educational system have important implications for the development of high-level personnel. The earlier children are separated into different educational streams, the more likely it is that potentially outstanding students will be misdirected, because it is usually difficult to make an adequate assessment of a child's inherent abilities in the first years of education. Nonetheless, it is desirable to identify gifted children at as early an age as possible and to encourage their exceptional capabilities. Teachers should understand students' motivations and be able to stimulate creativity and a spirit of scholarship. Vocational guidance programs are needed to inform students of career opportunities and requirements. Since many vocational decisions are irreversible, it is important that they be made with the fullest possible knowledge of their implications.

Because capital and teachers are in limited supply, a balance must be struck between the quality of education and the number in school; for political reasons, quantity is often emphasized to the detriment of quality. In countries where the bulk of the population is poor, the nature and extent of public financial aid determine who can go on to higher education. In pursuance of equity and educational quality, financial assistance can be an effective planning tool. Financial aid can be used to democratize, i.e., to eliminate economic disparity between wealthy and poor students and may be used as an incentive to encourage students to enter fields important for economic development.

In summary, the major constraints on university-educated manpower are not biological but economic and institutional. The limitations on capital and teachers on one hand and on children's attitudes, motivations, and awareness on the other hand should be focal points of educational strategy.

## **SCHEMATIZATION OF THE PROCESS OF OCCUPATIONAL CHOICE AND SELECTION**

**Herbert S. Parnes**

The schematic representation of the process of occupational choice and selection shown on the following page is an attempt to conceptualize the relationships among factors affecting individuals' occupational choices and employing units' selection of individuals for job openings. The question which we hope to answer is whether this scheme is applicable to the socioeconomic conditions of developing countries.

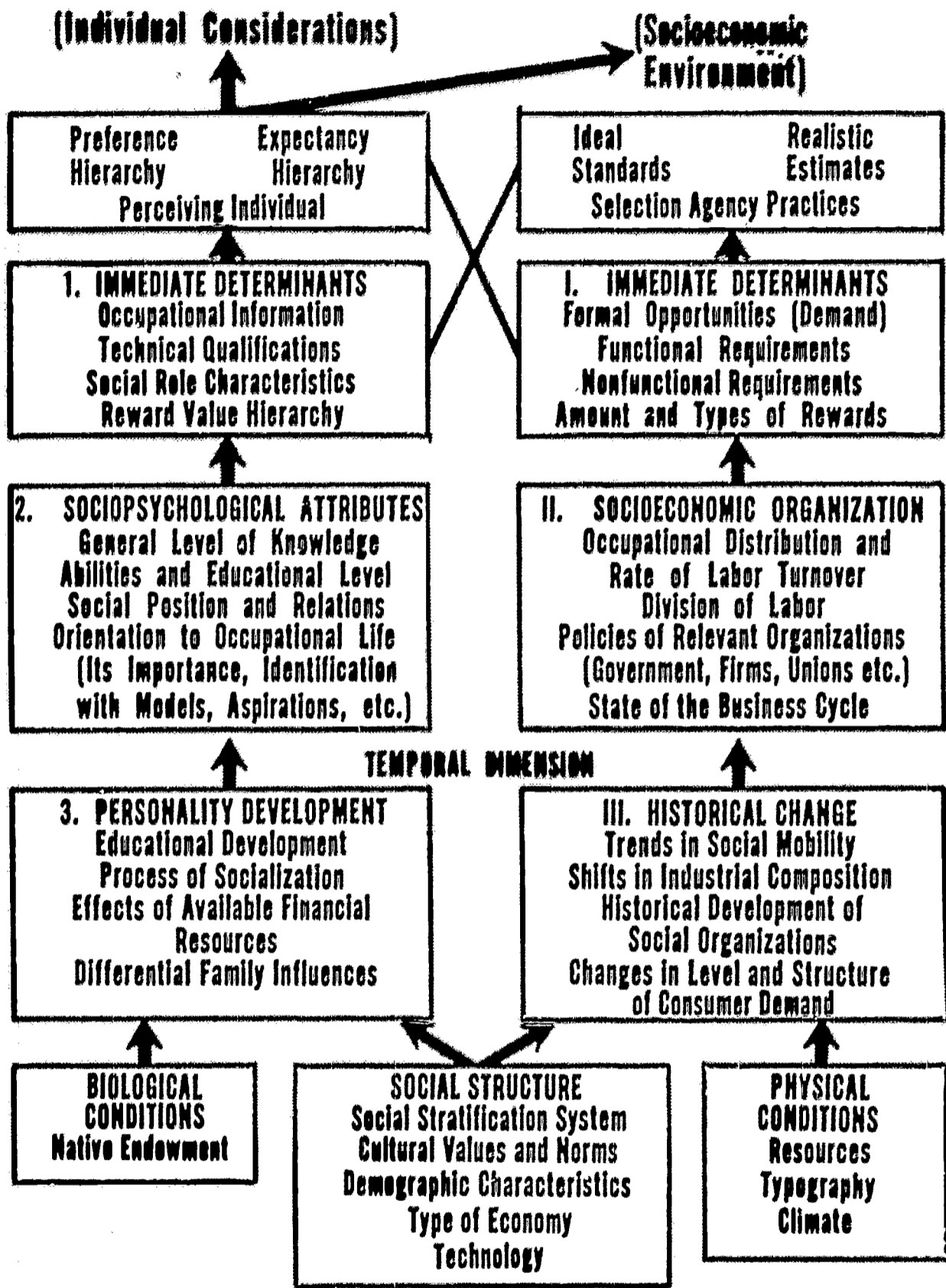
Lest the intention of the diagram be misconstrued, discussion should be prefaced by the understanding that there is no single rational decision which leads an individual into a particular occupation. The process whereby occupations are chosen and prepared for is a complex one which involves a series of decisions over time. In addition, individuals do not have complete freedom of choice; their freedom is limited both by past decisions and environmental factors.

The boxes on the left side of the diagram contain the factors affecting individuals' occupational choices, while the right side represents environmental factors determining the selection of individuals for different economic roles. The causal relationships among classes of factors work from bottom to top. The most fundamental social and economic determinants of individual and environmental selectivity are at the base, and the more immediate conditioners of choice are arrayed upward. The horizontal dotted line represents the temporal dimension in occupational choice; social and individual decisions at a particular moment in time are conditioned by developments in the past. Actual occupational entry results from the coincidence of the final decisions of individual and employer, as shown at the top of the diagram. The individual's decision evolves from the interaction of his preference hierarchy, or the way in which he ranks occupations according to their benefits and disutilities; and his expectancy hierarchy, or his perception of the likelihood of qualifying for alternative occupations. The decision of the employer, or selection agency, is a compromise between a set of ideal standards and the employer's estimate of the cost and availability of employees with different degrees of qualification.

The schema is applicable to each of the points of major decision in an individual's educational experience. It should be reemphasized that the process of choice is largely irreversible. The individual's range of vocational selection becomes more narrowly circumscribed with each decisive turning point in his progress toward occupational entry.

# SCHEMA OF THE PROCESS OF OCCUPATIONAL CHOICE AND SELECTION

## OCCUPATIONAL ENTRY



Source: Peter M. Blau, John W. Gustad, Richard Jessor, Herbert S. Parnes, Richard C. Wilcock, "Occupational Choice: A Conceptual Framework," *Industrial and Labor Relations Review*, Vol. 9, No. 4, July 1956, p. 534



## LABOR MARKETS AND LABOR MOBILITY

Herbert S. Parnes

Human resource planning involves more than a concern with the quantity and quality of manpower. It also entails an analysis of how labor resources are actually allocated. The manpower planner must attempt to determine whether the allocation of human resources is the most desirable one in terms of economic growth.

The allocation of labor resources is accomplished through the labor market--an institution which brings jobs and workers together. In a broad sense, the labor market process encompasses three functions. These are the processes whereby labor is bought and sold, wages and salaries determined, and labor allocated among occupations and industries.

The principal "actors" in the labor market are:

1. The individual employee with his pattern of preferences for different types of occupations and rewards.
2. The individual employer with his preferences for different types of employee skills and his set of personnel policies.
3. Associations of employees (unions) which strive to improve the economic position and working conditions of employees.
4. Associations of employers which attempt to protect the interests of employers.
5. Government, which, in addition to employing labor, sets labor standards, organizes the labor market, and regulates employment conditions in a number of ways.

Although the relative roles and characteristics of the so-called "actors" vary from market to market and over time, these actors are present in all labor markets and it is through their interaction that labor resources are allocated.

### The Economic Model of the Labor Market

In an attempt to explain the allocative processes of the labor market, economic theorists have constructed a highly abstract model. To explain this model we might imagine a society on an island with no immigration or emigration and where all parts of the island were easily accessible. In addition, let us assume the following four conditions:

1. In selecting jobs, workers are motivated by only one consideration--maximization of income. They are indifferent to geographical location or to the particular employer for whom they work.

2. In hiring employees, the employer's only goal is to minimize the cost of labor per unit of output.

3. There is only one occupational category and all employees have equal ability.

4. All workers have perfect knowledge of labor market conditions, that is, wage rates in other firms.

If all these conditions were fulfilled, pure competition would exist in the labor market, and wages in all firms would tend toward equality. If, for example, one employer paid higher wages than his competitors, workers would gravitate to this employer and the excess labor would result in wages being bid down until they were once again everywhere equal. The model thus explains two closely related phenomena: wage determination and mobility. Wage differentials motivate workers to seek employment elsewhere and this movement continues until differentials are eliminated.

If the restrictive assumptions are modified to reflect the existence of many occupational categories, the competitive model may still be used to explain occupational wage differentials. In this more realistic situation, wage differentials are compensations for the nonwage characteristics of jobs. Once again, wage differentials act as signals, and workers shift occupations until the "net advantages" of different types of employment are equalized.

In this purely competitive model, with existing technology and the pattern of workers' abilities and preferences given or fixed, all workers would be in occupations where their contribution to total product would be maximized. In economic terms marginal revenue products would be equalized for each category of labor.

In such a labor market there would be little for the manpower specialist to do. There would be no need for a conscious manpower program, for the market would automatically allocate resources in an economically optimal manner. Although there are some economists who maintain that such labor markets exist, most recognize that this model is an inadequate explanation of reality. There are several reasons why the model cannot be applied either to developed or developing economies:

1. In some of the emerging economies, formal labor markets simply do not exist.

2. The model can do little more than describe tendencies, for imperfections (lack of knowledge and nonpecuniary factors) are found even in the most highly-developed labor markets.

3. Even if the assumptions were realistic and labor markets operated perfectly, time lags in the adjustment process would necessitate manpower planning.

Despite the inadequacies of the model as an explanation of conditions in the real world, many economists and manpower specialists feel that it does represent a worthwhile ideal. The model emphasizes the importance of establishing a rational wage structure, which reflects socially desirable wage differentials, and the need to develop labor mobility, which allows the economy to react to structural changes with the fluidity assumed in pure competition.

### Labor Mobility

The concept "labor mobility" may be used in several different senses. It may refer to actual movement among occupations and geographical areas. It may be used to explain the ability of workers to move from one occupation or area to another. Or, in terms of economic theory, it can mean the propensity of workers to respond to perceived differentials in working conditions and wages. This last type of mobility is the most difficult to measure. Many researchers use data on actual patterns of movement as indicators of propensities to move. However, care must be taken in making generalizations from such data since some workers move because they have to and others may not have sufficient information to motivate them to move or may be unable to move, even though they desire to.

If labor mobility is regarded as actual movement, five types may be differentiated:

1. Interfirm mobility--movement from firm to firm with no change in occupation, industry, or geographical location of employment.
2. Occupational mobility--a change in occupational function which may occur within the same firm or which may be associated with a change of employer.
3. Industrial mobility--movement from one firm to another in a different industry.
4. Geographic mobility--a change in jobs which requires a move to a new community.
5. Labor force mobility--movement into and out of the labor force.

While these categories exhaust all the ways in which the supply of labor can adjust to changes in the level and structure of demand, it should be noted that the categories are not mutually exclusive and most job changes involve several types of mobility. For example, a man may move across the country to take a different occupational assignment in a different industry.

Labor mobility is important in economic development because it gives flexibility to the economic system by allowing the labor force to reallocate itself in response to changes in demand, output, and production techniques. Moreover, labor mobility provides opportunities for advancement to higher income and social groups.

Various attempts have been made to analyze the process of labor mobility, but certain data limitations should be noted. In the first place, most studies of labor mobility have been made in the United States, and it is not known how applicable the generalizations are to other nations. Second, much of the research on the significance of motivational factors in mobility stems from studies of blue-collar workers, and the extent to which these results are applicable to white-collar workers in the United States is unclear. Certainly, care must be taken in applying these findings to other economies.

Most of the studies of mobility in the United States are based upon collections of detailed work history data from samples of workers over time. These data permit quantification of job changes and enable the analyst to draw a rough picture of the pattern of movement. In addition, many of these studies have included personal interviews in an attempt to determine motivational factors underlying mobility patterns. A consistent pattern of responses to the questions has provided manpower analysts with a good idea of the criteria workers use in job selection.

National surveys of the labor force conducted in 1955 and 1961 by the U.S. Bureau of the Census indicated that about one-tenth of all persons who worked during these two years made at least one change of employer. However, other data indicate that over one-third of those employed at the beginning of 1963 had been with their current employer for at least ten years. Considering these two facts together, it is obvious that job movement is not evenly distributed among all employees. A small proportion of highly-mobile workers accounts for a disproportionate share of the total amount of job-to-job movement.

The disparate incidence of mobility raises questions about which workers are mobile. The most widely accepted generalization is that an inverse relationship exists between age and all types of mobility. This inverse relationship appears to be continuous, that is, mobility constantly decreases with age. Results of similar studies in Europe confirm this relationship. There are several reasons for this phenomenon. Many young persons experiment in the early stages of their labor market experience, whereas older workers are reluctant to give up a job and search for another because of the discriminatory hiring practices of many employers. The most important reason for the inverse relationship between age and mobility is that older workers tend to have greater job tenure and, thus, are less prone to change their jobs voluntarily. The seniority system in the United States provides a partial explanation, but psychological and sociological factors are also important. Workers with long tenure in a job are reluctant to leave the familiar routine for a situation which almost never can be fully known in advance.

A second generalization is that mobility rates vary by occupation. There is a continuous increase in mobility rates from the top of the occupational hierarchy to the bottom. That is, professional workers make fewer changes of employer than manual workers. On the other hand, professionals show considerably more geographical mobility than other groups due to the wider market for professional services and the greater financial ability of professionals to relocate.

Third, it is important to note the flexibility that is implied by the types of job changes American workers make. Most of the changes that are made are complex changes in the sense that when a worker changes his employer he also changes his occupational group and/or his industrial affiliation. In 1961, for example, one-third of all job changes were of this complex nature. This indicates a remarkable degree of industrial and occupational flexibility and suggests that it is unrealistic to assume individuals will remain in the same occupation and industry over time.

A final generalization is that there is more variation in mobility within age and occupational groups than among them. This fact suggests that psychological variables may be of considerable importance in explaining mobility.

### Motivational Factors

Data from numerous labor market studies indicate that wages and wage differentials are not so overwhelmingly important to workers as economic theory implies. Job movement occurs in the absence of wage differentials and often does not occur in the face of substantial differentials. Obviously a number of considerations influence mobility: job security, physical working conditions, the nature of the job, the character of the supervision, and fringe benefits. All of these factors are significant, and any one of them may outweigh wage considerations. Moreover, finding a job is not the rational weighing and balancing process suggested by conventional economic theory. Most persons do not consider all possible alternatives, and few have information that would allow them to judge even several alternatives. Most Americans find jobs in a relatively random and informal manner, in many cases taking the first reasonable job that presents itself.

What are the implications of these findings for manpower policy?

1. It should not be concluded that wage differentials are unimportant, but rather that the manpower specialist cannot exclude psychological and sociological factors from consideration. A rational wage and salary structure is a vital tool of manpower policy, but in certain contexts, other factors may be more important than wages. Attempts must be made to identify these other factors and to measure their significance.

2. Reference to the conventional labor market model suggests the importance of channels of information between workers and employers. Perfect knowledge does not exist, but attempts must be made to improve information flows where possible. Employment services and vocational counseling may be helpful supplements to existing sources of information.

3. Available labor market studies also suggest the importance of programs for training and retraining to facilitate occupational mobility and of policies to remove and reduce barriers to geographical mobility.

## WAGE POLICY AND MANPOWER PLANNING IN DEVELOPING NATIONS

Everett M. Kassalow

In Western industrial development, wages were established largely by market forces, subject to some influence by the labor-management bargaining process. Developing societies, committed to more centrally-planned, accelerated development, are hardly likely to leave wage structures free to develop as they did in the West.

### Background Factors: Structural Features of the Labor Market

Technical, political, and ethical constraints render full government control of wages in developing countries neither possible nor desirable, but we should acknowledge at the outset that, as an integral part of manpower planning and general economic development, wage policy must be closely coordinated with other aspects of planning. The functional relationships among wages, manpower, employment, and investment are familiar and need not be elaborated. Our objective here is to describe major problems and tendencies rather than to prescribe detailed remedies for particular national difficulties.

The wage and salary sector in developing economies is characteristically small, usually constituting between 5 and 30 percent of the labor force. In most countries the government is the largest single employer of wage labor and is likely to remain so, because public employment resulting from economic planning and investment projects is added to the former colonial functions of government administration and operation of infrastructure. Another characteristic is the presence of a few, large foreign-owned firms whose employment and wage policies have a special impact on the national labor market and wage structure.

Excessively high wage differentials among classes of workers, skilled and unskilled, manual and nonmanual, rural and urban, native and foreign, are common and difficult problems in the new societies. Tables 7 and 8 demonstrate for several developing countries the great wage differential between unskilled workers and workers with various specific skills. In some cases we find skilled personnel receiving as much as seven times the pay of their unskilled compatriots.

The following explanation regarding Accra applies to both Table 7 and 8: For Accra, these calculations are based on statistics taken from the Labour Department's "Information on Labour Matters, Ghana" and from collective agreements. Statistics for all other places were derived from "Statistical Supplement: 1961 October Inquiry," International Labour Review, July 1962. The list of places used in these tables has been limited by the availability of reasonable comparable figures.

Table 7. WAGES OF SEWING MACHINE OPERATORS EXPRESSED AS PERCENTAGES OF WAGES OF UNSKILLED LABORERS IN MANUFACTURING OR CONSTRUCTION INDUSTRIES BY SELECTED LOCATION

<u>SEWING-MACHINE OPERATORS</u>		
<u>Place</u>	<u>Wages Compared</u> <sup>2</sup>	<u>Percentage</u>
Stockholm <sup>1</sup> .....	AE	58
Germany, Federal Republic <sup>1</sup> .....	MR	78
Helsinki <sup>1</sup> .....	PR	80
Manchester .....	MR	84
Netherlands .....	PR	95
Georgetown (British Guiana) .....	AR	97
Melbourne .....	MR	112
Madagascar .....	AE	115
Malaya .....	AR	116
Brazzaville .....	MR	116
Spain .....	MR	138
Manila .....	AR	150
Nairobi .....	PR	153
Douala .....	PR	167
Bangui .....	PR	169
Abidjan .....	MR	171
ACCRA .....	MR	191
Bangkok .....	AR	267

<sup>1</sup>Female sewing-machine operators

<sup>2</sup>Since the calculations are expressed as percentages, it is reasonable to suppose that ratios based on MR, PR, AR, and AE are comparable. The Minimum Rates for Accra are usually substantially the same as the Principal Rates and the Average Rates.

Source: Report to the Government of Ghana on Questions of Wage Policy, ILO, Technical Assistance, Geneva, 1962.

MR = Minimum Rates; PR = Prevailing Rates; AR = Average Rates; AE = Earnings

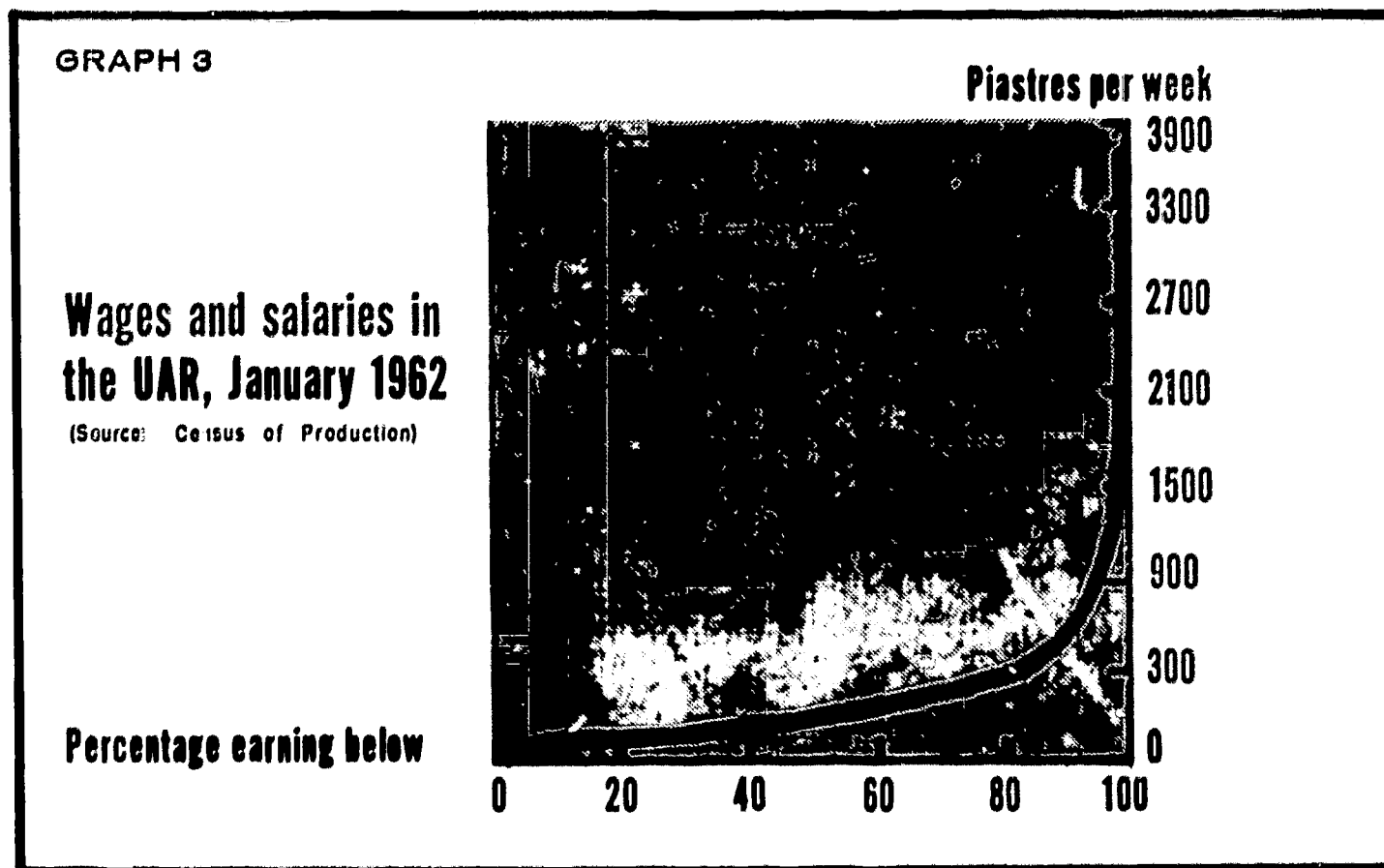
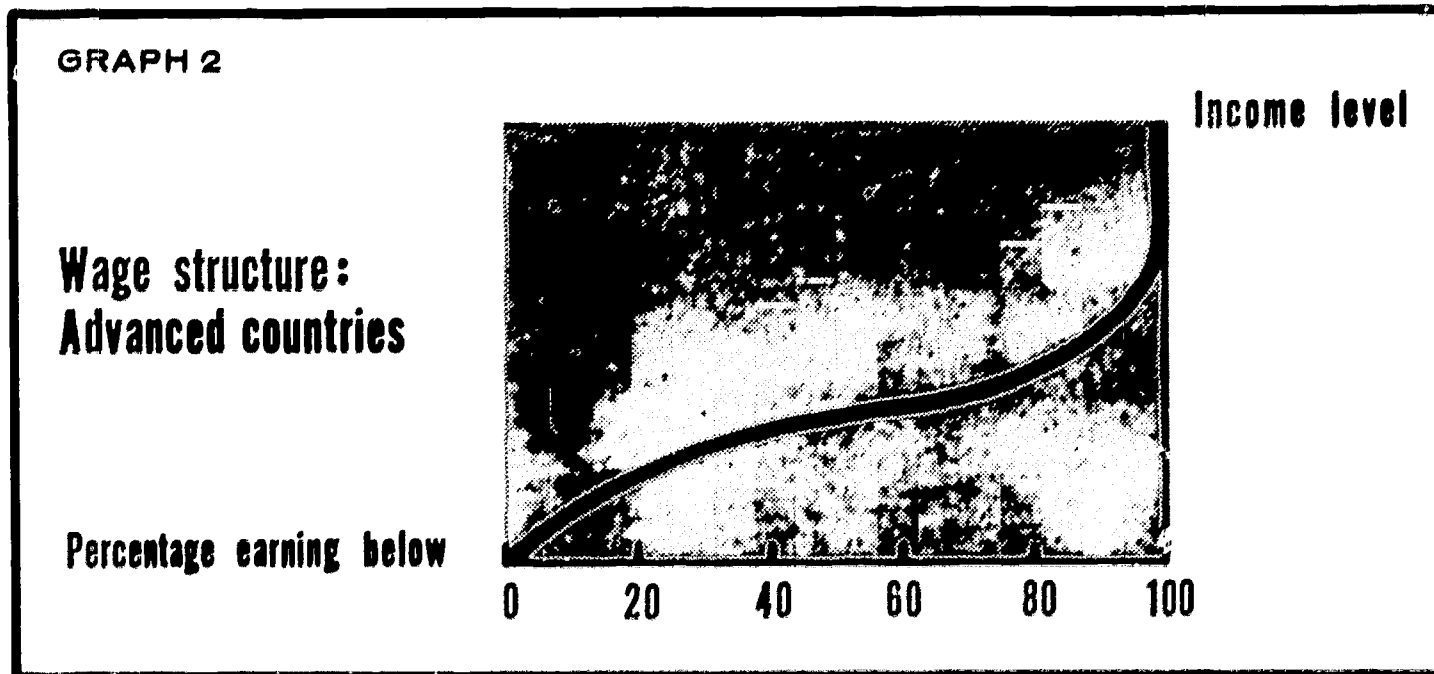
Table 8. WAGES OF FITTERS EXPRESSED AS PERCENTAGES OF WAGES OF UNSKILLED LABORERS IN MANUFACTURING OR CONSTRUCTION INDUSTRIES BY SELECTED LOCATION

<u>FITTERS</u>		
<u>Place</u>	<u>Wages Compared</u>	<u>Percentage</u>
Stockholm .....	AE	94
Manchester .....	MR	103
Germany, Federal Republic .....	MR	108
Spain .....	MR	108
Helsinki .....	PR	111
Netherlands .....	PR	114
Melbourne .....	MR	117
Cyprus .....	AR	121
Madagascar .....	MR	144
Douala .....	PR	172
Manila .....	AR	196
Abidjan .....	MR	206
ACCRA .....	MR	210
Eastern Region, Lagos .....	AE	211
Eastern Region, Lagos .....	PR	214
Malaya .....	AR	232
Dakar .....	MR	305

Source: Report to the Government of Ghana on Questions of Wage Policy, ILO, Technical Assistance, Geneva, 1962.

MR = Minimum Rates; PR = Prevailing Rates; AR = Average Rates; AE = Earnings

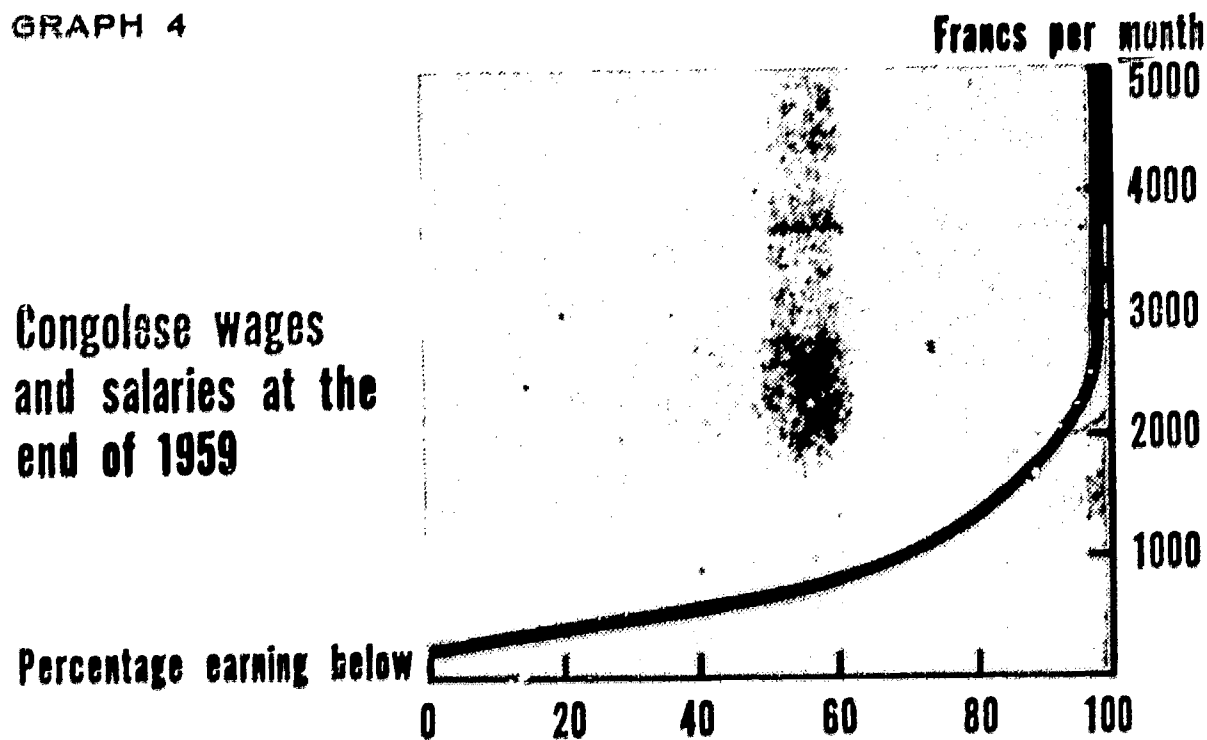
Graph 2 depicts the normal wage distribution for a typical developed economy, whereas Graph 3 and Graph 4 show the representative distributions for the United Arab Republic and the Congo. Note that for both countries a far greater proportion of the labor force is concentrated in low-paying jobs, with very few people in the high pay brackets.



Source: H.A. Turner, Wage Trends, Wage Policies, and Collective Bargaining: The Problems for Underdeveloped Countries, Cambridge University Press, 1965.



GRAPH 4



Source: H.A. Turner, Wage Trends, Wage Policies, and Collective Bargaining: The Problems for Underdeveloped Countries, Cambridge University Press, 1965.

These differentials tend to be much larger than those in productivity. Overcoming differences which have no economic justification is an important part of government policy. The government must gear its educational and training program to relieving skill shortages because payment of higher and higher wages to skilled craftsmen or other bottleneck skill groups will not, in the long run, relieve shortages as effectively as training more people. As the nation's largest employer, the government can also affect prevailing wages via its own pay scales. It should set pay scales so that generally-trained college graduates are not paid more than technicians whose talents are more critical for development. In addition, admission and financial assistance in higher education should be oriented toward current and future economic and social needs and away from traditional patterns and archaic conceptions of occupational prestige. These means, rather than expanding pay differentials, are fundamental elements of the solution to skill shortages.

Minimum wage legislation, the result of social and political pressures as well as economic considerations, is common in developing nations. In more advanced economies, the statutory minimum wage typically affects only a very small part of the work force, but, because of the generally weak bargaining position of labor vis-à-vis employers in most developing countries, the minimum wage is likely to become the prevailing wage in the monetized labor market. This situation presents legislators and planners with a dilemma. To guarantee the labor force an acceptable standard of living, the wage floor cannot be set too low, but a wage which is

fixed too high has undesirable economic and social repercussions. A high minimum wage may deter entrepreneurs from beginning or expanding their enterprises, or it may induce a strong labor-saving bias in investment. Furthermore, the experience of several countries indicates that a high minimum wage lures too much of the surplus agricultural labor into urban centers before it can be gainfully employed. Because of its effects on the general wage level, population movement, and investment, a minimum wage must be set with great care and awareness of possibilities of regional differentiation.

Traditional payments, which often accompany wages, but which are unrelated to job performance, complicate plans for rationalizing the wage system in developing countries. Provision of services and facilities such as housing, medical services, and canteens is socially desirable, but it is not economically sound for such benefits to be tied to a particular employment. To explain by example, regular annual seniority wage increments commonly paid to workers contribute to work-force immobility--because a man loses seniority when he changes jobs--and divorces workers' pay from the real worth of their efforts. Annual or periodic bonuses in the form of profit-sharing also present problems because the rewards shared by workers do not reflect their individual job performances. Evidence from the post-World War II period reveals that although problems such as these remain critical, in the course of social and economic evolution workers' total remuneration comes more and more to reflect their economic contribution.

Another challenge to a coherent wage structure is the presence of large, efficient, foreign-owned firms which generally pay higher wages than other public and private employers. Planners in many countries fear that smooth functioning of the labor market, with wages as the major allocative device, will be disrupted by the existence of a few large employers whose wage scales are greatly out of line with those of the rest of the economy. No simple answer to the question of how to deal with the employment policy of large-scale industry is possible. Sectoral dualism has characterized developing economies everywhere, and none has found a quick remedy for structural disequilibrium in the labor market. As a general proposition, however, government policy should encourage firms to relate wages more closely to productivity, the limits of deviation to be negotiated with labor unions.

The foregoing analysis of some major wage structure characteristics of modernizing economies has already suggested policies appropriate to remedy a few specific problems; it remains to draw some general conclusions.

#### Toward a Balanced Wage Policy

Government control of wages will, of course, vary in degree and type from country to country, but a few generalizations can be made about potentially effective areas of government intervention and common limitations of government policy. Where central controls are exercised, government may make recommendations on wage levels for a few job types which prevail throughout the economy. The wages for such jobs as typist, truck driver, and unskilled laborer can serve as scale markers which help employers

establish rates for other classes of jobs. These guidelines, along with other government advice and coercion, should be developed in tripartite consultation among organized labor, private employers, and government. The government's influence in such cooperative wage-setting activities is enhanced by virtue of its position as a major employer.

In many countries, proposed wage freezes are inadvisable in view of the need for incentives to greater work effort and productivity and the possible destabilizing political effects of a policy which appears to ignore demands for a rising standard of living. Wages should increase with productivity, but the problem for policy-makers is to insure that a significant proportion of increased productivity is reserved for development investment.

Governments, in consultation with private interests, can devise a general framework of wage policy but, short of complete control of wages which we have seen to be unfeasible, the practical activity of assigning pay rates to workers will be the purview of labor and management in collective bargaining.

**PART III.**

**MANPOWER  
ADMINISTRATION**

## PART III. MANPOWER ADMINISTRATION

### INTRODUCTION

As the manpower programs of the developing nations become more ambitious and more formal, many questions which might be bypassed at earlier stages of manpower planning come to the fore. Those charged with administering such programs must find workable answers, if they hope to participate effectively in economic development.

In the opening paper in this section Hilliard raises a number of significant questions concerning national development planning and examines their implications for the manpower planner. He notes that within a nation there are different levels of involvement in the planning process and that, at each level, one finds diverse conceptions of planning and different orientations for action. If manpower planning is to be more important and fruitful than it has been, it is necessary for the manpower planner to become involved in every phase of national development. In a second paper Hilliard identifies and analyzes vital issues which the manpower planner must act upon, if manpower planning is to assume its potentially focal role in development.

In a sequence of papers (3, 4, and 5), Merson describes the task of the manpower and employment specialist and suggests an analytical framework which might be utilized in the planning, programming, and implementation of an active manpower and employment policy.

The final paper (6) in this section is by Ruttenberg, who describes the several functions of the Office of the Assistant Secretary for Manpower, United States Department of Labor.

# PLANNING AND IMPLEMENTATION OF MANPOWER PROGRAMS AS AN INTEGRAL PART OF ECONOMIC PLANNING AND DEVELOPMENT

John F. Hilliard

## A Note on the Nature of Development

Perhaps the most fundamental change required in our thinking about development is that we broaden the concept of development to include all aspects of national development, including pursuit of goals which are political and intellectual, psychological and conceptual, creative and cultural, as well as economic, scientific, and social. Despite the considerable lip service paid to such a broad definition, development, so far, has been defined, conducted, and evaluated essentially in economic terms--per capita income, gross national product, and so on. Even education has been conceived of and justified by economic criteria, despite the rather reluctant recognition that it is also a "consumer good." Growth of human skill and leadership has become "human capital formation."

It is becoming increasingly clear that as valuable as economics is in planning, conducting, and evaluating certain aspects of development, more has been asked of it than the state of the art can produce. National development has as one of its major goals a higher standard of living for all people. This is only one of the goals, however, and its achievement depends upon the collateral attainment of many other goals which are not wholly economic in any direct or immediate sense. In other words, national development requires a reasonable synthesis in all fields of political, intellectual, economic, social, and cultural endeavor. Beyond this, it requires a wide acceptance of ideas and symbols which facilitate communication and provide an effective sense of national identity, an intelligent respect for the country's cultural antecedents and, at the same time, an orientation toward modernization.

These things are not easy to define and very difficult to quantify in economic terms. But the ideas men hold about their relationships to each other essentially determine whether there can be created either a viable economic system or a nation-state. The will to develop is demonstrably more important than any other single factor in achieving development, and it would be difficult to show that national growth--in the sense it is defined here--has ever been achieved without strong motivation unrelated to economic self-interest. Such a redefinition of development can have very important conceptual and operational values. In conceptual terms, it adds vision to planning and helps reconcile traditional values with modern aims. Operationally, it places the developed and developing nations in an equalitarian relationship in which it is recognized that both have much to give as well as to receive.

## Elements of National Development Planning

For theoretical purposes we assume, wrongly, that planning is an orderly and logical process motivated by the desire to better the lives of all people. The mixed

motives of those involved in the development process--such as political ambition and pressure group objectives--imply that the goals of planning, and therefore an optimum methodology, are not clear. The confusion of intermediate goals, such as maximization of export revenues, and final goals, such as increased disposable personal income, detracts further from the clarity of planning. With these limitations in mind, we can investigate some of the elements of national planning.

Selection of a time framework within which development activities are to be carried out is an important aspect of planning. The problem is, essentially, that development is a continuous process, but planning involves dividing the continuum into stages in which certain activities are emphasized and targets projected. Political and budgetary limitations in virtually all nations also make period planning necessary. The strategic implication of this unavoidable interaction of discrete time periods within a continuum is that designers of five-year or other plans should not overemphasize short-run payoffs or think of the planning period as a differentiable unit of development.

A second element of planning involves the choice of a structure for the planning organization. Observation of developing countries reveals a multiplicity of relationships among heads of state, planning ministers, cabinet members, planning commissions, and other groups in the planning hierarchy. Effective and efficient use of scarce decisionmaking and administrative talents is important for the achievement of plan goals. In this respect we should learn a lesson from the planning failures caused by organizational weaknesses at high levels in several countries. In particular, political leaders designing an organization to oversee development must be aware that organizations in which decisionmaking is dispersed among several individuals or groups suffer from internal conflict and competition. The more clearly the lines of power and prerogative are drawn, and the broader the network of communications, the less likely it is that planning will degenerate into competition among feuding interests.

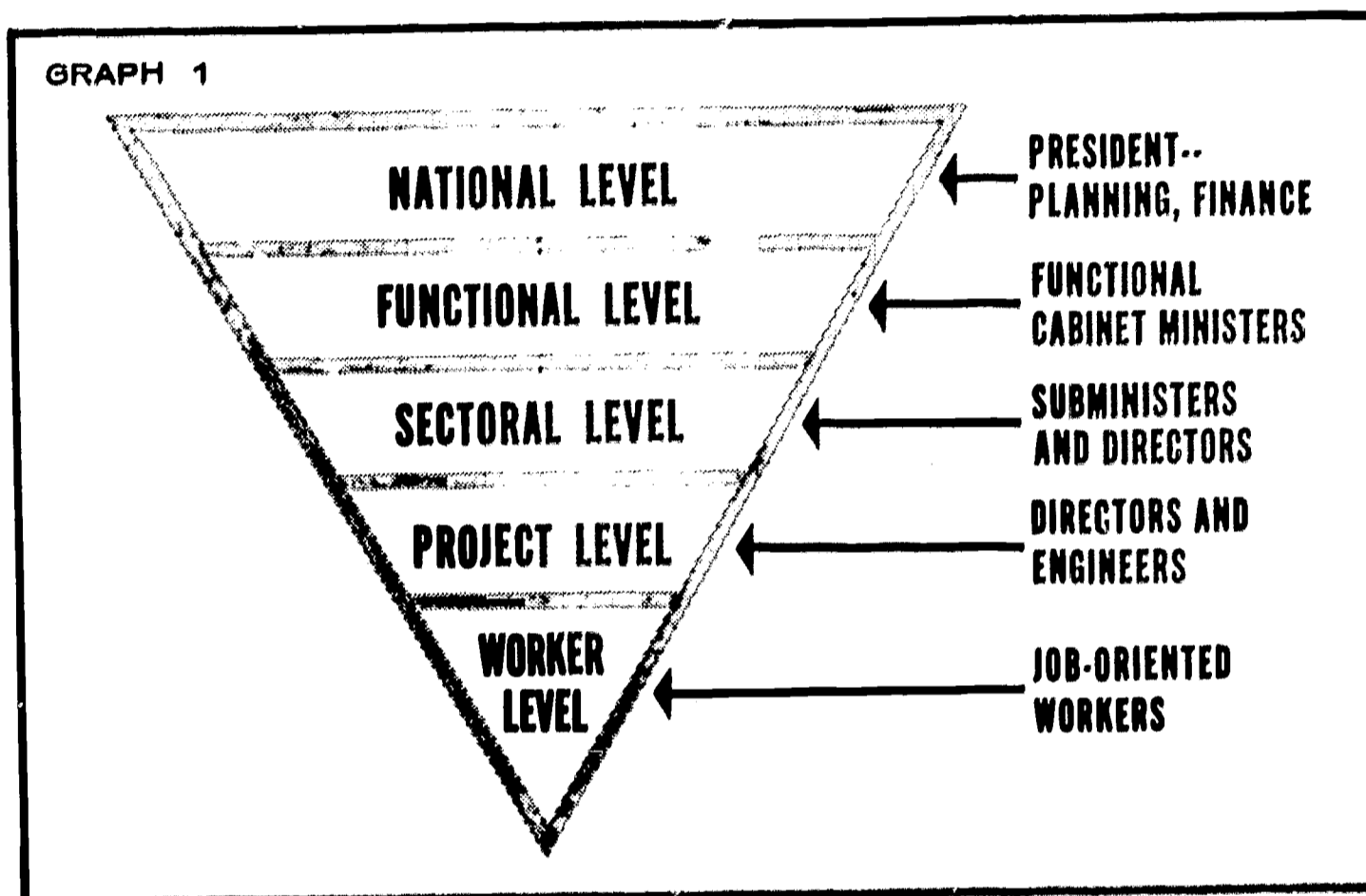
A development strategy involves decisions about balanced versus unbalanced sectoral growth. Such choices of emphasis between agriculture and industry, between infrastructure and directly-productive investment, or between expansion in export versus import-competing sectors, must be explicit and must be made at the highest level. Choices of sectoral emphasis are part of the larger problem of integrating partial plans into a global program of national development. We will return to the difficulty and necessity of integration, with specific regard to the role of manpower planning.

Finally, a prerequisite to effective planning is an assessment of the nature and extent of natural and human resources. Granted that no nation is fully aware of its resource potential, and especially of its human resources, the selection of goals which are feasible, yet which leave no resources unemployed, rests on a reliable evaluation of resource endowment as well as requirements. We are led to conclude that planning national development is inherently neither orderly nor logical. The plans which have emerged in practice are typically compromises, arising out of conflict and uncertainty within both the political process and the planning hierarchy.

Integration of the parts into a cohesive whole is atypical. We should be forewarned as well against the sanguine assumption that a plan which is logically consistent on paper can be successfully implemented without frustration, shortfalls, and unforeseen changes.

### The Inverted Planning Pyramid

One way of conceptualizing the human and organizational frailties of national planning is to utilize an inverted pyramid which depicts different levels of involvement in the process of planning.



Only three of the offices identified above are directly concerned with the national plan as a whole. The head of state, responsible to the legislature and the people, takes an overview of all aspects of development. The Minister of Planning thinks in terms of forging a unified plan out of the diverse and often competing planning agencies below the presidential level, and the Finance Minister is primarily concerned with budgeting the plan, exploiting sources of money and allocating it to development agencies. Thus, even at the global level there are three divergent conceptions of planning and orientations for action. At the functional level there is likely to be even more conflict of interest and lack of communication. One can accept the premise that at the cabinet level each ministry will attempt to maximize its importance and its allocations, even at the expense of others. When we disaggregate to the sectoral or project level, we find no one directly concerned with the relationship between his own activities and the success of the national



plan. Both administrators and operators are concerned exclusively with fulfilling their own targets and advancing their careers. At the lowest level, that of the individual worker, there is still less interest in achievement of national objectives or of integrating activities into a coherent plan. The inference to be drawn, then, is that the prerequisite of successful development is a planning mechanism which minimizes conflict, which favors vertical and lateral communications, and which transmits directives effectively through the organizational hierarchy. In this context the essence of manpower planning is to synthesize into a cohesive and integrated program the multitude of manpower implications at the project, sectoral, and functional levels.

### Sketching the Relationship Between Manpower Planning and Administration and Overall Development Planning and Administration

Development of "human resources"--progress toward a richer life for all people--is the goal of every aspect of national planning. Manpower planning is ultimately intended to do far more than make men more efficient factors of production, but in order to do so its activities must be linked with the other aspects of planning. In particular, manpower planning has been relegated to a subordinate position in the developmental hierarchy in many lands. Education and training programs are designed after quantities of various types of manpower needed to achieve physical targets are determined. Because skill creation through education is inextricably bound up with the process of enlightenment and the evolution of new attitudes, manpower development should not be conceived as ancillary to other goals, but should be a goal in itself.

An upgrading of manpower planning in the development hierarchy is not the only way to augment the contribution of manpower specialists. For one thing, planners in all development activities should be aware of the role and the importance of human resources in relation to national goals. Moreover, helpful and creative relationships among all planning authorities should be established from the outset in planning. Because manpower considerations pervade all modernizing programs, there is a great opportunity for human resource specialists to be pivotal figures in the coordination of development activities.

In addition to its potential role within the larger planning organization, manpower planning can be improved within the scope of its own functions. In particular, manpower research and strategy have been shortsighted and unsophisticated in many lands. Second, manpower experts can be more fully schooled in the comprehensive nature of the development process to understand better the human resource needs of the nation. And third, the functions of manpower planning and administration, which are often isolated from each other, should be brought into a close relationship.

In summary, manpower planning should be involved in every phase of national development and, with skilled and vigorous specialists, the role of human resource planning within the overall planning organization can be more important and fruitful than it is today.

## VITAL MANPOWER ISSUES

John F. Hilliard

The general prerequisites for integrating manpower planning into the framework of national development were discussed in a previous paper. In this presentation we shall investigate some vital issues which must be identified and acted upon, if manpower planning is to assume its potentially focal role in development.

### Manpower Studies vs. Policies and Programs

Virtually all developing countries have made at least one manpower study. In many of the same nations, however, decisionmakers, particularly those with little training in economics, are growing skeptical of the value of such studies for active development programs. These people want to attend immediately to the "guts" problems of development such as unemployment and education. Their predisposition to make policy without prior research into alternative programs poses a serious threat to rational manpower planning and to national development. In all instances manpower plans are somewhat imprecise, but when all relevant information is not brought to bear on strategic decisions, they become slipshod. For this reason, manpower studies as "reconnaissance surveys of the economic terrain" broaden the base of planners' information, indicating limits and possibilities of alternative courses of action. It should be borne in mind, however, that research funds and skills are in very short supply in developing countries, so they cannot afford purely academic research which has no practical applicability.

As a danger to the planning process, we have cited aggressive, anti-intellectual decisionmakers, who insist on action without sufficient information to make efficient choices. At the opposite extreme is an equally dangerous type of planner, the skeptic who shuns choices when success is doubtful. The atmosphere of development decisionmaking is often pessimistic, but decisions must be made; planning is not for the faint-hearted but for those with the will to achieve.

### Employment and Unemployment

One of the most serious and chronic problems of many developing nations is widespread unemployment and underemployment which, if continued, poses a threat to political stability and wastes valuable human resources by leaving them idle. In response to the critical unemployment problem, virtually all labor surplus economies have made the elimination of unemployment an objective of national development. Yet, complete elimination of unemployment within one or two decades is not a feasible target. Progress toward lower rates of unemployment, however, is possible. Selection of a higher rate of employment as a planning objective has important implications for the choice of techniques of production, and it is safe to generalize that, for most modernizing economies, expansion of large-scale, capital-intensive

Industry mitigates against achievement of a high employment level. It is critically necessary that planners emphasize sectors and technologies whose factor proportions maximize the combination of employment and productivity.

### Population and Labor Force Growth Rates

Manpower planners cannot isolate themselves from demography, and one of the ways to integrate manpower and other planning functions is for demographers and manpower specialists to cooperate. Effective human resource development is predicated upon the utilization of all information on changes in population quality, health, education, and motivation, as well as population size and age distribution.

### Wage and Salary Policies

It should be obvious that planning for future labor force needs involves creating not only sufficient educational and training facilities, but also a system of incentives to allocate and motivate the work force. This implies abolishing the colonial legacy of wages and salaries and leveling historic inequalities to reconstruct a pay system grounded in productivity and equity. Because of the power of recalcitrant interest groups which have a stake in perpetuating old wage patterns, new pay scales can be introduced only as the power of old pressure groups wanes. This process will be accelerated by the opportunity to set wages for the multitude of new job types which arise in the course of modernization.

The morale of the labor force is as important to development as efficient allocation, and high morale depends on many extra-monetary incentives, primarily advancement as a reward for outstanding work. Improved work conditions, better health, and improvements in housing, food, and transportation are necessary adjuncts to career opportunities in fostering high morale. Regarding the necessity of both monetary and other incentives, planners must never assume that workers who are trained and coerced into jobs by government will be effective in their occupations without these incentives.

### Investment in Education and Training

Education and training have been the topic of numerous earlier lectures, but several points bear reiteration. First, universal primary education is certainly a valid, long-range goal of development, and constant expansion of the educational base is desirable; but to make it an immediate objective is likely to contradict valid aims of national development. Universal education will absorb an inordinate amount of the nation's resources of capital and educated people, and the quality of education is certain to be low. Many nations find it worthwhile to experiment with work-study programs as an alternative to formal education or purely vocational training. Secondary and college-level students can contribute valuable skills to their schools and communities in such activities as elementary school teaching. Through such a

program students contribute to development while they are still in school, and society benefits because the academic community does not lose touch with the rest of society. Students will become more aware of social realities and less alienated from the outside world. In addition, many students may find vocations through their part-time work. When domestic educational facilities are insufficient, it becomes necessary to send students abroad to study and, as developing nations are aware, this is one of the major causes of the "brain drain." In order to minimize the permanent outflow of talented youth, these nations must make greater efforts while students are young to inculcate strong ties to the homeland and to inform children of opportunities at home.

### Education and Employment of Women

In developing as well as developed nations, women are the single most underdeveloped resource. During the 20th century the Western world has been involved in what may be called the "feminine revolution," and it is spreading to other areas of the world. Equal educational opportunity for men and women has become a common goal, and the inescapable conclusion is that when women are educated, female employment will become a burning issue. If channeled into useful purposes, the feminine revolution--that is, the demand for education, independence, rights, and employment opportunities--can be one of the great forces accelerating national development. If frustrated, the demands of women can be a divisive force. In most areas of the world men have become accustomed to dominating virtually all forms of social activity, especially economic activity, but the time has come for men to acknowledge that the era of female subordination is almost over, and that the unexploited talents of women can contribute greatly to the well-being of all.

### A New Conception of Labor Force, Employment, and Unemployment

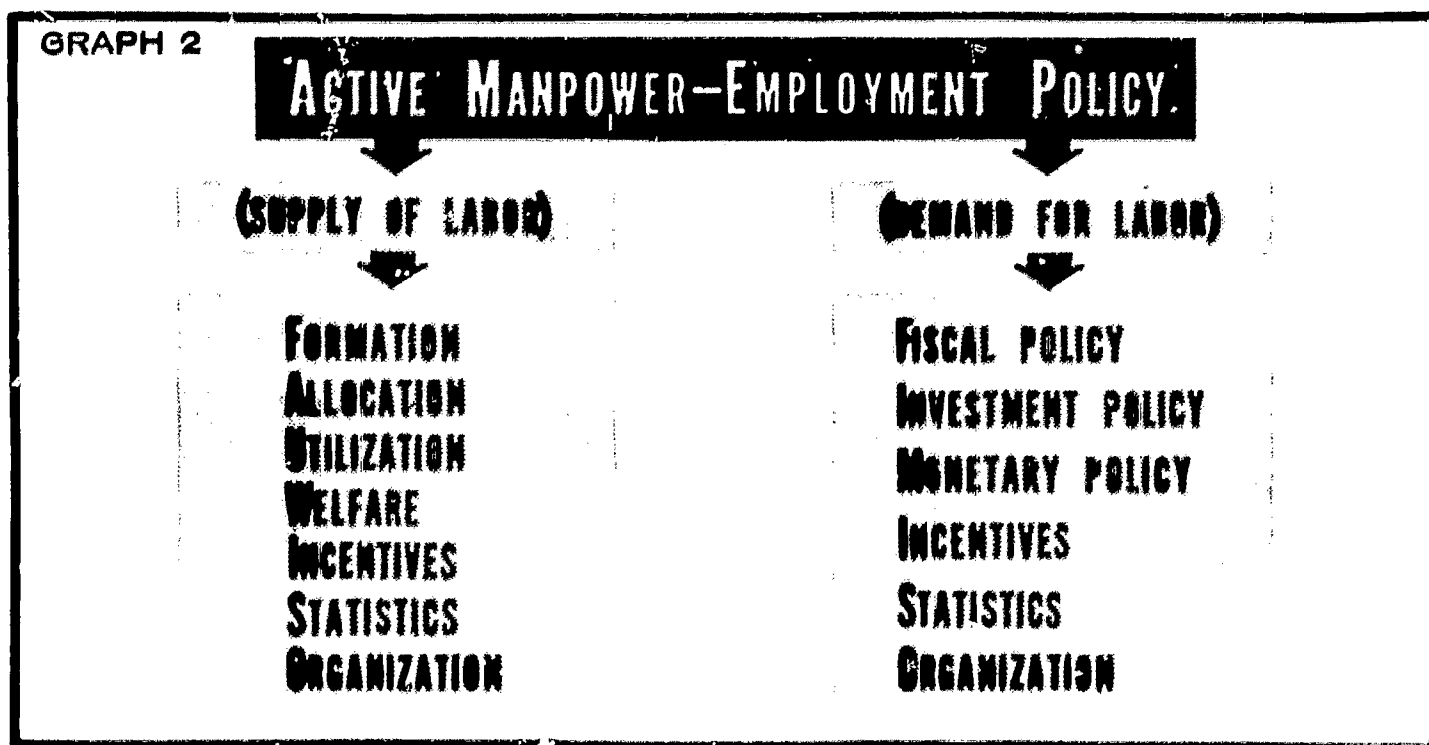
The definition of "labor force" used in manpower programs of most countries is narrow and misleading in that it does not include as employed numerous persons, such as volunteer welfare workers, who make valuable contributions to national development but who are not paid. A more comprehensive use of the term "labor force," one which might be very useful in manpower planning, would include these people. In addition, large numbers of foreign specialists are usually active in most developing nations, yet no adequate way of including them in current labor force statistics--and especially in projections of the future work force--has been devised. Because human resource strategy is contingent upon the supply of foreign skills, ways should be found to integrate alien workers into overall projections.

If manpower specialists can provide the bases for decisions on these major issues, manpower programming can advance to the top ranks of national development planning.

## MANPOWER ADMINISTRATION: CONCEPTUAL FRAMEWORK

Burnie Merson

All nations which seek rapid economic growth and social progress must, as an integral part of their national development plans, include a section devoted to active manpower and employment policies, programs, and institutions for full, productive, and freely-chosen employment. The task of the manpower and employment specialist in planning, programming, and implementing an active manpower and employment policy is made easier by the use of an analytical framework which outlines both purpose and direction. The major elements of such an analytical scheme may be represented by three acronyms.



AMEP is an acronym which suggests the broad challenges facing the manpower expert. He must initiate and nurture viable, dynamic policies which equate the supply of and demand for labor. The manpower official must perform other tasks as well, and the acronym should be expanded to include Programs and Institutions. Most developing nations are well aware of the problems which they face and many have developed sensible programs and policies to combat these problems. Problems associated with the implementation of programs weaken the execution of manpower-employment policies because many developing countries simply do not have adequate organizations and institutions. Consequently the manpower official in a developing nation must focus more of his attention on developing effective institutions to translate programs into actions.

FAUWISO is an acronym for an analytical approach to formulating policies regarding the supply of labor. Each element represents one task force area with which the manpower administrator must be concerned. These elements are not mutually exclusive; each reinforces the other.

## Formation

Development of a modern economy requires an adequate supply of qualified labor. Therefore, a manpower program must concern itself with training, skill development, and retraining of the labor force. Development of occupational skills is a process which, for a great majority of occupations, usually occurs on the job after completion of formal education. Thus, formation of qualified workers entails formal and informal on-the-job training, self-study, and adult education.

## Allocation

Within a framework of individual freedom of choice, the manpower specialist must attempt to provide the best possible organization of the labor market in support of a country's social, economic, and political objectives.

## Utilization

The labor force must be not only qualified and efficiently allocated but also effectively utilized at the place of employment. Higher productivity is a result of effective utilization and development of the individual on the job.

## Welfare

The concept of welfare differentiates human from physical capital. The worker is more than a factor of production, and his dignity and stature must be carefully guarded.

Incentives, Statistics, and Organizations are support elements common to both the demand and supply sides of the market and will be discussed below.

FIMISO represents the employment or demand side of manpower policy.

## Fiscal Policy

Conscious manipulation of government receipts and expenditures has a profound effect upon the functioning of the economy and, therefore, upon employment, investment, education and training facilities, general consumer demand, and welfare programs. The need for coordination between fiscal policies and manpower policies is obvious.

## Investment Policy

Although the public sector plays a dominant role in the development process of many developing economies, private investment is no less important a source of labor demand. Indeed, public investment in infrastructure often stimulates and facilitates private investment.

## Monetary Policy

A third and closely-related aspect of demand is fiscal and monetary policy. The level and changes in prices and interest rates will have a direct effect upon both public and private investment policies.

## Incentives

Formation, allocation, and utilization of the labor force depend heavily on the rewards associated with particular occupations, areas, and levels of organization. Similarly, private and, to some extent, public capital formation depend upon the level of interest rates and the anticipated returns from various investment opportunities.

## Statistics

Statistics are necessary for the entire range of active manpower and employment policies--from economic and social planning to formulating policy and evaluating results. While occasionally there has been a tendency to regard statistics as an end rather than a means of policy formation, there is no doubt that quantitative data on potential demand and supplies of human resources are indispensable tools of the manpower specialist.

## Organizations

Ideas and programs are translated into action largely by organized groups. Successful development depends not only on manpower planning, analysis, and potential investment demand, but also on organized action of individuals through institutions.

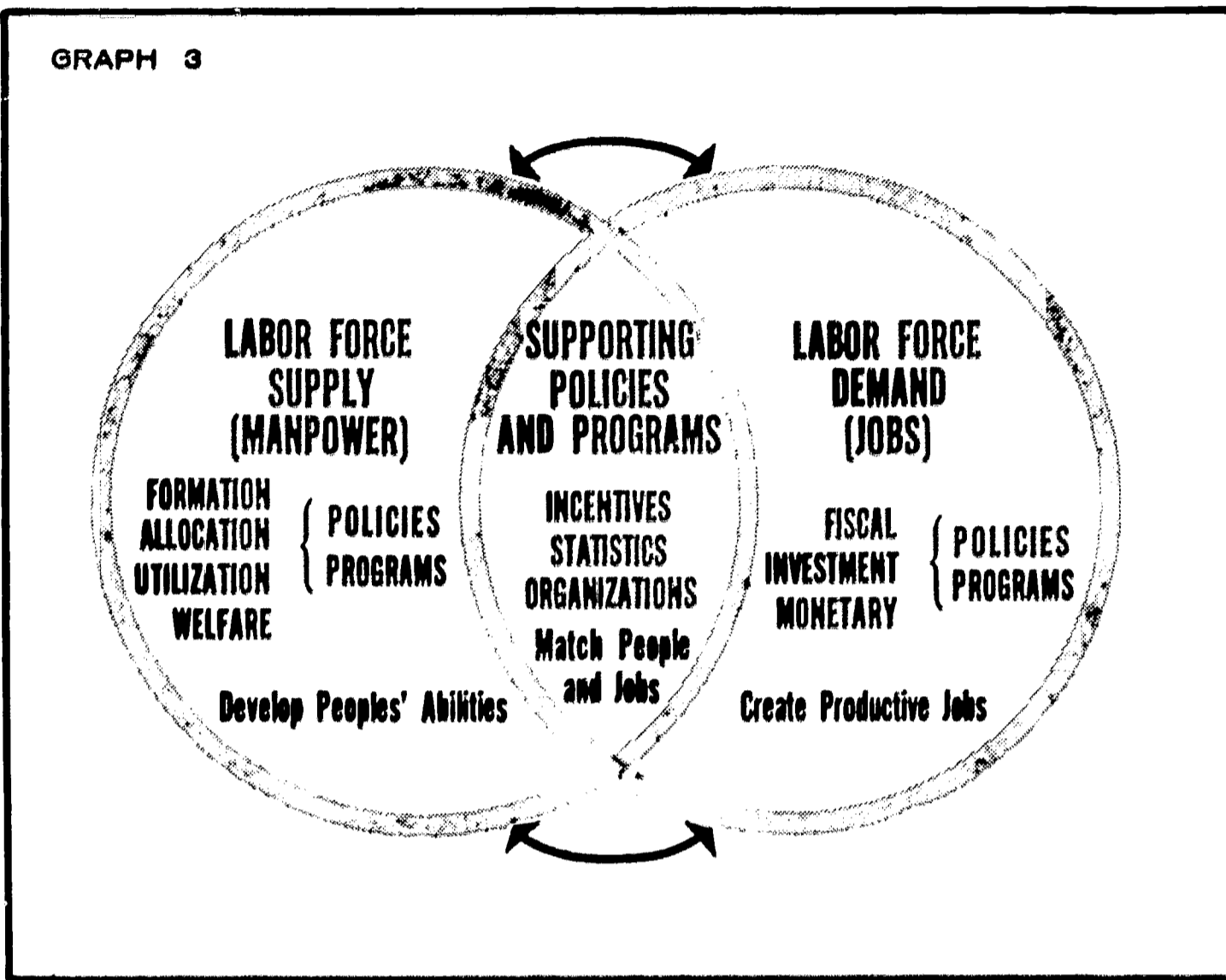
## Manpower Administration

Manpower administration is the process of integrating the elements of an active manpower-employment policy into an internally consistent framework which identifies the ultimate goals of the manpower specialist:

1. Developing the labor force--skills, knowledge, abilities, and motivations of those who produce the GNP.
2. Creating productive jobs--fiscal, monetary, investment, manpower measures to expand employment.
3. Matching people and jobs--occupational, geographic, economic sector, and in-plant mobility to link supply and demand.
4. Increasing productivity--labor-management relations, working conditions, personnel policies to increase output per unit of input.

The following graph suggests the basic components of an AMEP policy and also the interrelationships which exist among the elements of such a policy.

GRAPH 3



The mutually reinforcing aspects of supply and demand are suggested by the arrows connecting the two circles. Manpower administrators must recognize this interdependence and structure policy accordingly.

Effective manpower policy as well as fiscal, investment, and monetary policies can create jobs. Filling a critical job can create several other jobs in a "manpower-multiplier" effect. As another example, decent wages for productive work and sound income maintenance programs help supply effective demand for products flowing from investments in farms and factories.

As the emerging economies proceed in the transition from traditional to modern society, the extended kinship arrangement is modified. Rather than assume that the extended kinship arrangement can be transformed overnight to meet the social security needs of industrialization and urbanization, it seems more realistic to provide a type of social insurance to substitute for it. To make social insurance realistic, the manpower specialist must integrate the welfare and allocative aspects of manpower policy with population and fiscal (transfer payments) policy.



## MANPOWER ADMINISTRATION: ACTIVE MANPOWER/EMPLOYMENT POLICY

Burnie Merson

Manpower administration is the process of integrating the elements of an active manpower-employment policy into an internally-consistent framework, and the systematic application of this policy to achieve the goals of human resource development. Four broad objectives of manpower administration may be identified:

Need to develop the labor force. Better policies, programs, and institutions are needed to improve the skills, knowledge, abilities, and motivations of those who produce goods and services. Formation of human capital is a never-ending job of meeting replacement and expansion demand as well as the challenge of technological change. Solutions which countries are utilizing include: on-the-job training within industry; use of foreign contractuels and United Nations' technicians as trainers; organization of indigenous professional management and worker associations; in-service training in organizations which service education, health, and agriculture; sending of participants abroad for training; apprenticeship; work-training; retraining; skills upgrading; agricultural extension; and supervisory and management in-office training.

Need to create productive jobs. The need to create productive jobs requires better policies, programs, and institutions for expanding employment levels. If structural unemployment were a country's only unemployment problem, it could be minimized by such measures as occupational training and retraining, equal training and employment opportunities, reengineering of jobs, and bringing men and jobs together. However, a growing labor force in most of the developing countries and, hopefully, use of more efficient technology require creation of additional new jobs. Here, too, nations are taking some corrective action: fiscal, investment, and monetary policies to expand aggregate demand; specific measures to reduce differential unemployment rates; use of productive labor-intensive projects; food-for-work programs; public works; tax incentive for investments in labor surplus areas; investment climate to attract job-creating foreign investments; tax deductions for in-plant training costs; special taxes to support occupational training; income maintenance programs; and job multiplier services, e.g., recruitment and placement.

Need to improve their labor market mechanisms. This requires better policies, programs, and institutions for matching men and jobs. Development means change, and change brings with it the need for purposeful labor force mobility. The developing nations provide many examples of labor market problems and responses: wholesale migration from the villages; inadequacy of reliable job opportunity information; placement into productive jobs of returning workers and students; pockets of unemployment; civic action programs; mobilization of the unemployed and underemployed for public works; allocation of scarce skills to private enterprise; recruitment and examining process in the public sector; placement of the right man in the right job; distribution of existing and potential productive jobs; nondiscriminatory hiring practices; youth employment counseling.

Need to increase productivity. The need to increase productivity involves policies, programs, and institutions for tackling most of the three common development problems mentioned above and also a number of others: better labor-management relations; decent working conditions; equal opportunity for promotion and in-plant training; and sound personnel and job tenure systems. Studies of problems in the developing countries reflect some of the pertinent problems: tradition-bound civil service; expensive labor turnover; poor use of labor force; overstaffing; labor unrest; patronage jobs and tribal nepotism. Among solutions to such problems are: salary commensurate with responsibility or job skill demands; and promotion system to encourage personnel to take in-service training and upgrading courses.

Since manpower administration is only one aspect of the development process, it is necessary to indicate how manpower-employment objectives relate to broader development goals. Discussion, in this respect, will be restricted to three major areas:

1. The relation between development and manpower-employment objectives.
2. Manpower sources and the relation of the current labor force to gross national product (GNP).
3. Manpower programs, policies, and institutions.

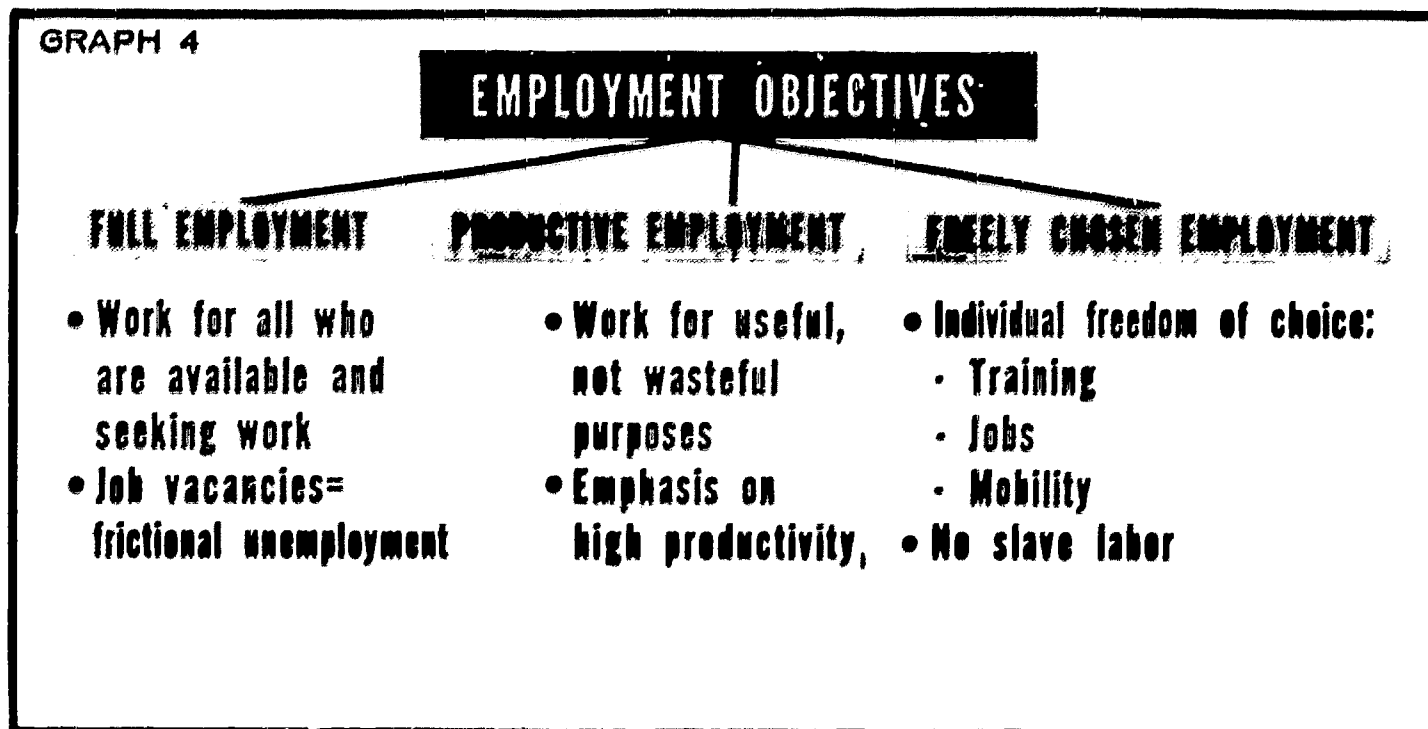
#### Development and Employment Objectives

Economic growth is not an end in itself, but rather a means of satisfying the economic, social, and political aspirations of society. Without knowledge of goals to be attained, purposeful and sustained development is handicapped. The five basic objectives of rising standards of living, economic growth, social justice, political stability, and full, productive, free employment, are only suggestive of a myriad of possible goals which vary from society to society.

Knowledge of the objectives to be achieved is necessary to provide specific socio-economic targets, to provide a basis by which progress may be measured, to establish a priority list so that conflicts among goals may be reconciled or compromised, and to give some indication of the social, political, and economic resources necessary to achieve the goals. The development of human capital, and to some extent institutional capital, concerns the manpower specialist. The specific objectives of human resource development must relate to broader development goals but, in turn, the advancement of man's welfare must be the focus of development. Some specific employment objectives which relate to development goals are:

1. Full employment--work for all available and seeking work; job vacancies equal to frictional unemployment.
2. Productive employment--work for productive purposes; emphasis on high and increasing productivity.

3. Freely-chosen employment--individual freedom of choice with regard to training, jobs, and mobility; no slave labor.



#### Manpower and Gross National Product

Although subject to numerous qualifications and limitations, gross national product and per capita gross national product are two good measures of economic development. The relationship between manpower and GNP is clear, as the labor force may be defined as that part of a nation's population engaged in producing goods and services entering into the GNP. While this definition is severely limited in nations where the monetized sector is not yet highly-developed, the manpower specialist can, nonetheless, relate improvements in labor force participation rates and labor efficiency to GNP.

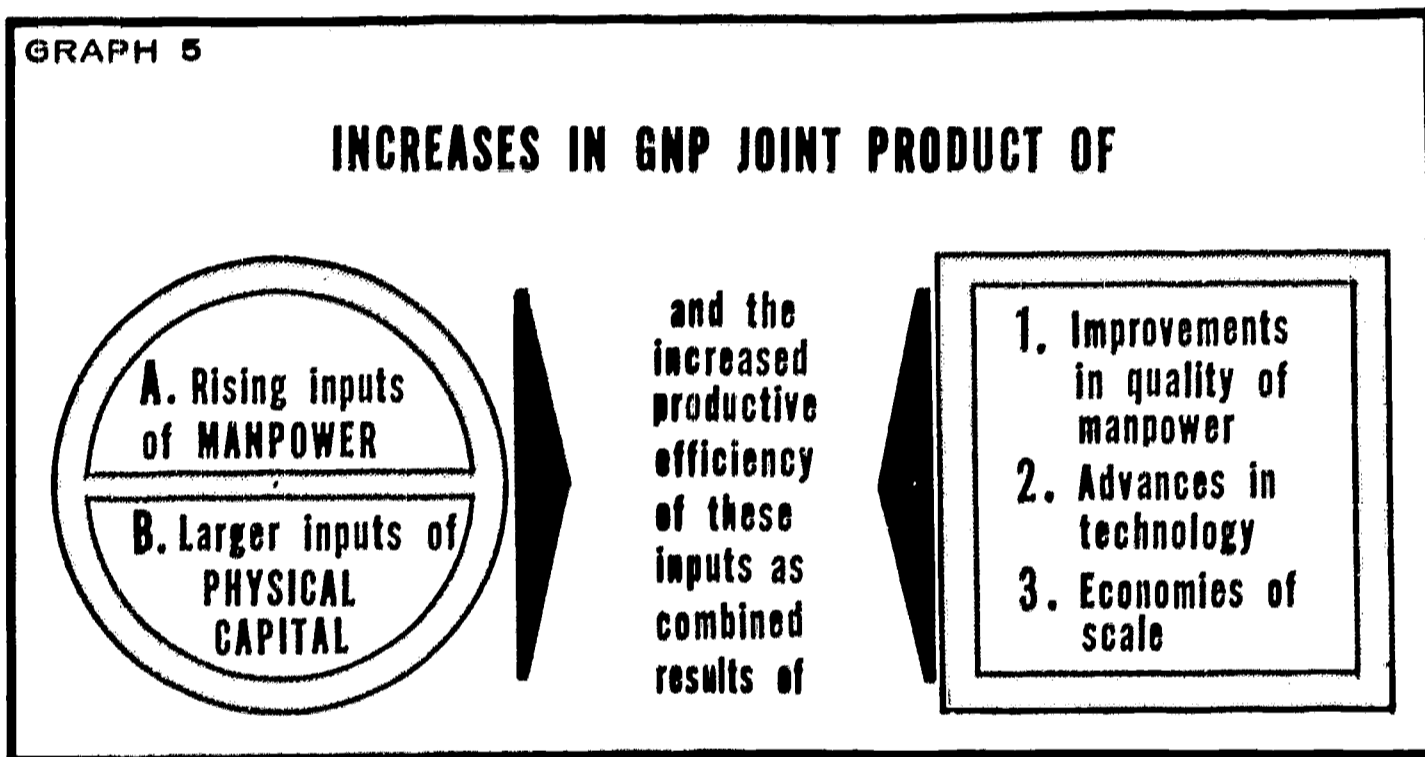
Growth in GNP is the joint product of rising inputs of manpower and of physical capital. However, these increases in measurable GNP are the result of increases in the quality as well as the quantity of inputs. Improved productive efficiency of manpower and physical capital is the combined result of improvements in quality of manpower, advances in technology including organization and management techniques, and economies of scale. In terms of manpower administration, three relevant determinants of per capita GNP may be cited:

1. Labor force participation rates. Important variables to be considered by the manpower specialist are the number of men, women, and children at work and seeking work; job opportunities for minorities and handicapped workers; and education, population, health, and retirement policies.

2. Average hours worked. Relevant policy variables include unemployment, underemployment, labor disputes, absenteeism, industrial accidents, and the length of the work week.

3. Output per hour worked. Key factors to consider are worker skills, intensity of worker efforts, proper placement of occupational skills, labor-management relations, proper equipment, and complementary capital goods.

The close relation between the size and occupational composition of the labor force and GNP makes it imperative that the manpower administrator categorize sources of manpower. Several methods of classification are available and the manpower specialist must choose the one which best fits the specific needs of his country. He should distinguish between the potential and actual labor force, and place broad groups into classes which provide information he feels is necessary for analysis and planning. For manpower planning purposes, it will be necessary to subclassify the actual labor force by economic sector, occupation, and class of worker (wage earner, self-employed, employer). The sophistication and accuracy of this classification will depend upon the individual country, but in no case should the administrator allow lack of data to interfere with his role as a developer of human potential and productive jobs.



#### Programs, Policies, and Institutions

The active manpower-employment policy previously discussed comprises one analytical framework for a systematic approach to the tasks of manpower administration. The basic elements of this active approach (formation, allocation, utilization, welfare, statistics, incentives, and organizations) draw distinct task force areas to the attention of the manpower administrator, while the interrelation of the elements facilitates a comprehensive "systems approach" to human resource development.

A nation's greatest asset is its manpower. Rising total output is the joint product of rising inputs of manpower and capital and the increased productive efficiency of these inputs. Productive employment means food, clothing, and shelter. Idle

men and women are wasted resources. Unemployment and low productivity are major causes of poverty and misery. Members of the labor force have many roles to play in the development process. They produce goods and services which support the entire population. They and their dependents are major consumers of a nation's output. They supply a significant amount of the savings going into new investments of plant and equipment. They are voters, citizens, and key determinants of social and political stability.

Manpower is another word for the current and potential labor force. The current labor force is made up of employed and unemployed. Thus, the "manpower-employment" gap is primarily a reflection of the country's volume of unemployment. It helps describe the degree to which full employment, allowing for frictional unemployment, is being achieved. In concept, it also includes the underemployed and those who would enter the labor force under full employment conditions.

What is the economic significance of the manpower-employment gap? Let us turn to the Economic Reports of the President and the concept of potential GNP for our answer. In his 1965 report he said, "The potential GNP of the United States economy measures the volume of goods and services that our economy could produce if the unemployment rate were at the interim target of four percent... It includes the output that could be produced by people who would leave the ranks of the unemployed and also by many who are not currently counted in the labor force but who would be if unemployment were reduced to four percent." In the 1966 report he said, "The measurement of potential GNP must incorporate the effects of higher productivity, the larger labor force, and the fuller work schedule which accompany reduced unemployment."

The Economic Reports stress the fact that unemployment is wasted manpower and that fiscal, monetary, manpower, and other measures to reduce the manpower-employment gap have significant impact on potential GNP. For example, the 1965 report states, "...when the economy is marked by excessive unemployment, it is producing below its full potential. The distance between actual and potential gross national product is one measure of the cost of high unemployment to the whole nation."

Measures which narrow the manpower-employment gap pay off in increased GNP and higher growth rates. United States experience, for example, according to the 1963 Economic Report, indicates that a reduction of one percentage point in the global unemployment rate is associated with an increase in real GNP of slightly more than three percent.

What are these measures? The developing countries themselves point the way with rural works programs, skills training, labor-intensive employment, better placement of university graduates, tax incentives to invest in labor surplus areas, more job opportunity information, immigration to fill shortage occupations, optimum utilization of the work force, improved personnel practices, voluntary self-help community development projects, and better labor-management relations.

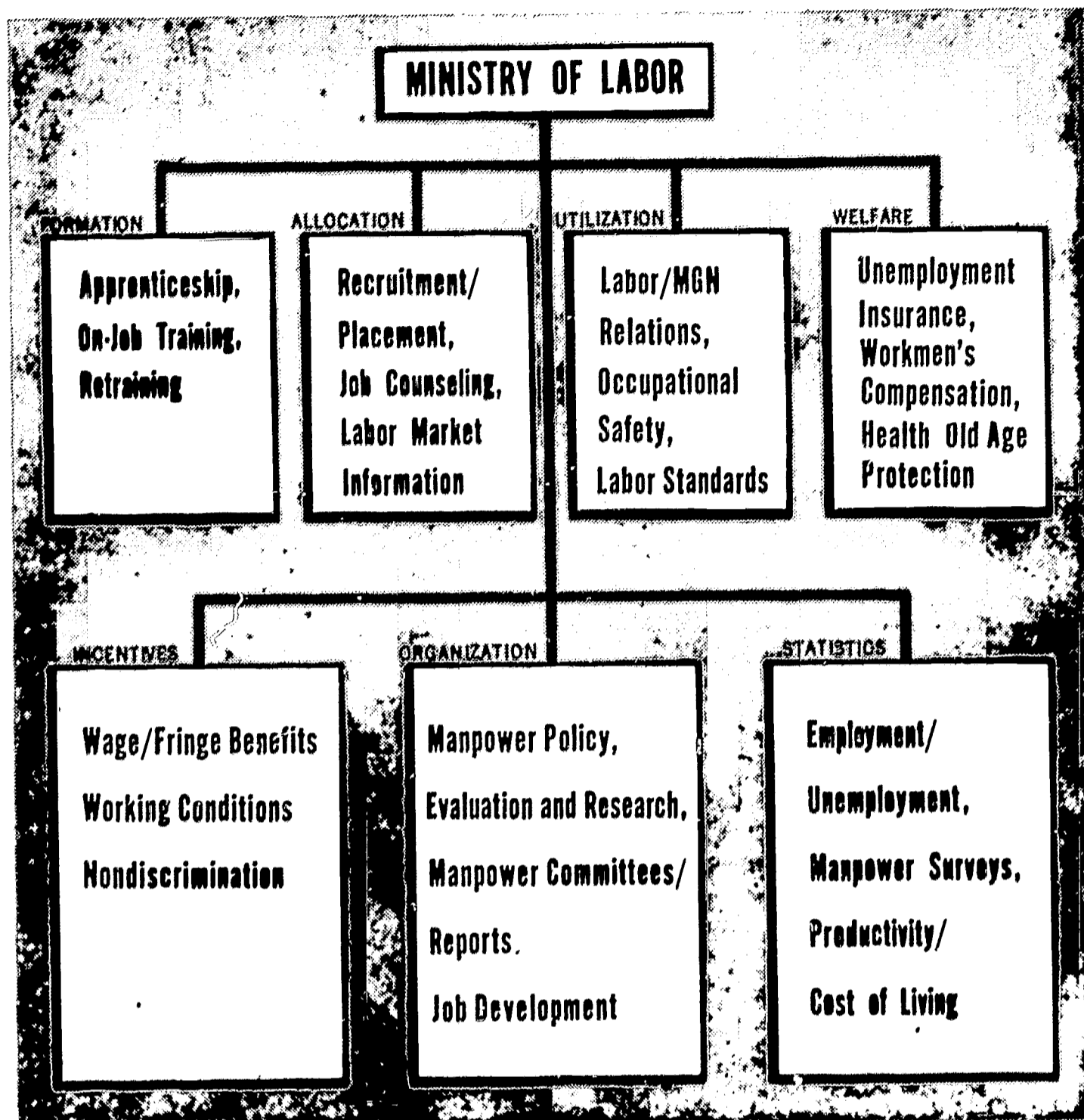
The three development gaps (export-import, savings-investment, manpower-employment) are not independent of each other. A labor dispute in the copper mines of Chile reduces export earnings, whereas remittances by Turkish workers in Europe favorably affect Turkey's balance of payments. Tunisian industrial safety programs increase the returns on investments in education and training and Pakistan's food-for-work projects are productive investments which reduce the need for domestic savings. Programs which improve the quality and efficiency of the work force add to a nation's capacity to compete on the world market and increase its potential for investment in new plant and equipment.

Attainment of employment and manpower goals is not a static undertaking. There are no blueprints. President Johnson, in relating the United States Active Manpower Policy to the Great Society, stated it this way in his 1965 Manpower Report: "The way there is hardly clear... We will have to try, adapt, try anew, and adapt again, but always on to this goal, always on until what is now too often only a dream--that no human talent shall go to waste, that each man shall have full opportunity to be all he can be--can become a reality for all."

## MANPOWER ADMINISTRATION: FUNCTIONS AND STRUCTURE

Burnie Merson

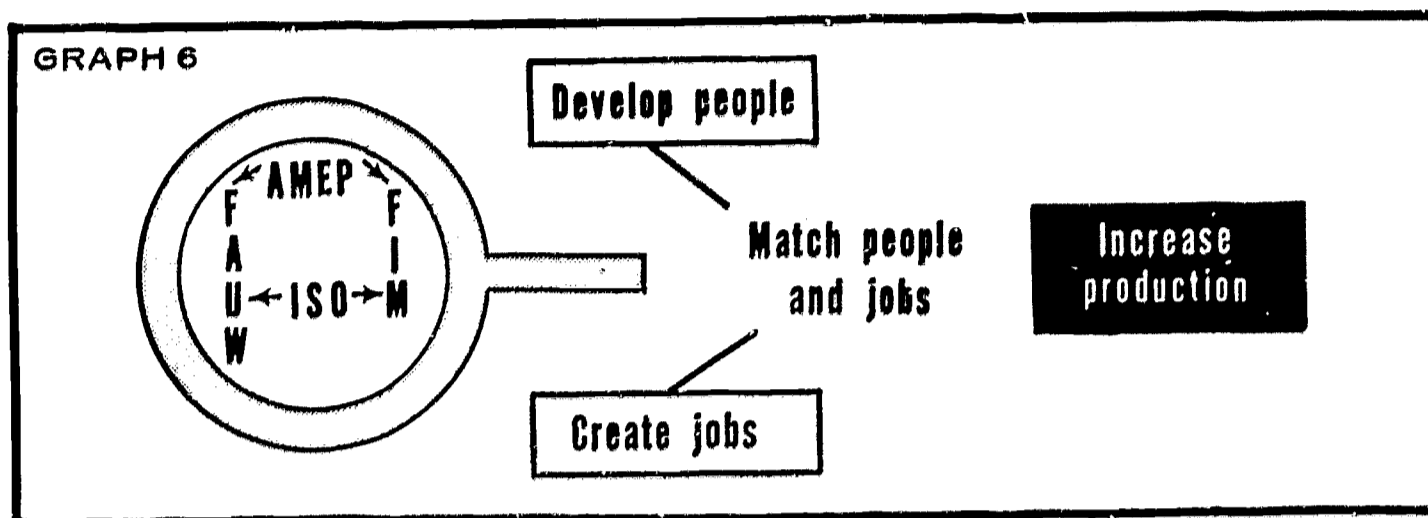
The development of institutions to implement manpower policies and programs is of primary importance to the manpower administrator. Most development officials, such as members of this Seminar, in the developing countries are well aware of the problems which must be solved, and many have developed programs and policies. It is not enough, however, to know what must be done; adequate organizations and institutions must exist if policies and programs are to be successfully introduced. Using the elements of the active manpower-employment policy as a guide, the following chart suggests one type of organization for a department of labor:



The functional breakdown of this hypothetical department of labor facilitates a rational analysis of manpower development problems and a systematic approach to the requirements of manpower administration.

Previous discussions on manpower administration have described the critical role of effective organizations and institutions for labor force and employment development. It is obvious that each country will have to develop and organize its own manpower institutions in accordance with domestic needs and policy. One task of the manpower administrator is to determine the nature and structure of these institutions. To be effective, the manpower administrator must have a firm understanding of the elements of an active manpower-employment policy, the institutions

necessary to implement manpower programs and policies, the manner in which manpower policy relates to and supplements the development process, and the multitude of factors necessary to administer these programs, policies, and institutions. The analytical framework composed of elements of the active manpower-employment policy is of considerable value in formulating a rational, systematic approach to the requirements of manpower administration. To summarize diagrammatically:



But it is not enough merely to know what should be done; something must get done, generally through organization. Implementation of policy and programs requires approval of plans by superiors; adequate funds to finance plans; adequate, well-trained staff personnel; legislative support; and acceptance of one's ideas by business, labor, farm, and other economic-political groups. The manpower administrator must recognize the necessity of enlisting the support of both visible and invisible organizational power centers. To this end he must identify existing power centers and solicit their support of his role in the development process.

## MANPOWER PROGRAMS OF THE UNITED STATES DEPARTMENT OF LABOR

Stanley H. Ruttenberg

The Assistant Secretary for Manpower administers the Office of Manpower Policy, Evaluation and Research; the Bureau of Employment Security; the Bureau of Apprenticeship and Training; the Neighborhood Youth Corps; and the Office of Financial and Management Services.

### The Bureau of Employment Security

The Bureau of Employment Security carries out the Federal Government's responsibilities in connection with the administration of two programs operated by the



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Federal and State governments on a cooperative basis. These are the public employment service program and the unemployment insurance program.

The United States Employment Service coordinates and guides a system of public employment offices operated by State and territorial employment security agencies. The functions of the United States Employment Service are to examine State plans of operation for conformity with Federal law and policy, to promote effective methods for the operation of public employment offices, to give technical assistance to the States, to determine funds necessary for administration of the program, to maintain a program for referring labor from one area of the country to another, and to maintain a public employment service in the District of Columbia.

To assist the placement activities of the local employment offices operated by the States, the United States Employment Service has developed tests that are helpful in occupational counseling, and publishes the Dictionary of Occupational Titles which describes and classifies some 22,000 jobs. The United States Employment Service also publishes a variety of labor market data and seeks to promote policies that encourage the employment of various disadvantaged groups.

The Federal-State unemployment insurance system provides income to workers during periods of unemployment. The insurance is payable under conditions set forth in Federal and State laws. About 80 percent of the nonagricultural workers, including Federal workers and ex-servicemen, are covered by the unemployment insurance system which operates in all the States, the District of Columbia, and Puerto Rico. Federal workers and ex-servicemen are also protected in the Virgin Islands. Railroad workers throughout the country are covered under a separate railroad unemployment insurance law administered by the Railroad Retirement Board. Although there are certain basic standards set by national law, a State has wide latitude in framing its unemployment insurance law. Each State is free to determine its own provisions as to who gets benefits, under what conditions, and in what amounts.

Special Federal programs protect civilian employees of the Federal Government and members of the Armed Forces. Under these programs, benefits are paid by the State employment security agencies acting as agents of the Federal Government. At the present time efforts are being made to further improve the unemployment insurance system.

#### The Bureau of Apprenticeship and Training

The Bureau of Apprenticeship and Training stimulates and assists industry in the development, improvement, and expansion of apprenticeship and other training programs. Emphasis is on encouraging apprenticeship as an organized method of developing a broad range of skills and increasing technical knowledge of these skills.

The Bureau's principal functions are to encourage the establishment of sound apprenticeship and training programs and to provide technical assistance to industry

in setting up such programs. Since its establishment, the Bureau of Apprenticeship and Training has made available to management and labor the services of its field staff and technicians in developing and improving apprenticeship and allied training programs.

The American apprenticeship system is based on voluntary cooperation between management and labor, industry and government, and shop and school. This voluntary cooperation is reflected in national joint labor-management apprenticeship committees. Similar cooperation in apprenticeship involving management, labor, education, and government exists at the State level.

The Bureau administers a program of industrial training for foreign nationals who come to the United States under the sponsorship of the Agency for International Development, the International Labour Organization, and other agencies. It also participates in various phases of training under the regional programs of the Economic Development Administration.

#### Office of Manpower Policy, Evaluation and Research

Congress passed the Manpower Development and Training Act in March 1962, giving the Secretary of Labor the major responsibility for administering this law. The Office of Manpower Policy, Evaluation and Research assists him in carrying out provisions of the Act.

Two major functions are research and training. The research program was authorized to identify occupations in which there is a current or developing manpower shortage and for which training is needed. Broad and diversified training programs were authorized to qualify for employment persons who could not reasonably be expected to secure full-time jobs without such training.

Vocational training courses are conducted under the supervision of the Secretary of Health, Education and Welfare, principally in public vocational education facilities. The Secretary of Labor encourages, develops, and secures adoption of on-the-job training programs by the States and by public and private groups.

A weekly training allowance is available to a jobless worker learning a new skill if he is the head of a family or of a household and has had a period of gainful employment. This allowance is based on the average unemployment compensation payment in the trainee's State of residence.

#### The Neighborhood Youth Corps

The Neighborhood Youth Corps is a work experience program for young people between the ages of 16 and 21. To be eligible for the program, a youth must come from a poverty-stricken family, a family with an income of less than \$3,000 per year. Final selection of participants is made at the local level. The training is provided through the Neighborhood Youth Corps and the public education system.

### The Office of Financial and Management Services

The entire program of the Manpower Administration costs in excess of one billion dollars per year. The Office of Financial and Management Services is in charge of assisting the Assistant Secretary for Manpower to supervise the allocation of funds.

### Cooperation with Programs of Other Government Departments and Agencies

One of the essential activities of the Manpower Administration is to make certain that its programs do not overlap with the manpower programs of other Government departments and agencies such as the Department of Health, Education and Welfare, and the Office of Economic Opportunity. The Manpower Administration has three-man Government agency teams in 30 different areas to promote coordination of the many programs. In this way, an effort is made to integrate the total national manpower policy.

**PART IV.**

**HUMAN  
RESOURCES  
DEVELOPMENT**

119-120

## PART IV. HUMAN RESOURCES DEVELOPMENT

### INTRODUCTION

Many of the developing economies are faced with the immediate challenge of transforming a body of traditional workers into a labor force capable of functioning effectively in modern industrial and administrative settings. Part IV of this report includes general discussions of training for human resources development and discussions of specific aspects of vocational programs in the United States which may be relevant to the developing nations.

In the opening paper, Walsh describes the basic elements of a system of human resources development. He stresses five key factors which contribute to the development of competence: skilled instructors, a sound training plan, instructional material, equipment, and facilities.

Howe (2) discusses factors challenging the educational system of the United States and describes a number of new programs which are attempting to introduce more occupation-related courses into the school curriculum. Additional details of these programs, and particularly of the Vocational Education Act of 1963, are discussed by Arnold (3) and Matthews (4). The Dunwoody Industrial Institute of Minneapolis, Minnesota, has been actively involved in vocational and technical education in the United States and abroad. Butler (5), Director of the Institute, explains the importance of continuous processes of education in the development and upgrading of manpower skills.

Regin (6) outlines the extent and nature of the leadership training programs conducted by labor unions in the United States, and Friedman (7) discusses aspects of labor union philosophy and experience that bear upon manpower development. Harmon (8) stresses the importance of the role played by private industry in vocational training and argues for closer cooperation between the business community and vocational schools.

## ANALYSIS OF HUMAN RESOURCES DEVELOPMENT SYSTEMS AND PROGRAM AREAS

John P. Walsh

In order to establish a framework for a general analysis of human resources development, we must assume the existence of several types of supporting data:

(1) An Economic Development Plan. There must be some idea of the social, political, and economic goals of the society in order that the analysis has direction.

(2) Industry-Occupation Projections. The manpower specialist must know something about the structural changes which will occur in the economy as development takes place.

(3) Manpower Requirements Analysis. Projections of occupational requirements must be prepared.

(4) Human Resources Analysis. This includes an estimate of human resources presently available.

(5) An Education and Training Resources Study. Educational and training facilities in existence and their potential for expansion must be examined.

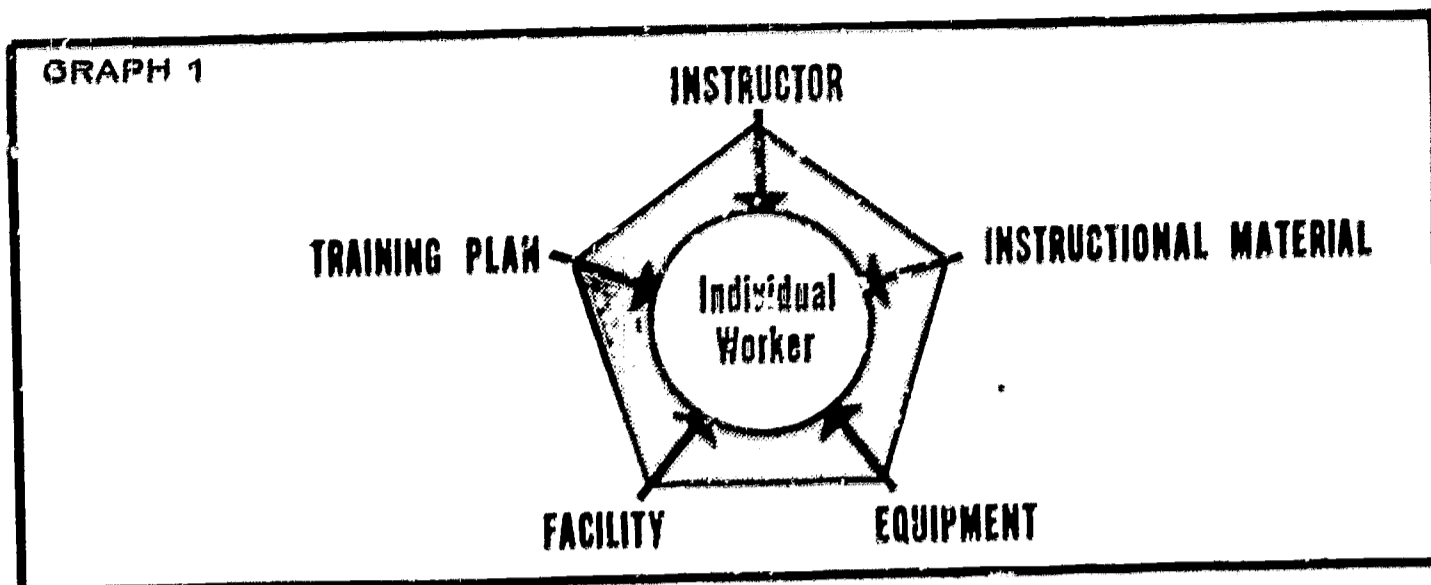
(6) Manpower Development Goals. A specific timetable for the achievement of manpower development targets should be formulated.

Given such information, it is possible to proceed with planning overall strategy for manpower development.

### Occupational Competence

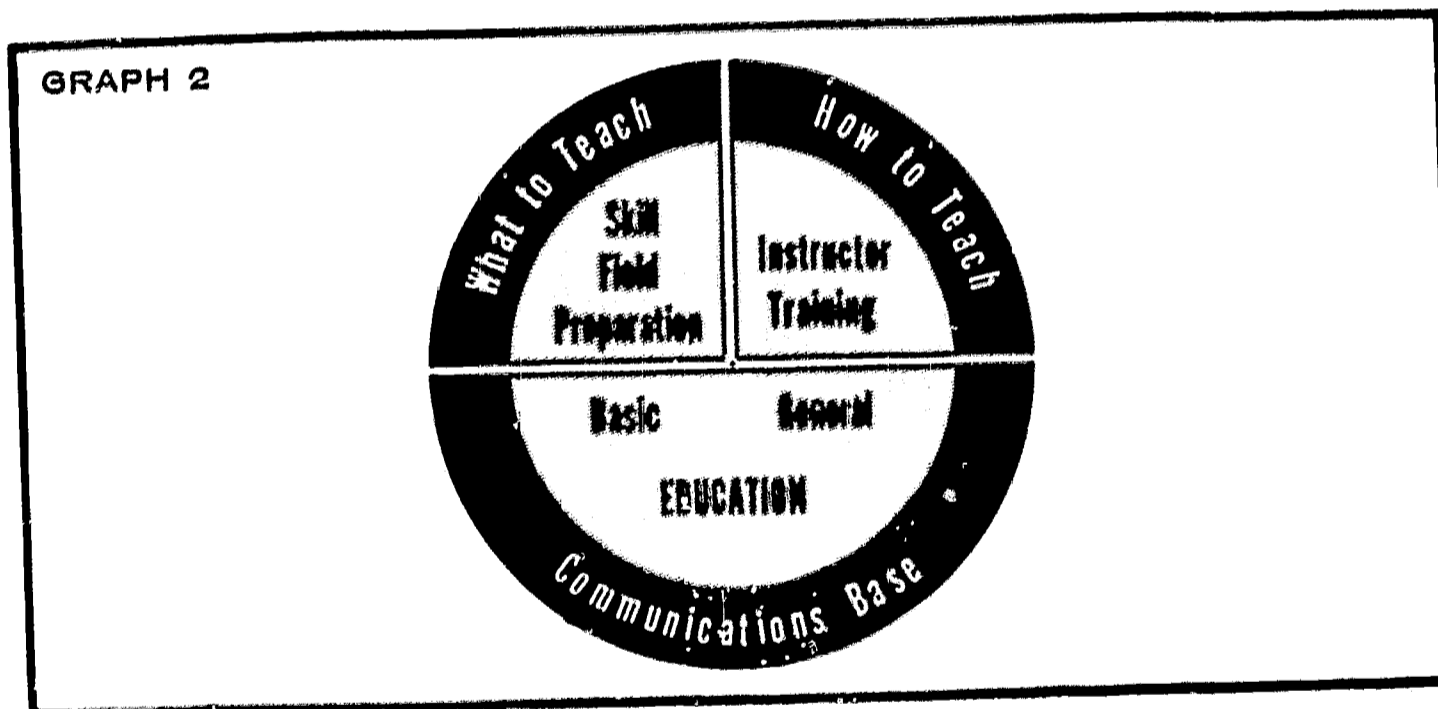
There are five factors which contribute to the development of occupational competence. The key is the instructor, the person who will do the guiding and leading. A second important factor is the training plan, and a third is instructional material. Fourth, equipment similar to what the worker will use on the job must be provided. Finally, adequate facilities are required. Although all five of these factors are necessary for the development of occupational competence, the "mix" of the factors will depend on the skill to be taught. The manpower administrator must determine the proper balance among the factors for each occupation.

The following graph suggests the relationship of the five factors which contribute to the development of occupational competence:



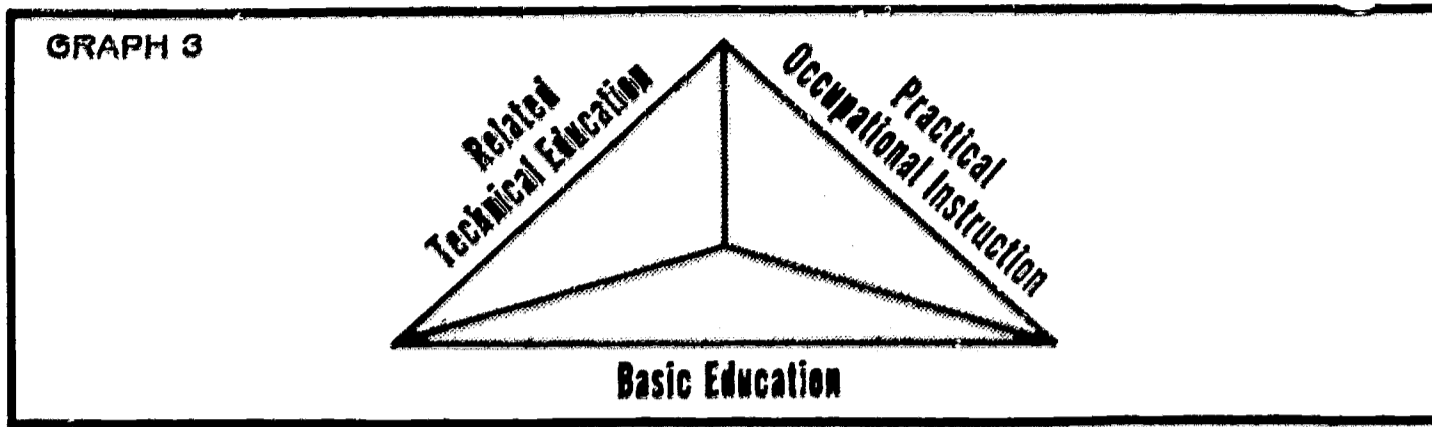
Developing Instructors

Three elements essential to the development of instructors may be identified. The first involves ability to communicate. A basic general education is a requisite for the development of this skill. Second, an instructor must have an adequate background in the field he is going to teach. Third, an instructor should have proper instructor training; he must know how to teach. The following graph summarizes the points made above.



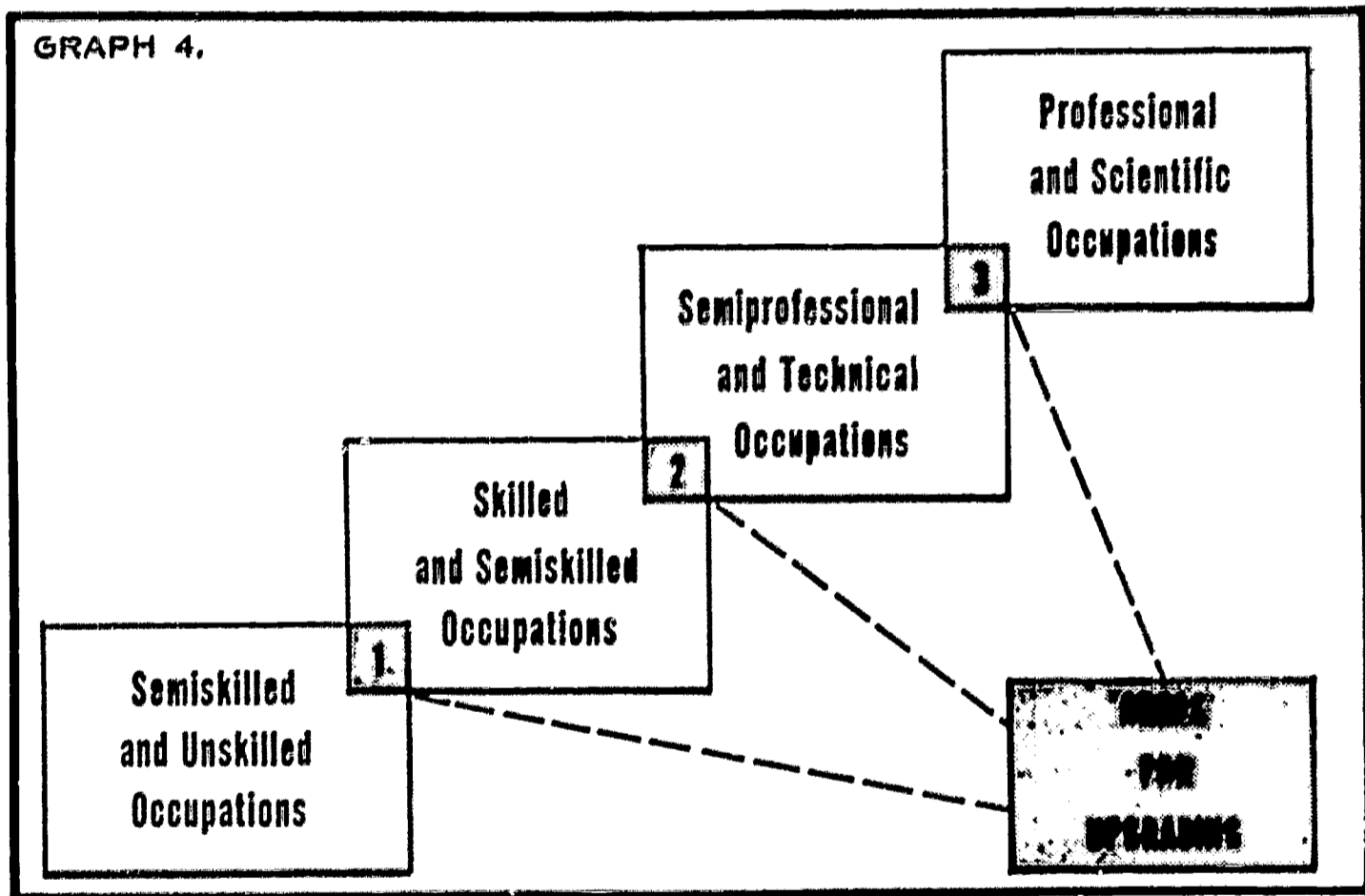
Elements of a Training Plan

There are three elements in the training plan: 1) basic education, 2) related technical education, and 3) practical occupational instruction. The ratio among elements depends on the specific occupation in question. For example, some occupations may require more basic education and less technical education. The following graph portrays the relationship of the three elements:



The Skill Ladder

Job levels must be related to education and training requirements. Continuous development of skills is the key to improvement, and advancing technology makes learning new skills imperative. Movement up the skill ladder (occupational mobility) occurs as skills are upgraded, as illustrated below:



Job Levels and Competence Requirements

Job levels must be related to competence requirements. At the lower levels, skill and "know-how" are the most important; at the higher levels, knowledge and "know-why" are important. For example, the engineer must generate ideas to be carried out by others, therefore, the training for an engineer must be different than for semiskilled workers. The following graph suggests how job levels are related to competence requirements.



**GRAPH 5**

<b>SEMSKILLED</b>	<b>SKILLED</b>	<b>TECHNICIAN</b>	<b>SCIENTIST ENGINEER</b>
		<b>SKILL (Know-how)</b>	
		<b>KNOWLEDGE (Know-why)</b>	

### Decisions to be Made

This brings us to the following specific decisions on training and the implementation of training which emerging nations must make:

1. What to train for?
2. Who should be trained?
3. Where will the training take place?
4. Who will do the training?
5. What is the training plan?
6. Where are the training materials?
7. What training facilities are needed?
8. What equipment is needed?
9. What financial resources are available?

These are difficult questions, but in some cases the experience of other countries may help the planner to answer them. In any case, planners must assume that these questions can be answered, but overall evaluation of the resources available should be made before an attempt is made to do so.

### Training Facilities

Facilities for human resource development are provided by private industry, public and private schools, public agencies, labor organizations, private trade and business associations, and the military establishment. Private industry has on-the-job training, apprenticeship, and formal training courses. Public and private

schools have formal courses. Public agencies have on-the-job training, formal training programs, and formal courses in special evening classes. Private trade and business associations have formal courses. The military establishment has formal training courses, on-the-job training, and apprenticeship. It is often helpful to integrate some of these programs or parts thereof into one program designed for a precise human resource need. Training facilities other than those mentioned should also be utilized, if they are available and applicable.

### Training Systems

The manpower expert must distinguish between the public and the private sectors in dealing with training systems. In the public sector several agencies may carry out various programs. The agencies that may be available in this sector are a national training agency, a national ministry of education, a department of labor, and other national government agencies. Every developing nation must first decide whether it wishes to establish a national training agency. In South America, for example, national training agencies have proved quite successful. Once established, a national training agency decides what to train for and how the training programs should be implemented. A national training agency should coordinate its training programs as much as possible with training programs in private industry.

In the private sector there are four main types of training systems: 1) corporate training systems, 2) trade union systems, 3) private schools, and 4) correspondence schools. Corporate training systems and trade union systems may provide formal training courses, on-the-job training, and apprenticeship. Private schools have formal courses which may, in some cases, be applied toward academic degrees. Correspondence schools provide formal courses which are completed through study after working hours.

### Programs for Human Resource Development

The two types of training programs are action programs and support programs. Examples of action programs are vocational school courses, on-the-job training in industry, cooperative school-industry education, industrial apprenticeship, and industrial upgrading courses. The five support programs are instructor training; coordinator training; instructional materials development; occupational analysis activity; and recruitment, selection, and referral activity.

### Conclusion

Given this framework of human resource development systems, developing nations may proceed with greater confidence and organization. Primary emphasis should always be given to on-the-job training, as such training will provide much skilled manpower with the smallest possible expenditure of valuable financial resources.

Particular attention should be given to proper coordination of various programs for human resource development. Through proper coordination and planning, each developing nation should establish a human resource development system particularly suited to its present and future needs.

## EDUCATIONAL STRATEGY FOR HUMAN RESOURCE DEVELOPMENT

Harold Howe, II

It is a pleasure to address a group of representatives from the world over who are working to solve a problem as vital as maintaining a continued supply of skilled manpower. It is especially gratifying to see the recognition being given to the importance of education in helping to reach the solution to that problem.

There is not one nation represented here today whose schools are not carrying on special vocational or occupational education programs designed to meet the increasingly complex demands of this technological age. India, for example, has launched a massive effort to train more people in new advances in the ancient arts of agriculture and food production. Mali recently opened an interesting new school to teach machine shop skills and mechanical drawing. Turkey is conducting special training programs in such varied fields as the latest industrial techniques, public health measures, and home economics.

Every one of your nations is taking important steps to strengthen your labor force. But, as in the United States, you nevertheless are plagued with the problem of how to make sure that you will have an adequate supply of skilled manpower in the years ahead when technology is expected to undergo even more radical changes than any we have seen so far.

For me to suggest what your schools should do to meet these demands would be presumptuous, not to say foolhardy. We are all different in the way we do things, be it conducting business or operating our educational systems. What has worked for us in America might not necessarily benefit you and, of course, the reverse is also true. I do not want to give the impression that we have solved all the problems in my own country; clearly we have not. Evidence of this is the existence of a large group of unemployed and unemployable people in the United States at the same time as we have a shortage of manpower in almost every area of technical and intellectual skills. Our own education system, of which we are in many ways justifiably proud, clearly needs new initiatives to meet the challenge of technological change. Nevertheless, perhaps it would be useful if I discussed the strategy American education is adopting to meet our human needs, in the hope that some of what I have to say might be applicable to your problems and challenges.

Let me mention first that providing a continuing flow of skilled manpower into the American labor market represents a demanding test of the skill and ingenuity of our teachers. There are two important factors that make this so. One is automation. Each year 200,000 men are replaced by machines. The inevitable result is that it is becoming increasingly harder for an unskilled worker to find employment.

Our economic analysts tell us that employment will one day fall into three general categories: the highly-skilled occupations, service occupations, and managerial responsibilities--the types of jobs that man can still do better than machines. Practically every other kind of work is in danger of being automated out of existence. Anyone without the required skills will be unemployed, perhaps permanently.

The second factor challenging our educational system is directly related to the first and compounds the difficulties. It is the dropout problem. Each year one million of our young people leave school before graduation. These dropouts represent a guaranteed annual employment problem to the Nation. The majority are semiskilled at best and, more often than not, unskilled. They are just the type of job-seeker that our economy is finding more and more difficult to absorb and eventually may not be able to absorb at all.

We realize that our schools share more than a little blame for this situation. Fortunately, it is coming to be recognized that we must adapt the school to the student, not the student to the school. To illustrate our errors, you might say that we have failed to pay sufficient heed to a very common type of pupil, the youngster who always asks what many teachers regard as the wrong questions. He is usually the student who professes to believe that going to school is a waste of time, and he does not hesitate to say so. Instead of seeking more information about a particular subject, he wants to know why he has to study it in the first place. He wants to know what good history is going to do him when he gets ready to hunt for a job. He complains that geography is boring, and asks how it has anything to do with being a fireman--if he is more sophisticated, an engineer or scientist. He doubts that algebra or biology has any bearing on life as he leads it. The teacher's traditional response has been to take a deep breath and patiently explain that all education is necessary and that no matter how irrelevant the subject may seem at the moment, the student will some day be glad he managed to suffer through it.

Well, much later than we should have, we have begun to see that these so-called "wrong" questions have a lot of merit to them. We have begun to wonder if, perhaps, it is not our answers that are wrong. For the children who ask these questions often never do, in fact, need to know some of the things we try to cram into their heads, and these are, in any case, the youngsters who tend to drop out of school.

American educators are therefore beginning to concede that education for the sake of education on a take-it-or-leave-it basis may not be as meaningful as we have blandly assumed. We have begun to realize that if we are going to do more than merely give lip service to the American concept of individuality, we must recognize that some pupils need to see an immediate purpose for attending school and that something must be done to meet this need.

Our approach to the challenge of exciting the disinterested has been to introduce more occupation-related courses into the curriculum to relate a classroom education directly to the world of work. Of major assistance in putting this idea into action has been the Vocational Education Act of 1963 which provides Federal money to expand the number of occupational and technical courses in the Nation's schools from the high school level through institutions of higher learning. The money is made available to support courses that run the entire spectrum of occupations from hairdressers to jet plane mechanics, from dance instructors to electronic computer programmers.

Although the program is still new, results have been highly encouraging. In 1964 20 percent of all high school students in the country were enrolled in some type of vocational program. By last year the figure had risen to approximately 25 percent. Construction of new schools that specialize in vocational education has also been on the rise. Before passage of the Act, there were 405 area vocational schools in the country, i.e., vocational schools serving particular regions. At the end of last year the number had jumped to 561. Moreover, the Federal Government now helps finance vocational education programs in two-thirds of the Nation's public high schools. The money is used primarily for the installation of modern machinery and equipment.

Nor is it only the tools and instruments of vocational education that have been modernized. Instructors have been offered opportunities to advance their knowledge of the new technologies and of ways to teach them. The advice of business and labor has been solicited to try to ensure that programs will be attuned to changes in industrial technology and, thus, to the changing demands of the labor market.

The vocational education enterprise holds promise of helping to reduce the number of students who leave school early. In many ways it is being especially geared to meet the needs of pupils who have always comprised a principal segment of dropouts, i.e., those who are more captivated by the prospect of getting a low-paying job right now than of preparing for a higher-paying job in the future. At the same time, we are not neglecting the strictly academic aspects required in a high school education. Students in at least our better vocational schools receive academic training of about the same caliber as those preparing for college, and special attention is devoted to slow learners.

The magnitude of the problem of supplying sufficient quantities of skilled human resources is too great, however, to be solved just by expanding vocational education at the high school, post-high school, and college levels. It has become

apparent that we must bring vocational education in some form to the elementary schools. We can no longer wait until pupils reach high school before encouraging them to begin to plan their occupational future. We must stimulate interest in the world of work early in the student's life.

And so we are encouraging elementary teachers to design their instruction programs to include a foundation for understanding what it means to get and hold a job, and of the wonderful variety of occupations man is engaged in. We have found, as might be expected, that young children are extremely interested in how adults earn a living. The boy who longs to be a fireman or policeman and the girl who dreams of becoming a nurse are American clichés. There is no reason why schools cannot help to extend the same popularity to the air traffic controller or the electronic computer programmer. Regular classroom teachers must be the mainstay of such a program, but with all their other duties they cannot be expected to carry the load alone. Trained guidance counselors are needed, too, and we are making reasonably good progress in increasing the number of these specialists on all education levels.

Since passage of the National Defense Education Act of 1958, the number of guidance counselors in the United States has nearly tripled--from 12,000 in 1959 to some 35,000 today. Additional guidance counselors are also being provided under the Elementary and Secondary Education Act, passed in 1965. A sample of programs being conducted under this Act for children from low-income families shows that about 30 percent are devoted to improving counseling and guidance services. But as is the case with so many occupations these days, the stock of trained counseling personnel on hand is still far from sufficient. We need many, many more--particularly on the elementary level--for it is in elementary schools that those wrong questions I spoke of earlier are first asked.

It is here also that the most fundamentally important step can be taken to insure that today's young people meet the rigid job-skill demands of tomorrow. The step I refer to is that of making certain our children have the best possible instruction in the basics of education--reading, writing, and arithmetic. Unless our youth have these basic skills, much of the effort represented by our up-to-date vocational education courses, specially-trained counselors, and expensive education research projects will be wasted.

Unfortunately, we have not always met this requirement, particularly in the poverty-stricken areas of our country where not enough money has been available to correct deficiencies in the educational system. Children of the poor--disadvantaged children as the educators call them--enter school bearing physical and psychological scars. They often begin with little incentive to learn, and the deeply-disturbing fact seems to be that the longer they remain in school the farther they fall behind. It is no wonder that many of them join the ranks of the dropouts. We are making what I think can be described as a dramatic effort to overcome some of the educational problems that stem from poverty. One of our main weapons is contained in one section of the Elementary and Secondary Education Act of 1965, to which I previously referred. This section authorizes the

spending of nearly a billion dollars a year to improve schooling in urban and rural slums. In its first year of operation this program financed 22,000 special projects in 15,000 school districts throughout the country. These projects extended into such areas as school health, remedial reading and writing programs to help slow learners, hiring additional staff to deal with the special problems connected with slum schools, and providing preschool training to help disadvantaged children enter the classroom on a par with more fortunate boys and girls. We have every hope that projects such as these will break through the basic educational barriers that have prevented us from making maximum use of the broad-scale vocational programs we have undertaken.

There is another consideration I should bring to your attention in this brief review of efforts within the United States to use education to enhance human resources. It is the recognition by educators that job training for employment in a changing economy places special demands on education. It requires, first of all, that the education provided be broad enough so that the individual can adapt to changes which will inevitably occur in his field of work. If a person is too narrowly-trained in a specific occupation, his skill is more likely to be made obsolete by technical advancement than a person who, along with his skill, has acquired the means of learning new skills. Since the average person employed in the United States is likely to have three or four different kinds of jobs in his lifetime, he improves his opportunity both for employment and advancement by acquiring basic education.

The education system of this country is rapidly adjusting to the needs of a population which constantly changes jobs and residence. The Manpower Development and Training Act and the Basic Adult Literacy Program are both intended by the Federal Government to develop the skills of citizens, whatever their age. Administered by the United States Department of Labor and the Office of Education, these two programs put money in the hands of State officials to improve literacy and employability. The Labor Department has a special relationship to the Manpower Development and Training Program. Through its employment offices all over the country, it helps bring people who need jobs into the program, and it also assists those who are providing training to do so in fields where jobs are available.

At this point it is, perhaps, important to say to a group representing other countries that education in the United States is not a centralized responsibility of the Federal Government. We have instead a highly-decentralized system of education in which the basic educational authorities are the 50 States. Each of these has the legal authority to decide the nature and scope of public education within its borders, and each makes the basic arrangements for paying for such education. The States, in turn, have in varying degrees passed on control of education to local communities--or school districts--each with its own elected school board responsible for the local schools and for levying the local property taxes to pay for them. The Government of the United States has nothing to do with the organization of the schools, what is taught in them, who is hired to teach, or a host of other administrative matters. The Federal Government makes some funds avail-

able to States and to local school districts if these agencies care to use them. The funds which the Federal Government provides are usually given for a specific purpose and must be used to supply new services. The monies we have been discussing here for vocational education, manpower training, and adult literacy, are handled in exactly this fashion.

To give you an idea of the increasing importance attached to job opportunity education by the Federal Government, let me point out that Federal grants to support adult, vocational-technical, and continuing education in 1966 amounted to approximately \$926 million, compared with less than \$195 million in 1964. Of the \$926 million, more than half, \$501 million, supports vocational-technical education. The remainder goes for economic opportunity programs, veterans' education, general continuing education, training of State and local personnel, and American Indian adult education. Many more millions of dollars are spent for adult literacy and manpower training under a variety of additional programs. Most of these funds are administered by the Office of Education although portions fall under the Office of Economic Opportunity, the Department of Labor, the Department of Agriculture, the Department of Interior, and other agencies.

Actually, these figures do not give a complete picture since much of the activity of the schools in their regular education programs is vocational. Perhaps a useful figure to give you some broad perspective on education in the United States is that, at the present time, we spend about \$25 billion annually on elementary and secondary education. Of this amount the Federal Government supplies approximately eight percent and the States and localities provide the remainder. Comparing this percentage with that mentioned above, it is clear that the special aspects of education related to employment in this country are more heavily invested in by the Federal Government than is the regular school system.

Looking at the total picture of education supported by both public and private sources, in the United States, the total investment this year for education will be approximately \$49 billion, or about seven percent of the gross national product. The Federal Government will provide about \$10 billion of this, or 20 percent.

One of the things this information suggests to us is that no nation, large or small, can solve its skilled manpower shortage overnight. It also tells us that manpower, as such, is not the basic issue; there is also the more important human equation. Young people must be prepared not just to play a part in the technological revolution but to lead satisfying, rewarding lives, and older workers must be retrained so they may continue to contribute to man's progress.

These are basic challenges to the world community, and these are challenges that education is called upon to help us meet promptly and effectively.



## VOCATIONAL EDUCATION

Walter M. Arnold

Although vocational education has received increasing emphasis in the past five years, it is necessary to place it in proper perspective with regard to other means of skills acquisition. Formal vocational programs, military training, private schools, industry, and Federal-State vocational education, account for two to five percent of all training. Most vocational-technical skills in the United States continue to be acquired by the "pick-up method," that is, by accident or informal on-the-job training, and manpower specialists and educators should not be deluded by any contrary ideas.

### Vocational Education

Formal vocational-technical education is a modern social efficiency device whose purpose is to integrate skill and knowledge and to transmit these in the most efficient manner possible. While some encouraging results have been achieved, there remains the serious question of whether we actually have developed an efficient and effective training device. For example, many of the programs, especially those in the secondary schools, are quite superficial.

### The Vocational Education Act of 1963

There were few modifications in the basic scope and purpose of Federal-State vocational education during the period 1917 to 1963. By 1963, however, the superficiality and ineffectiveness of existing programs were recognized and attempts begun to adjust vocational education programs so that they might better meet the needs of a dynamic economy. The new philosophy of vocational education is found in four provisions of the 1963 Act:

1. Vocational education must be geared to present and projected labor market demand on a national, State, and local basis. Specific programs must be justified in terms of labor market needs.
2. Educational programs are to be designed to meet needs in all occupations other than professions (those requiring a bachelor's degree).
3. People of all aptitudes and abilities have a place in the labor market and are entitled to training. Programs are to be provided for people of all levels of ability.
4. Any type of educational institution, public or private, is eligible to conduct training under the Act and to receive the financial support of the Federal and State governments. The types of eligible institutions include: (a) the compre-

hensive high school; (b) specialized vocational-technical high schools, found primarily in larger cities; (c) area vocational-technical high schools; (d) post-secondary area vocational-technical schools to accommodate "dropouts" and high school graduates; (e) junior and community colleges which prepare students for high-level technical education; (f) colleges, some of which are offering vocational education.

Two other features of the 1963 Act should also be cited: it provides for a nationwide evaluation of programs enacted under the Act. This is a new feature to facilitate analysis of various methods of vocational education. It also provides for research into methods of vocational and technical education.

### Systems of Vocational Education

The system of vocational education as applied in the United States has seven basic parts:

1. Legislation. Prior to the introduction of any vocational education program, Federal and State legislation must be enacted which provides authority and funds.

2. Regulation. From the basic legislation, more detailed regulations that describe what is expected under the law must be drawn.

3. State Plan. As each State has the responsibility for administering the programs in its jurisdiction, it is necessary to know how the State proposes to meet the requirements of the law. The State plan is usually a broad description of standards.

4. A Projected Program of Activity. The projected program of activity is a detailed plan of what the State plans to do with the Federal funds. This plan includes data on the nature of unemployment, of demand for various skills, and so forth. No state can qualify for funds until the projected program is reviewed and approved.

5. Reporting System. At the end of each year the States must submit reports of what was done, how funds were spent, and what results were accomplished.

6. Evaluation. States are obliged to spend some portion of the funds provided on evaluation and ancillary services. This is an important link in the feedback necessary to revise programs and judge results.

7. Research. It is quite clear that many problems exist in the field of vocational education and provisions are made to study curriculum revision, educational requirements for various occupations and related issues, so that modifications in programs can be made.

### Summary and Conclusions

It is evident that the United States is moving rapidly toward a nationwide system of area vocational education. The system described previously has proved useful for this country in the expansion of training facilities, although the task of providing adequate educational opportunities for all citizens is not yet complete.

Although the Vocational Education Act is the basic legislation underlying the expansion of area vocational training, many other programs have been enacted since its inception. These programs are so numerous, varied, and yet interconnected that there is a question as to whether administrators can effectively integrate and apply the programs. Educational administrators today must be very well-informed, if they are to do an effective job of leading their communities in the development of modern vocational training programs.

### MANPOWER TRAINING: A NATIONAL SYSTEM WORKING WITHIN THE LOCALIZED EDUCATIONAL SYSTEM

Howard A. Matthews

Traditionally, education has not been a responsibility of the Federal Government; it has been a function performed by the individual States. They in turn transfer this responsibility to a city, county, or some other government unit or a combination, to operate the local educational system. This complicates the problem of training to fulfill manpower requirements because the economic areas with which these needs are associated may cover one or more government units with separate school systems. This is especially true of areas of high population density. For example, in the metropolitan area of Chicago, a manpower planner is involved with city and county school systems in planning for a training center. In the greater New York area the educational system of each of three States, New York, New Jersey, and Pennsylvania, would have a role to play in developing a manpower program. If the individual States have insufficient need for certain skills--for example, flood control experts--to warrant separate programs, a single training center provided by the national system may serve many States.

To meet manpower needs which frequently involve areas with a variety of government units, it has been necessary to develop a national system for vocational training. The system controls the selection of teachers and curriculum and the management of the training centers. In this program available local facilities and services are utilized. If they are nonexistent or inadequate, the Federal Government provides the necessary institutions.

As the Federal Government develops a program of vocational training, there is a question as to whether the same or separate institutions should be responsible for

vocational training and for general education. Actually, the two types of education are complementary. They are often alike in kind and differ only in purpose. The conflict which exists in peoples' minds and in educational systems is not so great in reality.

With the growth of urban centers it is becoming apparent that local property taxes, currently the major source of educational funds, are becoming insufficient. The rate of property tax has a practical limitation and in some cases constitutional ceilings. Also, there is political resistance to raising property taxes. The proportion of school-age children increases at a greater rate than does the revenue for schools from property taxes. The Federal role in financing local education is, therefore, increasing. The budget currently before Congress is asking for \$10.2 billion for various educational grants and programs.

#### Manpower Development and Training Act--Program Operation

The individual States first develop a plan and a budget for their manpower training needs, and the proposals are studied by regional representatives of the Department of Labor. These officials ascertain whether the plans fit actual labor needs and if all the interest groups of the area have been consulted in drawing up the plans. If the program is approved by the Department of Labor, Federal funds are provided for the project. Normally, the States' own educational facilities are used but if they are inadequate, the Department of Health, Education and Welfare will provide the necessary funds for the training project.

A new emphasis of the Manpower Development and Training Act for the future will be to assist "disadvantaged" individuals. They are disadvantaged in the sense that they have poor education and/or work histories. Because of their unique backgrounds it is necessary to develop special curricula to fit their cultural characteristics and ways of thinking. Since these disadvantaged people constitute such a small minority in individual States, a Federal program appears to be the best practical means of assisting such groups of people across the country.

#### DEVELOPMENT OF INSTRUCTIONAL AND TRAINING RESOURCES

John A. Butler

More and more developing countries are realizing that if they are to achieve rapid growth and viable economic and social systems, they must possess more middle-level technicians and place more emphasis on vocational and technical education. This realization has come about as a result of increased emphasis on industrialization as a means of diversifying traditional economies, on modern agriculture as a means of providing food for ever-increasing populations, and on technological change as a cause of unemployment for the unskilled.

Vocational and technical education are based on a simple premise: manpower skills can be developed and upgraded through a process of continuing education. Recognizing that each country has varying needs and resources, the manpower specialist must adopt a flexible approach to vocational training; he must be daring and ready to modify traditional procedures of education, and he cannot afford to have preconceived notions on the task which faces him. Above all, the manpower specialist must begin development of training facilities. Developing technical manpower skills is a long process and can only be perfected over time. For example, the first Federal Act in the United States to encourage vocational training was passed in 1917, but vocational training in this country has yet to be perfected.

### Initial Steps in Establishing Vocational-Technical Training Establishments

In order to provide adequate and flexible vocational-technical training establishments, the manpower specialist must initially determine the range and types of skills the institutions are to provide; that is, he must determine the goals he wishes to accomplish. It is unrealistic to suggest that the manpower administrator will know exactly what skills should be provided, and rather than be stymied by an inability to foresee future structural and technological changes, he should determine intermediate goals which are flexible enough to be modified in light of changes in the economy. In estimating future needs, precision is not of critical importance, for the need for most intermediate skills is so great that estimates can be off as much as 50 percent.

Given the goals to be achieved, the manpower specialist must estimate or measure the available tools and resources--the existing training facilities. With a relatively clear idea about what exists and what is hoped for, the specialist has a more accurate idea of what is needed to fill the gap, and may integrate various budgetary and legislative constraints into his plans. The manpower specialist may then proceed to achieve these modified objectives through institutions and organizations.

### What to Teach--Whom to Teach

Two essential questions which must be answered by the manpower specialist are whom to teach and what to teach. Although in the short run vocational-technical education must attempt to fill existing critical skill gaps in whatever way possible, over the long run training must operate in a more structured fashion and attempt to reach specific age and educational groups. In the United States there is a need to reach the high school age groups, and in many States the public schools have some of the responsibility for vocational education. While there is a greater need to educate older age groups in developing countries through extension and night school vocational courses, there must also be some attempt to train the younger members of the labor force.

On the continuum of occupations ranging from scientist to unskilled labor, vocational training is most relevant for the middle-skill group. This group includes various types of technicians (engineering, science, industrial, laboratory, production, and maintenance), highly-skilled craftsmen, highly-skilled industrial workers, machine operators, and semiskilled workers. Employment opportunities of this group range from planning and drafting to truck drivers and helpers. Facilities, staff, and equipment will obviously depend upon the particular skill level involved.

Approaching the task of vocational-technical education in terms of a continuum suggests the connection between skill levels and allows the human resource specialist to structure training institutions for continuous upgrading of skills.

### Staff

The key to effective vocational-technical education is the training faculty. While equipment and training materials are important supplements, the teacher transmits most of the skills and knowledge in vocational education. The manpower specialist must determine how many qualified teachers he already has, how many he needs, and where he may obtain others. Experience in the United States and some developing countries has shown that people with a variety of backgrounds may be used as teachers. The single best source of teachers is industry, but problems often arise over removing skilled people from the production process.

Although potential teachers must have a firm skill background, it is often necessary to supplement and "fill out" this knowledge before individuals can be effective transmitters of their skills. The institutions which exist in many of the developed nations often have the facilities to provide this teacher training. For example, the Dunwoody Industrial Institute has trained many citizens of developing countries. The process at the Institute is to train teachers in the workshop and laboratory, using the manuals and techniques the regular students use, so that new teachers will understand fully what is expected of them.

In addition to initial training, teachers must have ample opportunity to keep abreast of developments and techniques in their own fields. Just as machines become obsolete, so do instructors unless they are constantly exposed to new ideas and processes.

### Curriculum, Methods, Support Material

While vocational schools exist to train students in specific technical and occupational areas, some general education is also necessary. This is especially true if the students are of secondary school age. For example, the Dunwoody Industrial Institute has a general subjects department which offers courses in mathematics, English and grammar, technical writing, worker-foreman relations, bookkeeping, and economics. These general courses are somewhat modified for extension and night courses, where the need for background education is often not as great.

The basic course work in vocational and technical fields at Durwoody is organized around occupational areas such as metal working, electrical trades, building trades, and auto mechanics. Each of these major fields is broken down into 18 four-week courses which progress consecutively from basic training in the first unit up through the most complex training in the eighteenth unit. Students are often allowed to specialize after the first 12 or 13 units. Breaking each major occupational course into four-week units permits considerable flexibility in scheduling and in the educational process. Those students who have some background in the field may bypass some of the earlier courses or may choose among selected units. This flexibility is very important for the developing nations, for upgrading of workers often does not require a complete course.

A considerable portion of vocational education can be achieved through the use of instructional manuals and similar support material. Comprehensive and well-organized instruction manuals allow the student to progress on his own and make the teacher more effective and efficient. Support materials do not replace the teacher but guide him, as well as the student, and allow one teacher to reach many more students than would otherwise be possible. These materials are also a vital part of the short course and upgrading courses where basic skills and knowledge are already present. Desirable instructional materials may be translated and reproduced in quantity from selected manuals or written by the staff, in a curriculum development center for national distribution.

### Facilities

A final, but by no means unimportant, aspect of vocational education is the physical training center. The actual structure is not only a functional center equipped for student training but a showplace of the government which can be used to demonstrate the progress being made toward achievement of development goals.

As many vocational schools are initiated and run by the government, the contributions that private industry can make are occasionally overlooked. Not only is business a source of financing for the vocational schools, but it can contribute valuable technical advice, experience, and equipment.

## TRADE UNION PROGRAMS FOR WORKERS' EDUCATION

Lawrence Rogin

In describing some of the characteristics of the American labor movement, and in outlining the extent and nature of its leadership training programs, I do not presume to prescribe solutions to the labor problems of developing countries. It is rather for you, the participants in this Seminar, to deduce from my remarks

what is relevant and what might be useful for your own countries. I will discuss first the nature and functions of trade unionism in the United States and then describe the workers' education program of the AFL-CIO in light of the character of American unionism.

### The Character of American Trade Unionism

The assumption of American law and of American workers on which the trade union movement is predicated is that, in a democratic society, it is best for society as well as for its labor force that workers be organized into trade unions. Unions are an important countervailing force to the power of business and government and, in addition, they perform important social services in the interests of the mass of the people. A corollary to this assumption is that, in order to function effectively, unions must be strong enough to stand independent of and exert suasion over government, employers, and political parties. Labor union independence has two prerequisites. One is a financial base from members' dues sufficient to enable employment of a full-time staff of officers and specialists, to enable larger and more affluent unions to aid weaker unions, to finance the expansion of unionism, to compensate members who participate in strikes, and to promote lobbying activities aimed at better labor legislation. The second prerequisite is capable leadership well-versed in labor law, the structure and problems of unions, and the needs of workers and society.

American unions use their independence and power in three major activities. They operate in the shop or at the job site to improve working conditions and to communicate workers' grievances to employers. Through collective bargaining, unions share in the major decisions on wages, hours, conditions of work, and other benefits. (NB: A fundamental difference between American unionism and labor activities in most other countries is that conditions of work and remuneration are determined by bargaining between workers' representatives and employers rather than by legislation or governmental decree.) The third target of union power is the general area of Federal and State legislation on social insurance, minimum wages, union security, tax schedules, and other areas of concern to workers.

Mention of union power leads naturally to a discussion of its role in the American political process. An essential difference between American and European trade unions is American unions' traditional nonsocialism. Most American unions, although nominally aligned with the Democratic Party, have chosen to exert political influence over rather than through the party system. Despite its deep involvement in politics, the premise of American labor movement activity is that the collective power of labor should be concentrated first and foremost in collective bargaining rather than on legislation. Bargaining strength vis-a-vis employers is regarded as the key to worker well-being.

A distinction should be made between the weak and the strong in American labor, for the labor movement is not a monolithic force nor are its constituent members uniformly strong and independent. Thus, for instance, when the essentially anti-



labor Taft-Hartley Act was passed in 1947, its proscriptions seriously hampered the independence of weaker unions, while the strong have been able to flourish despite the stipulations of the Act.

A generalization from American experience which may be valuable to labor unions in developing nations is that the interests of workers can best be served if the unions do not so involve themselves in political activities that they ignore the benefits which they can win through solidarity and strength at the work place.

### Workers' Education Through Trade Union Programs

The aim of union educational programs is to give local union leaders new skills and a broader understanding of union activities. Recently, the scope of programs has been extended to reach a larger proportion of full-time staff, but there has been no attempt to educate all union members. Courses of study include both practical training and background information as indicated by the following abbreviated list of courses: union history; principles of trade unionism; financing, administration, and program creation in union locals; law and practice of collective bargaining; and the economics of particular industries. In the 1960's increasing emphasis has been placed on such pressing social issues as civil rights and poverty. The length of courses varies according to the sponsoring union and the needs and interests of participants. The most common program, involving over 20,000 unionists each year, is the one-week residence course. There are also evening courses, one-day and two-day conferences, and some longer-term training of two weeks or more. The courses have several types of sponsors. The bulk are run by national unions and by State and local union federations, but numerous local union chapters undertake their own periodic training courses. Almost 30 of the AFL-CIO's 130-member national unions have full-time worker education specialists. Programs are financed by a pooling of funds between a national union and the affiliated local union which sponsors courses. About 25 universities, most of which are publicly financed, are joint sponsors with unions of additional educational services. The dual premises underlying university sponsorship are that training of more effective union leaders is an important community service and that workers, who represent an economic class which has had less opportunity for college education than others, should be exposed to university activities and teachers. Although two-thirds of the cost is typically borne by the public through the universities, administration of programs is largely independent of public and university control.

In conclusion, I would like to comment on the commonly-held belief that education of workers--and their representatives--leads to employer-employee peace. It is true in the United States and is likely to be true in developing countries that the initial effect of increased labor education is to exacerbate tensions between workers and their employers because, in the course of their training, workers become aware of their rights and they begin to understand that there are alternatives to their current relations with employers. If government and management are understanding and responsive to the workers' demand that past inequities be rectified, political stability and labor-management cooperation can be achieved.

## LABOR UNIONS AND ECONOMIC POLICY

Marvin Friedman

The objectives of organized labor frequently may conflict with the most efficient use of resources as prescribed by economists. For example, the seniority system, which is a pillar of the American labor movement, inhibits the mobility of labor. Unions, nevertheless, feel that the system provides a necessary protection for the worker of long tenure.

Unions have been content to function in the established system of mixed capitalism within a political democracy. Years ago workers saw a chance to bring about changes within the system that would lead to a more equitable sharing of industrial output. The system, as operated, has produced great wealth and improved the workers' standard of living in the distribution of this wealth, but the unions are not yet completely satisfied.

The gains made by organized labor in the first half of this century reflect the social, economic, and political progress made in this country during these years. The changes did not come easily and, in fact, there is still resistance to the growth of unionism. Nevertheless, unions have been and remain a prime initiator of constructive progress in our society. One of the major achievements of organized labor was the 1935 National Labor Relations Act which gave workers the right to organize and to bargain collectively. The Act was beneficial to the entire society as it promoted the establishment of strong, free unions which are necessary for the achievement of a country's economic and political objectives. The gains made by unions increase their members' buying power, thereby strengthening the economy.

The historical concern of unions to achieve a fuller life for workers is still very much alive. Therefore, both collective bargaining and the legislative process continue to be vital tools in deciding how much and in what form they receive their share of the "economic pie." Wages, hours, and fringe benefits have been stressed, as the workers not only increase their share of the fruits of their work but, at the same time, strengthen through the legislative process their ability to negotiate.

Much of this progress conflicts with the policies preferred by econometricians. For example, in recent years the Federal Government has established wage and price guidelines which it expects all parties in the economy to respect. Labor unions have expressed strong reservations as to the merit of this policy for it places an undemocratic restriction on their activities and creates further inequities in the distribution of the economic pie. In developing countries, particularly, many economists have emphasized that investment capital must be accumulated at the expense of current consumption. It is unrealistic to expect free unions in any country to be indifferent to such a statement should it be translated into economic policy, since it may be inequitable to the workers.

Balanced economic growth, in which the workers share the benefits, is possible only when workers are free to exert their influence. This type of growth should be a policy objective as it promotes economic and political stability and, thus, serves as the basis for maintaining a free society. The Soviet Union provides an example of an economic system where capital formation has been emphasized at the expense of a free society. It appears that the Soviets have made great economic progress, but they may have made even greater advances under a free system with much less suffering on the part of the people.

Conditions for balanced growth are not possible under any oligarchy as there is inevitably a large disparity between a few high-income people who live well and the masses who do not. In such a society there is no large and growing middle class which is typical of countries with more balanced economies. Also, under an oligarchy, accumulated capital is often invested abroad because of the instability and lack of profit opportunities at home.

In the United States the debate over economic problems continues in the public arena. There has been no forced capital formation which is characteristic of less-democratic societies. Though the United States' experience cannot be copied, this does not negate the importance of free institutions and, particularly, free labor movements for all countries, for they are basic to balanced economic growth and democracy.

Unions are also necessary for an efficient manpower development program and, through collective bargaining, they have forced management to develop or improve the skills of workers. The result is that we have a practice in industry of improving skills by small increments on the job. There is no guarantee that management will take such initiative on its own because in many cases it might find this inconvenient and would, instead, seek to hire trained labor. The unions have placed some of the burden of manpower training on management. They also seek to get them to plan ahead to meet the problems of technological change. This relieves public facilities of a burden that otherwise would be a public responsibility.

A major objective of the labor movement in its collective bargaining and political activities is to improve human resources. Union action in the manpower field has often stimulated the Government to act. Unions give strong support to legislation for vocational and formal education, public employment service, unemployment compensation, Federal labor mobility services, and Manpower Development and Training Act (MDTA) programs. Unions have insisted on being represented at all levels on the advisory committees called for under the MDTA. They feel that they should have a larger voice in the activities of the public employment service as well. There can be no balanced approach to the solution of the problems in these areas unless union representatives are involved in their planning and execution. Labor unions must be free and strong if their influence is to be effective.

## THE BUSINESS-INDUSTRY COMMUNITY AND MANPOWER DEVELOPMENT

John E. Harmon

In the United States, private industry plays a very important role in vocational training since most vocational training takes place on the job. The role of the Department of Labor and the Department of Health, Education and Welfare is small compared to that of private industry. Businessmen generally recognize that education is a critical factor in the production process. In this respect, it is significant that the local school boards which administer primary and secondary schools are composed chiefly of businessmen. Yet, even though they represent a majority on most school boards, businessmen generally have failed to emphasize and utilize vocational education facilities to train the skilled workers they need. In a poll taken in a large American city, for example, businessmen indicated that up to one-half of the skilled manpower they needed could be provided by high school vocational training, but only four percent of the high school students in the area were enrolled in vocational education. All too often the prestige of a college education makes many technical fields appear to be less attractive than they actually are.

There is a real need in the United States for well-trained, highly-skilled manpower, and vocational education at the secondary and post-secondary level can be an important source of such workers, if businessmen act to utilize and develop the facilities at their disposal.

Because training should be relevant to the economic activity in the area, businessmen and educators must work together to plan an appropriate curriculum. At Los Angeles Trade Tech close cooperation between businessmen and educators has meant good jobs for graduates and satisfied employers. In Cedar Rapids, good and well-advertised vocational courses have produced many skilled workers. To achieve similar results in other cities, local school boards should be convinced of the value of vocational training.

A chief concern of vocational schools must be that the staff be well-versed in modern industrial techniques. Businessmen have a stake in helping to find an effective staff for vocational schools, since they are the ones who profit from the skilled manpower produced. Vocational schools which have a good faculty and good advisors will have a waiting list for their graduates. It makes good business sense to have well-trained teachers with considerable practical working experience. Business firms should offer special refresher courses to vocational training teachers. Often, retired skilled workers may be used effectively as instructors in vocational institutions.

### Summary and Conclusion

While some progress has been made in upgrading the facilities and prestige of vocational education, very little skilled manpower is being trained in vocational

schools. Most skilled manpower is still trained on the job by private industry. In fact, business spends about two dollars for job training for every three dollars spent on public education at all levels, and in several instances the education is on a more sophisticated level than that found in the universities. The examples of IBM and Bell Laboratories may be cited in this respect. Vocational education is an important investment in the competitive struggle and additional attention should be paid to the quality and availability of this instruction.

While vocational schools are an important aspect of manpower development, the developing countries should not overlook the possibilities of training by expatriate firms. Such on-the-job training could be made part of the original commercial contract and is an excellent method of building a supply of skilled manpower without spending scarce financial resources. Hopefully, foreign skilled labor could eventually be replaced by indigenous manpower.

## THE TRAINING ROLE OF FOREIGN COMPANIES IN EMERGING NATIONS

Robert F. Jacobsen

The training role of foreign companies in developing nations is very important both for the nation and the company. It is in the interest of developing nations to stipulate that foreign industry provide training programs for local workers. This is an excellent method for building up a cadre of skilled manpower. The foreign companies can make substantial financial savings by gradually phasing out more expensive foreign employees and replacing them with trained local workers. By employing mostly local workers, the foreign companies will also tend to be more acceptable to the host government and its people.

In most emerging nations, a great deal of emphasis is placed on a college degree, but in some developing nations there are many unemployed college graduates. Developing nations cannot afford to waste financial resources. Developing nations should concern themselves primarily with vocational training because they must fill a great need for skilled manpower.

In planning so that proper manpower will be available at a future target date, it is necessary first to analyze present manpower requirements and then estimate manpower requirements at the target date. The educational system should be streamlined to emphasize the skills which will be needed at the target date. If necessary, planners in developing nations should not hesitate to emphasize vocational skills at the cost of deemphasizing college education.

**PART V.**

**EMPLOYMENT  
PROBLEMS**

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## PART V. EMPLOYMENT PROBLEMS

### INTRODUCTION

It has become increasingly apparent that the employment problems of the developing states are complex and will respond to no single or simple remedy. Among the nations, one finds different patterns of labor market behavior, institutional structures, and, of course, resource endowments. For the manpower and employment specialist, the significance of these variations is that he cannot depend upon a general analysis of employment problems in the developing states for precise guidance, nor can he rely upon preconceived ideas of appropriate policy. He must, rather, supplement general propositions concerning appropriate policy that one finds in the literature of economic growth and development with approaches that are tailored to meet specific problems of individual nations. With this caveat in mind, however, the specialist can gain considerable insight into the operations of labor markets in the developing economies from the observations of those who have attempted to develop general propositions concerning the market in the setting of underdevelopment.

In the first paper, Ranis presents a two-sector model of the labor surplus economy and suggests a strategy for development in such an economy. The basic elements of the strategy are: withdrawal of the labor surplus from the agricultural sector, use of taxation or some other method to transform that part of agricultural output formerly consumed by the labor surplus into a "wages fund" or a food surplus that can serve as the wages of the population leaving the farms, and absorption of a large part of the labor released from agriculture by the modern sector through an investment policy with a labor-using bias.

Fisher (2) identifies a number of ways in which the social security program of the developing economy has important implications for manpower utilization. One of the less-obvious of these is that social security affects the mobility of labor by providing a means of income maintenance and a substitute for the extended family system.

The relevance of Classical and Keynesian employment theory to the developing economies is analyzed by McVoy (3). He notes a number of reasons for a lack of relevance and suggests an alternative approach to employment planning. In a second paper, McVoy discusses a variety of measures to increase employment levels and ease rural underemployment.

## BALANCED GROWTH IN A LABOR-SURPLUS ECONOMY

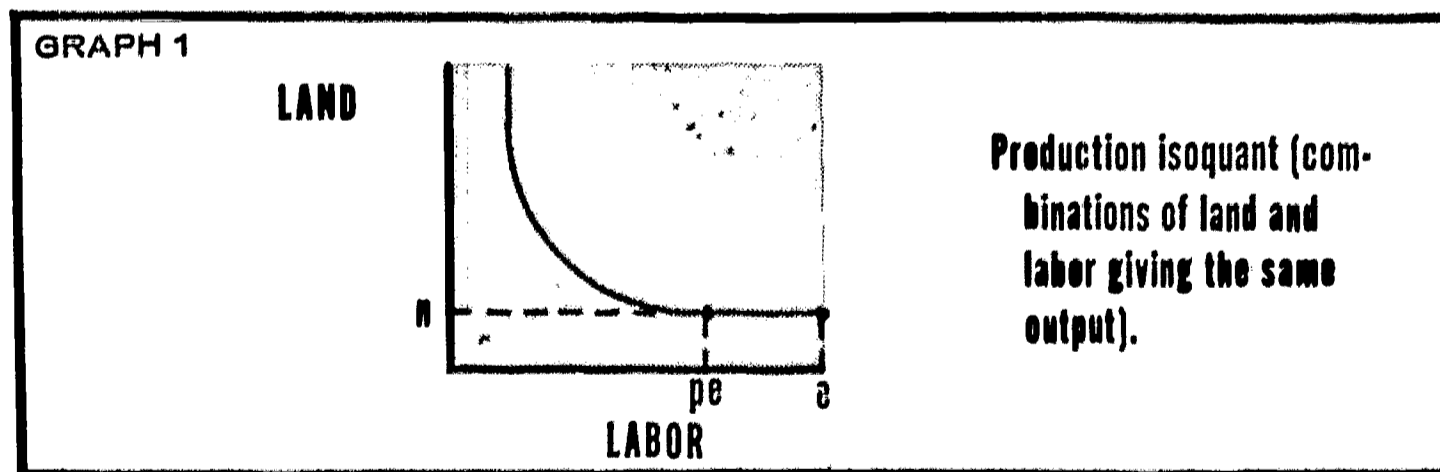
Gustav Ranis

Effective planning for economic development presupposes an understanding of the economic structure of the nation. Although the term does not describe all of the developing countries, many can be described as "labor surplus economies." My description of the labor surplus economy and the strategic implications which follow apply to lands containing the bulk of the world's population, but it remains for you, the representatives of developing countries, to discern the extent to which my comments are relevant to your conditions.

### A Two-Sector Model of the Labor Surplus Economy

We could enumerate a score of structural features common to labor surplus economies, but a listing of three of the most important characteristics should suffice to convey an impression of the type of economy with which we are dealing. The labor surplus country has low per-capita income combined with a high rate of population growth, which threatens to push the standard of living even lower unless output increases rapidly. The nation has limited economic ties to the rest of the world. The greatest proportion of the population, as high as 90 percent, resides and is employed in the agrarian sector where the ratio of arable land to the available work force is very low. With this background, we can proceed to a discussion of the two major economic sectors.

In the agricultural sector, labor and land are the major economic inputs. Capital consists mostly of working capital in the form of seeds, fertilizer, etc. The resource endowment is such that, with existing technology, the limited amount of land is the operating constraint on output and labor is in surplus supply. The land-labor isoquant diagram below indicates the sense in which labor is a surplus factor.



The smooth isoquant curve indicates the various combinations of land and labor which yield the same output. If the amount of land available is limited to the quantity "n", then the maximum amount of labor which can be employed produc-



tively is "pe"--any labor additional to "pe" which is applied to "n" land has zero productivity. Thus, if the labor supply in the agricultural sector is "e," the amount of labor ( $pe - e$ ) is redundant because, without additional land, it can add nothing to farm output. When this additional labor force exists in the agrarian sector and goes through the motions of working without making a significant contribution to output, it is called disguised unemployment or underemployment.

In most labor-surplus agricultural sectors, there are not usually any specific workers who have zero productivity. Each contributes something to output, but the input of a marginal unit of labor time adds virtually nothing to output. Two salient features of these economies are that despite their meager additions to total product, workers are still employed, and that their compensation is not determined by their marginal productivity (approximately zero) but according to some institutionally-determined standard. Often the standard is the local conception of subsistence, which is considerably higher than the marginal product of farm labor. The rates of technological change and of opening new lands to cultivation are slow, and in many regions changes in production conditions arise only in response to the pressure of growing population on the subsistence output level.

The industrial or commercialized sector typically employs only 10 to 20 percent of the national labor force. Labor and capital are the major inputs in the production process, with land relegated to a minor role. Generally, entrepreneurs, acting to maximize profits, hire labor only to the point at which its wage equals its marginal revenue product. To the extent that the industrial labor market functions well, the structural disequilibrium between labor's productivity and its remuneration, which exists in traditional sectors and leads to disguised unemployment, does not exist in the industrial sector. (NB: Because governments seldom use a rational marginal productivity calculus in staffing their bureaucracies, they too may contribute to disguised unemployment.)

The economic interchange between the labor-surplus country and the rest of the world is predominantly, if not entirely, through the commercial sectors, the exporters of primary plantation products, extractive materials, and light manufactures. There is, consequently, little external stimulus to the agricultural sector.

### A Strategy for Development of the Labor-Surplus Economy

A major goal of economic development in predominantly agrarian countries is to achieve a balance in the expansion of agricultural and industrial production so that the center of gravity of the population shifts from agricultural to industrial pursuits. In light of a characteristically high rate of population increase, this implies a labor-using bias in nonagricultural growth sufficient to permit expansion of the industrial labor force by at least four or five percent per year.

Four major changes in structural relations are necessary to achieve a shift in the locus of labor force activity:

Labor force reallocation: The actual movement of workers from the reservoir of disguised unemployment in agriculture into industrial and infrastructure employment is accomplished by means of incentives which act as signalling devices between the two sectors. The most prominent form of incentive is a "wage gap" between the low, institutional wage of the traditional sector and the higher-paying jobs of the modernizing sector. The lure of nonfarm employment can be reinforced by better housing, health care, and other improvements. Formulation of new value systems in which these benefits outweigh those of the old life is a major focus of government policy.

An agricultural surplus: As unneeded laborers leave farming, it is important that farm output be maintained at least at its ex ante level and that the remaining farm population not absorb all of its produce in increased per capita consumption. If the same food output is produced with less labor, there is a potential agricultural surplus which can be the basis of a "wages fund," a food surplus to serve as the wages of the population which leaves the farm.

At the same time that excess workers are siphoned off the farms, commercialization of agriculture should be pressed because, through participation in a market economy, attitudes and incentives in the farm sector will undergo a critical change. Out of the desire for money income arise responsiveness to price stimuli and receptivity to technological change. The size of the potential agricultural surplus (beyond farmers' self-consumption) will be greatly expanded as the farm economy adopts unspectacular and noncapital-intensive innovations such as new crop rotations, drainage systems, and fertilizers.

Financial intermediation: Generation of an agricultural surplus to contribute to the wages and investment funds of the modernizing sector is only partially accomplished by maintaining or increasing farm output with less labor. The problem remains to sequester the agricultural surplus, which requires prevention of an increase in consumption in the agrarian sector. It is doubtful that securities markets or rural understanding of the capital market are highly developed enough in most lands for investment in stocks and corporate bonds to be a likely source of funds for industry. Likewise, the operations of commercial banks seldom extend to agricultural areas on a scale large enough for them to be the major instrument of intermediation. Postal savings plans for investment in government bonds, on the other hand, have been used successfully in several countries. Although it is likely to confront obstacles of several kinds, a policy of taxing agriculture, in money or in kind, is the means most likely to limit peasant consumption.

Effective use of the agricultural surplus: Since the goals of an investment program are to increase output and absorb as much as possible of the reservoir of disguised unemployed, the major criteria for allocation of investable funds are the intensity of innovations of investment--the increase in productivity embodied in capital using new technology--and the labor-using bias of investment, the amount of employment created per dollar of capital formation. A fundamental misconception of many economic planners is that advanced technology must be imported without modification from developed countries and that, because this technology is predominantly capital-intensive, industrialization in developing countries must be capital-intensive to be efficient. My assertion is that innovations can be both

capital-using and labor-using if planners reject the assumption that foreign labor-saving technology must be imitated slavishly. They must begin to use imagination and ingenuity in adapting borrowed ideas to their own resources. This requires investigation of the feasibility of labor-intensive innovations in supporting a continuous mechanical production process, and introduction of "putting out" or subcontracting to individuals the parts of a discontinuous production process which lend themselves to manual fabrication. While development strategies rightly stress an investment's addition to output, they must be equally cognizant of its contribution to the absorption of surplus agricultural labor into industry and infrastructures. The measure of success of development strategy in a labor-surplus economy is reallocation of the labor force into non-agricultural employment at a rate greater than the general population increase. The outlook may seem pessimistic for some of your countries, but successful starts of a shift in the labor force center of gravity in Mexico, Taiwan, Korea and, most recently, Pakistan, are prominent examples that show that apparently insurmountable obstacles can be overcome.

### The Role of Foreign Aid in Development

For most developing countries economic contact with the outside world is narrowly circumscribed for investment funds and foreign exchange are in short supply. Foreign trade provides only a partial solution to these problems and, as has been stated, it affects only a small part of most economies. Foreign aid is an additional means of interaction with the advanced countries, and can be of major assistance in overcoming constraints to economic development. Most prominently, aid can supplement indigenous capital formation in both the agricultural and industrial sectors, but its effect as a catalyst to technical change should not be overlooked because the advanced knowledge of developed countries is often embodied in aid. Finally, for numerous recipient countries aid is a major source of government revenues used in the planning process and in construction of social overhead capital which is not profitable for private entrepreneurs, but which provide vital economic services and considerable employment.

Foreign aid is an important tool in the development process but, in pursuit of increasing national income and expanding nonfarm employment, planners in the labor-surplus economy must find the major source of economic dynamism in their own natural resources and, above all, in their own people.

## SOCIAL SECURITY, MANPOWER DEVELOPMENT, AND ECONOMIC PLANNING

Paul Fisher

In many respects, rising per capita gross national product is an incomplete measure of socioeconomic development as it reveals little about social welfare as ex-

pressed by the distribution of income, education, and health facilities. The social security method of redistributing income is a necessary complement to GNP growth and has important implications for manpower development as well.

### Social Security, Manpower Development, and Economic Growth

Social security may be defined as the statutory provision of cash payments to compensate for the loss or deficiency of income arising from long-term factors (retirement and disability), and short-term risks (sickness, unemployment). One immediately recognizable link between social security, manpower development, and growth is unemployment insurance, a means of sustaining aggregate demand and counteracting temporary imbalances in the labor market. This provision for a short-term risk does not apply to situations of chronic unemployment or underemployment. Another link between social security and manpower administration is an employment service which provides data and facilities for the implementation of both programs. However, an employment service requires an organized labor market or its effective operation, an institution often absent in developing countries. Without an organized labor market and an employment service, unemployment insurance is difficult to administer. In the absence of unemployment insurance, several other types of income-maintenance schemes are prevalent: 1) provision for work accidents; 2) provision for sickness; 3) old age and disability pensions; and 4) family allowances.

### The Social Security/Income-Maintenance Scheme

A less-obvious connection between social security and manpower development relates to the nature of the labor force in many developing economies. Most of the industrial labor force in these economies comes from the traditional agricultural sector where security provisions are made through the tribe or the extended family unit. Leaving the traditional sector for an urban, industrial job means parting with security, for industrial skills have little applicability to traditional vocations should the worker wish to return to this sector. Because of the relatively high cost of foregoing security, few workers readily leave the agricultural sector, and there is considerable absenteeism among those who do, as workers attempt to keep contact with their families or tribal units. Social security can provide one of the incentives to induce workers to move to the modernizing sector and, in this respect, is an important tool of the manpower administrator. The various forms of social security schemes that exist in the developing countries are a result of technical advice from foreign experts, imitation of the schemes of the developed nations, vestiges of previous colonial rule, and the influence of foreign enterprises which apply security arrangements similar to those used in their countries of origin. Regardless of the specific form they assume, government income-maintenance schemes may replace the family or tribal unit as the center of security.

To summarize: social security assists in the transfer of manpower from rural to urban industrial sectors by providing a means of income maintenance and a sub-

stitute for the tribal or extended family system. In the developing countries, social security normally covers only the monetized or industrial sector but, unlike tribal arrangements, does not affect mobility because rights to benefits are vested.

### Social Security, Manpower Development, and Economic Planning

Neither social security systems nor manpower development is highly regarded by economic planners because the goals of both often conflict with attempts to maximize GNP. Social security is less highly regarded than manpower development inasmuch as it is associated with other social aspects of development such as education, health, and housing, which are not directly relevant to increasing GNP. Yet, even though social security and manpower development programs divert capital away from direct investment in physical plant and equipment, the programs are of obvious significance with regard to the quality, quantity, stability, and security of the labor force and, ultimately, the development process.

The conflicts which exist among job security, maximum employment, and maximum GNP growth will be resolved in the political arena, not by the economists, although the economist can contribute information on the costs involved in undertaking or not undertaking certain projects. This, in fact, may be the economist's goal--to make the costs and benefits of alternative choices explicit so that chances of viable compromises are enhanced.

### Social Security and Economic Growth

Under the influence of contemporary economic theory, rapid growth is often seen as a result of maximizing capital investment. The target of maximum capital investment (the Harrod-Domar type model) means limiting or reducing consumption so that saving and investment may be increased. This policy tends to overlook the fact that sustained growth requires expanded aggregate demand for output and a broader base of income distribution. Moreover, the role of human resources in the development process cannot be disregarded, and this implies concern with adequate health, housing, and education. Social security supports a broader income base, maintains income, and thereby contributes to general welfare and security.

The difficulty with those models which incorporate human factors involves quantification of the contributions of these factors to productivity. For example, education may be a consumption good as well as an investment good. The extent to which this is true varies from individual to individual and from country to country. Measurement of productivity under these circumstances is quite difficult. Although the contributions of social security and manpower development to the growth process are substantial, in practice they are often neglected by the economic planners and government officials in their rush to increase GNP.

## Political Considerations

While social security systems are often neglected in the drive for rapid economic growth, two aspects occasionally outweigh the objections and neglect of the economic planner and the government official. Social insurance and income-maintenance schemes often prove to be crucial issues in the political arena. In many countries pressure from the citizenry leads to the establishment and growth of these institutions. Social security funds, once begun, tend to grow quite rapidly. The sheer size of the fund attracts the attention of politicians and planners who desire these funds for the development process. Although neither of these two considerations is related to the welfare aspects of social security, each influences the character of the system and should not be overlooked by the manpower or welfare specialist.

## EMPLOYMENT THEORY AND IMPLEMENTATION APPLIED TO DEVELOPING ECONOMIES

Edgar C. McVoy

### Introduction

Because of its social and political, as well as economic ramifications, unemployment is one of the most serious problems in developing economies today. Politicians and planners in these nations are so concerned about alleviating conditions of unemployment and underemployment that it is worthwhile to review the evolution of employment theory in Western economic thought and to evaluate its applicability to manpower problems in the modernizing economy.

Numerous theories of employment have been expounded by economists in the past century. The Classical and Neo-classical Economists applied supply and demand analysis to the labor market to show that the lower the wage, the more workers would be hired, and inversely, that the higher the wage the lower the level of employment. It followed that any action of government, trade unions, or other institutions that raised wages above the "natural" market level would create unemployment.

Aspects of the Classical Theory were challenged by Karl Marx, by American institutional economists, and others. However, the most sweeping departure from the basic theory was made by John Maynard Keynes in the 1930's. Keynes postulated that the level of employment is related to employers' anticipation of the demand for their products. The level of effective demand is the motivating force behind decisions both to produce goods and to invest in plant and equipment, which give rise to employment. The logical conclusion derived from the relationship between the demand for goods and the demand for labor is that a high wage, which gives workers greater purchasing power and thereby increases effective demand, leads to

a high level of employment. William H. Beveridge translated Keynesian theory into a full employment program, utilizing the government's fiscal tools to stimulate investment and to redistribute income toward lower income groups whose propensity to spend is high. In the United States the elaboration of Keynes' theory and Beveridge's program is known as the New Economics, a theoretical system in which the Federal Government's fiscal and monetary powers are used in combination to influence economic growth, employment levels, and price stability.

United States' experience of the past five years, however, indicates that rapid economic growth and high levels of consumer demand are not the full solution to problems of chronic unemployment. We have found it necessary to apply a number of measures in addition to the major fiscal and monetary tools. These include programs designed to give idle youth and the long-term unemployed skills which enable them to qualify for job vacancies. There are specialized job-creation programs in area redevelopment, the Job Corps, and the Neighborhood Youth Corps. There have been also projects to increase employment opportunities in specific skill categories. These programs are supplemented by pilot projects to test new approaches to employment problems and by empirical research into all aspects of the job market.

Although the application of modern economic theory to existing employment problems has had considerable success in some of the advanced countries, it is unwise to assume a priori that the same theories, without major revisions, are similarly useful in confronting unemployment in developing countries.

#### Application of Full Employment Theory to Developing Economies

The Classical Theory relating wage rates to the employment level is even less applicable to developing than to advanced economies because, in most developing countries, the bulk of the population is engaged in subsistence agriculture and a functioning labor market exists--with numerous imperfections--in only a few urban centers. The Keynes-Beveridge full employment theory and program have some relevance for developing economies in the sense that, in these countries, as in all others, full employment requires adequate rates of economic growth and aggregate demand and presupposes a level of investment sufficient to expand output capacity enough to accommodate growing demand.

Even if we assume availability of sufficient investment funds, there are several reasons why Keynesian theory is not fully relevant to the employment problems of modernizing economies. To begin with, such economies lack unused production capacity and unemployed skilled labor. Quick acceleration of output and employment in response to an increase in demand is possible only where there exists idle plant capacity and unemployed skilled workers. This was the case in Great Britain during the Great Depression, when Keynes proposed his theory, but it is not true of most developing countries.

Developed countries have both a broad popular base of savings and capital markets which channel personal savings into the investment process. Because these features

are poorly developed in emerging economies, funds for productive investment are both scarce and expensive. Private investment tends to flow into quick-return areas such as import-export business, housing, tourism, cinemas, and retail trade.

Neither the commodity market nor the labor market functions well in the rapid adjustment needed for quick recovery or growth.

Many developing countries lack well-developed institutions and infrastructure. Fiscal and monetary measures to increase employment are stymied by the structural deficiencies of government and private institutions and by the insufficiency of transport facilities, power generation, and other infrastructure.

There is usually a lack of incentives and the sociocultural environment conducive to growth because in developing economies the bulk of the population is engaged in traditional agriculture or is part of a social status system which does not foster responsiveness to economic stimuli. This, along with other cultural factors, limits the effectiveness of measures to increase growth and employment.

Under these conditions large injections of investment, from domestic or foreign sources, are likely to result in inflation and the overtaxing of production capacity, trained manpower, and material resources. Transport facilities will become glutted, power sources insufficient, and economic conditions will border on the chaotic. When large construction projects whose output of goods or services is delayed for months or years are emphasized, inflationary pressures will be aggravated.

Despite the shortcomings of Western employment theory in reference to developing economies, high levels of investment and effective demand are still the most important elements in achieving sustained growth and a satisfactory level of employment. I would suggest that few countries can achieve sustained growth of per-capita income without an increase in consumer demand as wages rise concurrently with labor productivity. Furthermore, I know of no country which has sustained rapid growth without some periods of inflation; how much price increase an economy can stand without suffering from "run-away" inflation, however, is a matter of debate.

### An Alternative Approach to Employment Planning

My approach to employment planning is a patchwork of ideas which is not original with myself. In 15 years of experience in developing countries, I have been impressed by the prevalence of two opposing strategies of economic development:

The first approach is to maximize labor productivity and output. In most cases this implies capital-intensive productive methods in major industrial and agricultural activities. Planners acknowledge that this strategy aggravates unemployment in the short run, leaving a large part of the population out of the mainstream of development. They propose that the unemployed and underemployed be kept "down on the farm" or given subsistence relief until the growing economy can absorb them.



The second approach in undiluted form seeks to maximize the labor-intensity of production in both agriculture and industry, probably at the expense of both output and labor productivity. Policies deriving from such a strategy emphasize small-scale and cottage industry, small-holder agriculture, and other measures to apply the maximum amount of labor to other productive factors.

While it is possible that each of these strategies offers a solution to the growth problems of some economies, I think that most countries need a combination of these and other approaches if they are to achieve balanced growth and a high employment level without undue sacrifice of other objectives. Development plans typically give verbal sanction to such goals as improved standards of living, full employment, and social justice, but in quantitative planning these elements tend to be underrated, partly because they are so difficult to quantify. I have seen a number of 5-year, 10-year, and 15-year plans which establish goals and targets in the following order of priority:

- (1) a target annual percentage increase in per capita gross national product (GNP);
- (2) savings and investment levels required to achieve the target rate of GNP growth;
- (3) a consumption goal;
- (4) production targets for the major sectors of agriculture and industry;
- (5) an assumed rate of increase in labor productivity; and
- (6) an employment target.

In some plans employment is given special emphasis and adjustments in other objectives are made with a view to increasing the employment level, but in many economic plans employment appears at the bottom of the list.

My proposal is simple and has been suggested in various forms in the past. Instead of using per capita GNP as the major index of economic development, I would substitute the level of productive employment or the rate of growth of employment as the primary indicator. It is not sufficient, of course, to use the level of employment as the sole measure of economic and social well-being. The mix of objectives in more complete form can be stated as follows: to achieve a target rate of increase in employment with the minimum sacrifice of production, labor productivity, per capita disposable income and living standards, and specific social goals such as individual freedom of choice and preservation of traditional values. The development plan becomes complex with the addition of these elements, and it surely defies the current state of knowledge and level of planning sophistication in most countries. Despite our inability to quantify the relationships among many variables, however, we must not ignore them or minimize their importance.

If developing nations adopt this approach, they may still be unable to achieve full employment for many years. The important gain which they will make is to place priority in development on productive employment which, in my opinion, is the most important factor.

## MEASURES TO RAISE EMPLOYMENT LEVELS, AND APPROACHES TO EASING RURAL UNDEREMPLOYMENT

Edgar C. McVoy

### Introduction

Some years ago many economists made optimistic predictions about the possibility of lowering unemployment in developing nations through industrial expansion. Their analyses were not always based on conditions actually prevailing in the developing nations. They failed to realize that, in many of these nations, employment opportunities would not grow as fast as the population and that a large part of the population would be untouched by economic development if emphasis were given mainly to rapid industrialization and increased GNP.

### Population and Labor Force Considerations

In this Seminar we have had lectures by Messrs. Lee, Harbison, Cohen, Barnett, and others concerning the distressing magnitude of the population explosion in most developing countries. They have stressed the difficulty of eliminating the widening gap between population and food and other consumer goods. I shall not belabor this point since I agree that narrowing this gap is the world's greatest challenge in our generation and the next. I am convinced that one of the two major avenues of solving this problem is a population policy tailored to the needs and traditions of each country. The other avenue, the theme of this paper, is to maximize employment opportunities.

### Maximizing Various Factors in Production

In development models, if not in practice, we can derive functional relationships which intensify use of one factor of production--land, labor, or capital. Plan models can be designed to maximize land use, capital-intensity, labor-intensity, labor productivity, output, or a combination of these. Previously, I proposed a strategy to maximize the growth of productive employment without undue sacrifice of production and other desired objectives. The relationship between employment and high levels of investment and consumer demand, outlined in an earlier lecture, serves as background for the present investigation of employment maximization.

## Increasing the Capability, Mobility, and Motivation of the Labor Force

Some observers assert that in most developing countries it is advisable to leave the rural masses relatively untouched by modern influences. They say that increasing the capability and motivation of the rural population induces them to migrate to the cities, aggravating urban overcrowding, unemployment, and social overhead costs during a crucial period when as much investment as possible should be economically productive ventures. The same observers also claim that this labor is needed in agriculture to increase food production. I suggest that these observers are not attuned to the realities of most developing countries, for, in most such countries, the capabilities and motivations of the people already have been stimulated. There is no way of turning back the clock. To try to stem the tide of people's aspirations is to resort to a highly repressive administration and to invite unrest or revolution. The object of this presentation is not to describe the revolution of rising expectations but to provide a few practical guidelines for countries facing the formidable problem of growing unemployment and underemployment.

## Removing Noneconomic Barriers to Increased Employment and Productivity

Can a developing society afford to restrict education, training, employment, and earnings on the basis of such factors as race, sex, national origin, social class, and age? To the extent that a nation maintains such barriers by law or custom, it limits both its national productive capacity and the living standards and well-being of its people.

This situation is related to the dilemma described in my first paper. According to one theory it is better in the long run to employ part of the potential labor force in modern sectors and to let the rest remain in subsistence agriculture or outside the labor force. Related to this strategy is a national policy to limit labor force participation. There are several means to this end, among which are: 1) increasing the minimum age for employment--which might coincide with an increase in the length of compulsory education; 2) lowering the retirement age; 3) limiting or discouraging employment of women; 4) restricting employment of certain groups or classes such as foreigners and racial or ethnic groups.

There is not sufficient space here to analyze and evaluate all possible measures; I would, however, like to make a few general comments:

1. Such measures place a heavier burden on the employed, who must support the idle.
2. As indicated by Professor Parnes and others, artificial barriers will exclude from employment some of the potentially most-productive persons.
3. Restrictive employment policies will seriously limit the rate of economic growth unless there are great increases in the productivity of the employed.

On balance, I am inclined to the viewpoint that most developing countries need to utilize all their potential manpower productively. They should minimize exclusion of groups for noneconomic reasons.

We will now discuss a number of measures for short-run improvement in the employment situation in developing countries. Some of these measures are similar to ones described by Messrs. Harbison, Cohen, and Hilliard, but my ideas differ, in some respects, from theirs.

### Labor-Intensive and Capital-intensive Production

Developing nations may choose between two methods of economic development, labor-intensive and capital-intensive production. There are advantages and disadvantages to each method. Labor-intensive production implies maximizing labor inputs relative to use of other factors. Capital-intensive production results from maximum investment of capital; it is normally used when labor is expensive.

Labor-intensive production can be fostered by several means:

(a) With a limited number of large projects, preference in the investment program can be given to labor-intensive technologies without unduly sacrificing efficiency. In public works projects particularly, there is a possibility for highly labor-intensive techniques.

(b) Special emphasis on small-scale and handicraft industries is socially desirable and economically feasible in some countries. However, in the long run such an orientation may require very burdensome subsidies or preferential market provisions for inefficient labor-intensive sectors.

(c) Labor-intensive work-relief programs are among the most important and valuable solutions to unemployment problems because they can be planned to give temporary employment, create skills, and perform economically valuable functions, at the cost of little capital outlay.

(d) Addition of work shifts increases the intensity of labor employed with a limited amount of capital equipment. This type of reorganization requires considerable managerial talent and some increase in the number of supervisors and skilled workers.

Capital-intensive investment is desirable for many long-range industrial projects, although there are examples where labor-intensive methods have proved successful. Indeed, due to the population pressures in many developing nations, more thought and ingenuity are needed to utilize labor-intensive methods wherever feasible. However, labor-intensive techniques normally imply low wages which must be balanced by the increase in total employment in order to maintain a high level of aggregate demand. In many countries this way of maintaining demand is preferable

to rapidly increasing wages which aggravate inflation and make it difficult to compete in export markets.

Korea is an example of a developing nation which some believe should develop a labor-intensive, low wage industrial sector. A low wage structure is compatible with rapid expansion only in the short run. In the long run difficulties will appear as they did in Japan. When wages eventually spiral upward it becomes difficult for a developing country which persists in labor-intensive techniques to compete in world markets. There are also socially undesirable consequences of such a policy.

### Work Sharing Schemes

Schemes to spread the demand for labor among as many workers as possible have succeeded on some projects and in some sectors in a number of developing countries, but this approach to problems of unemployment and underemployment has several drawbacks and limited applicability. In most countries wages for unskilled laborers are so low that these workers cannot achieve a decent standard of living even by working long hours. The consequence of shortening hours to increase the number of employees is to reduce all of them to a level below subsistence consumption. What is more, low-skill workers employed only part-time on projects often "moonlight," which lessens the opportunity for others to find employment. Work-sharing is particularly inadvisable in occupations requiring skills which involve considerable training, because the costs of vocational preparation are expanded out of proportion to the benefits of increased employment. There appear to be two circumstances in which work sharing is feasible: in the rotation of employment among underemployed, unskilled, or semiskilled casual workers, and when labor productivity and wages have increased sufficiently to permit institution of multiple shifts without reducing employees to subsistence or less by cutting their work hours.

### Internal Migration and Resettlement

Rural-urban migration is a significant trend associated with industrialization in all countries, and in most countries the number of migrants exceeds the urban demand for labor. Harbison and Cohen have stressed the importance of stemming the rural exodus by improving economic opportunities and social amenities in rural areas. Others have added that massive migration may reduce food production and inhibit agricultural development.

I agree in part with the "keep them on the farm" advocates, when they urge development of agriculture and rural industry, and improvement of village life. A substantial portion of national investment and planning effort should be devoted to rural development. I fear, however, that efforts to alleviate unemployment, underemployment, and urban overcrowding by such measures can be only partially successful in most developing countries, because modern agriculture usually requires

less labor and because, in countries with high population density and high birth rates, rural development alone is insufficient. I know of no country in history which has been able to reverse or even substantially slow rural-urban migration by public policy.

What, then, are the alternatives and supplementary measures? One is to develop regional growth centers which have natural economic advantages, and to attract some of the potential migrants to them instead of to the few large cities. The other is to accept growth of the cities as inevitable and to take measures to make urban life bearable without offering additional attractions to migrants.

Some developed countries have successfully promoted movement of surplus workers in one area to fill job vacancies in other areas. Programs to bring the worker to the job have been a factor in reducing structural unemployment as well as labor shortages.

Countries which have available land can make good use of resettlement programs, although I do not encourage anyone to think that this will solve serious over-population problems. Even countries such as Indonesia and Brazil, which have a great deal of unsettled land, have not been able to accomplish mass resettlement because of the high cost of land and infrastructure development and because of people's reluctance to move to unsettled areas. Much of this land is in jungle or inaccessible areas. A few countries which are blessed with surplus land which is fertile and accessible can mount successful resettlement programs. At best, however, this is costly to the government and the individual and cannot be undertaken on a scale large enough to relocate all the excess population.

### Area Redevelopment

The United States and some European countries have had substantial area development or redevelopment programs in the past half century. The objective is to bring industry and other economic opportunity into areas of existing population concentration and excess manpower. This has worked successfully in several countries, including a few developing nations, but it is costly and may involve some uneconomic investments.

As cities continue their rapid growth, tremendous efforts will be necessary to prevent spread of intolerable living conditions. A partial solution to this problem is the regional growth center, promotion of which is preferable to ignoring problems of urban growth or concentration entirely on the major cities. To promote the growth of planned provincial centers some emerging nations are building roads connecting regions in the hinterland without passing through major urban centers. Also, there must be an adequate economic basis for such centers. Ciudad Guayana in Venezuela is a prime example of the regional center concept.

### Special Programs for Rural Underemployment

Some of the measures applied or advocated for counteracting rural underemployment are listed:

- (a) diversifying and intensifying agricultural production by emphasis on labor-using crops and techniques and off-season activities;
- (b) investing in rural industries and handicrafts;
- (c) encouraging tourism and recreation;
- (d) developing fishing, forestry, and related activities;
- (e) locating major industries in rural areas, where economically feasible;
- (f) fostering community development activities;
- (g) initiating rural public works and work relief programs; and
- (h) improving public services which provide employment.

#### Special Programs for Urban Employment

Measures similar to some of those suggested for rural areas, as well as some additional ones, also can be applied to cities:

- (a) industrial development, emphasizing labor-intensive production where economically feasible;
- (b) public works and work relief programs;
- (c) urban community development projects, maximizing self-help;
- (d) suburban area development, combining market gardening and other employment; and
- (e) small-scale commercial and service activities.

#### International Migration

As several of our lecturers have noted, permanent emigration helps to relieve population pressures, but also robs developing countries of some of their most skilled and enterprising citizens. Temporary emigration for employment, on the other hand, can benefit both countries concerned.

#### Development of the Work Skills and Creative Economic Opportunities

Most of the measures described above are intended to increase employment opportunities. I want to emphasize that skill and attitude development are equally important in solving employment problems. Some people are potential entrepreneurs. They have sufficient basic talent and initiative so that with encouragement and guidance, some basic training, and a minimum of financial and technical assistance, they will create their own economic and employment opportunities.

**PART VI.**

**CASE  
STUDIES:  
MANPOWER  
EXPERIENCE  
IN  
DEVELOPING  
COUNTRIES**

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# FINANCIAL POLICY FOR EDUCATION AND TRAINING PROGRAMS TO MEET THE REQUIREMENTS OF THE CURRENT ECONOMIC PLAN FOR THE PROVINCE OF TAIWAN OF THE REPUBLIC OF CHINA

Homer Yu

## Need for a Sound Education Financing Policy

In recent years, the educational system in Taiwan has faced many problems resulting from an insufficient expansion of school facilities. For example, only 53.5 percent of primary school graduates are able to enter junior high school, and competition for admission is intense. According to a recent UNESCO study of education in developing countries, when the participation rate in primary school (percentage of school-age children actually attending school) exceeds 70 percent, free education facilities should be extended through junior and senior high school. However, in Taiwan only the first six years of education (primary school) are free, and expansion of the system is restrained by the rate of economic growth. In order to compensate for the absence of sufficient secondary school facilities and meet the needs of the economic plan, many primary schools in Taiwan have added additional hours of instruction and some have undertaken supplementary instruction. While such measures may prove temporarily helpful, they are not viable as long-run alternatives. Instead, a sound and progressive educational plan is necessary. The following four steps are suggested as instrumental elements of such a plan:

- (1) collection of annual statistics on the magnitude and dispersion of flows through the educational system and setting targets for future flows;
- (2) assessment of manpower requirements on the basis of the current socio-economic development plan;
- (3) determination of total resources available for education in terms of projected GNP growth and recommendation of a feasible educational financial policy; and
- (4) reconsideration of the relation between education and economic activity with the aim of redefining educational expenditures as social investment.

## Considerations for Projections of Future Educational Needs

Projections of future educational needs are to be derived on the basis of the following considerations: (1) the proportion of the school-age population entering primary school will remain at its present level of 96.8 percent; (2) the percentage of primary school graduates entering junior high school will increase from 53.5 in 1965 to 70 in 1974; (3) the percentage of junior high school graduates entering senior high school will decline from 70 percent in 1965 to 50 percent in 1974,

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but this decline will be offset by a rise in the number of junior high graduates entering vocational training programs; (4) the matriculation of senior high school graduates in college will rise from 70 to 80 percent by 1974; and (5) the dropout rate of primary and junior high students will be decreased through subsidies to needy children.

### Educational Financial Policy

The financial policy to implement educational plans should include a level of expenditure sufficient to meet minimum requirements for the coming decade, identification of the source of funds for education, and allocation of money by levels and categories. In accordance with UNESCO recommendations, minimum annual educational investment in Taiwan should reach five percent of GNP by 1974.

Financial policy for education must be in compliance with the national constitutional requirements that all school-age children must enter school, that development of secondary and higher education should be consistent with the requirements of professional, managerial, technical, and skilled occupations, and that expenditure for social education should be allocated to balance manpower supply and demand.

### Allocation of Educational Expenditure

In allocating educational expenditures, the ever-increasing needs of the population for primary and social education must be considered. Primary schooling should be designed to maintain a balance between social and technical education. On the other hand, secondary and higher education in Taiwan are designed to train professional and vocational personnel required for development. Rapid economic growth will necessitate a considerable increase of expenditures in this area.

### Short-Term Vocational Training Program

The expanding economy of Taiwan requires large numbers of workers in a variety of complex skills. A concerted effort to install a nationwide program of on-the-job vocational training is necessary if enterprises are to meet the challenge of business competition, as it is impractical to burden the already crowded schools with this task and too expensive for the educational system to acquire the modern equipment necessary for skill training.

In view of the need to coordinate vocational training efforts with the educational development plan, the following objectives have been set forth:

- (1) establishing an apprenticeship training system to train entrants to the labor force on a long-range basis;

(2) strengthening in-service training to upgrade the quality of administrative, managerial, executive, and clerical staffs;

(3) developing accelerated training programs in factories to retrain and upgrade skilled workers;

(4) training out-of-school youths and retired servicemen in occupational skills and assisting them in finding employment;

(5) establishing a nationwide administrative structure and organization to supervise overall vocational training, set training standards, conduct trade-skill tests, and issue certificates to qualified skilled workers and foremen;

(6) establishing a National Instructor Training Center and Pilot Accelerated Training Center;

(7) strengthening the school/industry cooperative program and coordinating efforts of military and civilian educational institutions in training technical and skilled personnel; and

(8) making provisions to collect training funds from both public and private enterprises.

### Conclusions

As most developing countries, The Republic of China is faced with a rapid increase in population and a rate of economic growth not sufficient to absorb all additional workers into the labor force. There are many unemployed and underemployed people. On the other hand, there are shortages of professional, technical, and skilled workers. This short-term imbalance can be removed by an overall vocational training program, while the long-run supply and demand problem can be dealt with through sound planning of formal education. Therefore, the following are recommended:

(1) Educational financial policy should be based on an analysis of past educational statistics and future trends of manpower supply and demand and should correspond with current and forthcoming socioeconomic development plans. Financial policy should be used as a flexible tool aiding, rather than restricting, the formulation of educational policy decisions.

(2) The quality of manpower must be further improved in the coming years.

(3) Higher education should be diversified and specialized to meet the requirements of all professions.

(4) Apprenticeship training to meet the ever-increasing demand for skilled and semiskilled workers should be encouraged. Implementation of the "Expansion Project

for Secondary Education" will pave the way for the extension of basic education and facilitate apprenticeship training by recruiting junior high school graduates.

(5) In order to produce enough skilled and semiskilled workers for industrial expansion, coordination between formal vocational schools and training institutions of civilian and military establishments should be initiated. The formal vocational schools equipped by United States' aid should be utilized more fully through evening and summer vacation programs.

## DEVELOPMENT GOALS OF THE DEMOCRATIC REPUBLIC OF THE CONGO

Joseph Wané

The problems of rational development and utilization of human resources are more crucial in a developing country like the Congo than in an industrialized one. That is why this Seminar sponsored by AID and the International Manpower Institute of the U.S. Department of Labor is so timely and valuable. The Congolese Government is happy to have a delegate participating at the Seminar. Because of circumstances peculiar to my country, it is not possible to verify observations with statistics. The years following independence have been marked by a series of unfortunate events severely limiting our ability to gather complete and reliable data.

The national environment is characterized by: a general slackening of economic activity and, in certain regions, nearly complete economic disintegration; increased unemployment as a result of economic stagnation, especially in large population centers; an exodus of the rural population to the cities and, as a corollary, a diminishing contribution to national income from the rural sector; and a succession of governments unable to end this series of miseries. The Congo is in the distressing situation where obstacles to development are increasing in number and size, and we know they cannot be overcome in a few months. Yet the Congolese people face the future with confidence and courage. The arduous efforts of Lieutenant General Mobutu's National Union Government, to end the chaotic situation, are proof of this optimistic spirit. The objective of the Congolese Republic is to find, in the shortest time possible and with the help of a Five-Year Plan designed to dynamize its economy, its place in the concert of nations.

We are well aware that the reorganization and expansion of our economy are partly the responsibility of the population at large and partly of authorities motivated by a sincere concern to develop and use adequately potentially-productive human resources. We know that effective use of human talents requires both rational allocation of manpower and its intensive utilization in all fields and at all skill levels, assuming education and training are sufficient and appropriate. We know that economic and social plans, however rigorous and well-designed, must fail if they do not explicitly take into account the utilization of human resources. Finally, we know we must devise measures to provide the skilled manpower required by accelerated economic development.

The Congo's economic troubles are numerous and deep-seated. I can summarize them as widespread underemployment, lack of qualified manpower, and insufficient output. Adequate mass education and good training programs could lessen the deficiencies mentioned above, but they are not enough. Comprehensive development of human resources must be planned.

Despite the domestic turmoil of the last six years, the Congo has enacted some progressive labor legislation. Most important is the Order of Council of February 21, 1965, on hiring under contract. This decree takes into account international stan-

dards in work relations and the present domestic situation within the Congo. To avoid the conflicts that often result from the fragility of work relations in a developing country, this decree obliges employers to show justifiable cause in the dismissal of employees. In addition, there is provision for examination of conditions under which work booklets and written contracts are signed. Under further provisions the employer is required to report on wages, health coverage, vacations, and travel expenses given to employees and their families, and also on working conditions for women and children. This fundamental decree also includes a series of important legislative measures regarding:

- length of the work day, the Sunday rest, and vacation
- pensions for retired workers
- disability pensions and annuities for widows and orphans
- family allowances
- creation and organization of the labor inspection program
- regulation of professional organizations and collective worker conventions
- arbitration of labor disputes
- representation of staff employees of enterprises.

The Republic of the Congo is justifiably proud of a legislative instrument so complete and consistent with international conventions on the welfare of the work force. Domestic difficulties since the Proclamation of Independence have worsened the employment situation, however, and several problems persist. The major problems which confront our manpower planners cannot be solved by decree.

#### Some Problems and Solutions in Congolese Manpower Development

In contrast to many other former African colonies, Congolese independence was not preceded by a period in which the Colonialists trained a cadre of natives for technical and administrative occupations. Because we cannot wait for graduates from institutions of higher learning to fill important positions in government and private enterprise, it is necessary to establish courses to improve the capabilities of those who occupy high positions without the desired educational background.

The shortage of skilled and semiskilled laborers presents a twofold problem because we not only have too few of these people relative to the needs of the economy, but also lack teachers and training facilities to prepare sufficient numbers in the near future. The gap between labor supply and demand is especially wide in occupations requiring longer technical training. One of the cornerstones of our policy in educating and training technical workers is to draw candidates from all segments of the population, especially from the rural areas where educational and employment opportunities have been limited. It is our firm belief that these people should participate in human resource development. Of cardinal importance in economic modernization is the task of transforming the rural economy and adapting its traditional institutions to the needs of development. By emphasizing the rural sector in our development strategy, we seek to assure the rural population of useful employment and a rising standard of living.

Preparing a work force which will make a significant contribution to national development goals is, of course, more than a matter of skill development. For this reason, we have found it necessary to reorganize elementary education to put greater emphasis on civic responsibility, the interdependence of interests among all citizens, professional conscience, and the necessity that each citizen contribute something to the prosperity of his country for the benefit of all. The number of secondary and technical schools stressing civic virtues as well as intensive vocational preparation must be increased, and adults already in the work force oriented toward new social values as well as new skills.

It is appropriate to mention here the creation, in 1964, of the National Institute of Professional Training which prepares personnel for employment by public services, individual firms, and groups of enterprises. Through the Institute public and private employers establish programs to:

- improve, adapt, or promote present employees
- train newly-recruited administrative staff
- establish on-the-job apprenticeship programs
- train and adapt to particular working conditions the recent graduates from general education and vocational and technical institutions.

The Institute analyzes the needs of employers, determines the action to be taken, and provides a teaching staff. Training is done within the individual organizations. The capital city, in which the Institute functions, has already benefited from its services. Hopefully its activities will be intensified and extended throughout the country.

We realize that manpower development, like the global economic development of which it is a part, is an immense task whose success is impossible without thorough and rationally-ordered planning based upon serious study of the Congolese economy. Success cannot be achieved through cursory research or by short-run measures. On the contrary, research must be exhaustive and policy oriented to the achievement of long-run objectives.

In pursuit of the elusive goal of rapid growth, the Congo will continue to require a great number of highly-qualified foreign experts. Technical and financial assistance must at least continue at this current rate for some time to come. One emphasis of our educational strategy, however, should be to expand facilities and prepare instructors for the training of native technicians who will eventually replace foreign personnel.

I want to conclude by mentioning the potentially important role of trade unions in manpower development. We hope that by cooperating with the government and with employers in their efforts to educate and train the masses, trade unions will take an active part in building a healthy system of labor relations between employees and employers, a prerequisite to the success of our social and economic policy.

## EDUCATIONAL REFORM FOR EFFECTIVE EMPLOYMENT IN DAHOMEY

Alassan Aboudou and Joseph Djalto

After achieving independence, the people of Dahomey found themselves confronted with a number of socioeconomic problems which will be the object of serious concern for some time to come. One of the most serious of these problems--unemployment--is of particular relevance to the Seminar. After an analysis of the present and future labor and employment situation in Dahomey, educational reform will be recommended as one solution to the employment problem.

### Highlights of the Current Employment Situation in Dahomey

The labor market in Dahomey has been in a state of unrest for several years. Two phenomena dominate this disturbing and potentially-dangerous situation: rural under-employment and urban unemployment.

There is always work to be done in the country, provided, of course, that one wants to do something. The great majority of the rural population, however, do not work full time. In fact, most work less than 120 days per year. Depending upon the region, the remainder of the time is devoted to hunting, ceremonies, and excursions to the city. Once in the city a large number of the travellers, in the hope of being hired "someday, somewhere", never return to the areas in which they were born. These migrants swell the already large number of unemployed in the cities.

Many of the urban unemployed are educated to a certain degree. Anything involving manual labor is repugnant to our educated citizens, an idea inherited by Dahomey from colonialism. The result is that many educated persons are without office jobs and there is a plethora of subordinate administrators. Many educated Dahomeans lived in exile before independence. Thousands were repatriated after independence, further swelling the ranks of the educated unemployed and aggravating the social problems of the crowded urban centers. To this mass of open unemployed must be added the large number of hidden unemployed, including a large number of apprentices in many occupational categories.

All this is likely to bring Dahomey to the edge of an abyss, unless carefully considered solutions are found quickly. While there appears to be some relief in sight for some of the socioeconomic problems, the outlook for employment remains bleak.

### The Employment Outlook

The present educational system in Dahomey does not promise much hope for alleviating the urban unemployment situation. Indeed, while there are many complaints



about the plethora of administrative personnel, little is done to modify the anarchic system of secondary education and outmoded vocational training, neither of which is relevant to development needs.

The situation seems even more alarming if one compares job supply and demand for the next five years. In order to do this one may refer to the Five-Year Plan for 1966-1970. Before proceeding, however, it is necessary to list the four major educational categories found in Dahomey:

- (a) Higher education (university and advanced study)
- (b) Complete baccalaureate
- (c) BEPC (Brevet Élémentaire du Premier Cycle) (comparable to senior high school)
- (d) CEP (Certificat d'Études Primaires) and lower school

A comparison of the two following tables reveals the disparity between the supply of jobs (9,194) and the demand for employment (70,500) for 1966-1970. The implications of this disparity for development are quite serious and the only solution is a complete reform of the educational system.

Table 1. ESTIMATE OF INCREMENT IN AVAILABLE JOBS, 1966-1970  
(PUBLIC AND PRIVATE SECTOR)

Categories	Public Sector	Private Sector	Total
Levels A and B .....	665	249	914
C .....	1,321	1,092	2,413
D .....	1,108	1,522	2,525
E .....	724	2,513	3,012
Total .....	<u>3,818</u>	<u>5,376</u>	<u>9,194</u>

Table 2. ESTIMATE OF INCREMENT IN LABOR SUPPLY, 1966-1970

Categories	Total	Those continuing or in training	Actively seeking jobs
Levels A and B .....	1,500	--	1,500
C .....	12,500	3,500	9,000
D .....	75,000	15,000	60,000
Total .....			<u>70,500</u>

### Remedy Recommended: Educational Reform

In order to reduce the imbalance between labor supply and demand it will be necessary to direct youth toward the productive sectors of the economy, that is to say, to adapt the school curriculum to Dahomey's needs. Moreover, education must be designed to train Dahomeans intending to remain in Dahomey. Specific features of the reform are the establishment of "Youth Villages" and formulation of educational programs designed to train unemployed youths to be farmers. These youths will be recruited compulsorily from the urban areas and, upon completion of their training, will be encouraged to form cooperatives.

In addition there is educational reform proper. Such reform must conform to the specific needs of Dahomey and, as economic development is the overriding social objective at present, the educational system must satisfy the imperatives of national development. The educational system must reflect the fact that Dahomey's is primarily an agricultural economy. Some possibilities are:

-At the primary school level: the creation of cooperative schools and a program for training young persons in certain handicraft skills.

-At the secondary level: the addition of general education courses with emphasis on agricultural training.

-Higher education: people with a baccalaureate will be recruited and trained according to national requirements for skilled personnel.

-Technical education: personnel who can be utilized directly in jobs will be trained. It is particularly advisable to establish close connections between schools and potential employers.

Dahomey is experimenting with a new concept of job training. Before a group enters a training or advanced course, it must be examined and approved by the Assistant Director of Human Resources. With regard to the training of stenographers and mechanics, for example, it may be necessary to establish appropriate sections within a college or national technical school.

### Conclusion

The disturbing aspects of the present and future employment situation in Dahomey have been intentionally stressed in the belief that, if a problem is well understood, it is half solved.

Educational reform as it has been recommended is perhaps not the only possible solution, but it is hoped that on the basis of this and other exhaustive studies, the optimal solution to Dahomey's employment problems may be found.

## THE SIGNIFICANCE OF THE PUBLIC EMPLOYMENT SERVICE IN MANPOWER DEVELOPMENT IN ETHIOPIA

Bersoufekad Assefa

With the process of industrialization in Ethiopia, the need to establish an administration responsible for better utilization and improvement of the country's human resources became obvious. In recognition of this need, a public employment service was recently established.

In September 1962, a Public Employment Administration Order was promulgated to create the Public Employment Administration for handling a wide range of manpower problems. Thus, the foundation for a comprehensive nationwide public employment service was laid, for the Public Employment Administration consists of an employment placement section supplemented by foreign nationals' work permit, manpower research, and statistics sections.

The objectives of the Public Employment Administration, as stated in the Order, are to facilitate employment of persons according to their individual desires and capabilities, undertake research regarding the human resources of the country, and implement the government policy of Ethiopianization.

The Order also states that the administration, under the direction of the Minister of National Community Development and Social Affairs, may take all measures deemed necessary to achieve its objectives. Moreover, Article II of the Order provides guidelines for the activities of the Public Employment Administration as follows:

- a) study and review the Ethiopian employment situation;
- b) recommend measures to the Minister of National Community Development and other appropriate officials to meet difficulties in the employment field;
- c) collect and publish statistical and other information related to the employment situation;
- d) provide facilities to bring together employers and persons seeking employment-- this involves assisting employers to find qualified manual and nonmanual workers and assisting persons able and willing to work to obtain gainful employment;
- e) provide guidance on vocational training or retraining, particularly for young persons, and assist in the enactment of vocational preparation plans;
- f) advise and assist handicapped persons through rehabilitation programs;
- g) stimulate and cooperate with public authorities and private enterprises and organizations in economic and other planning to promote the creation of additional employment, especially in areas where unemployment is a major problem;

h) propose measures to facilitate the voluntary transfer of workers from one occupation or region to another when the employment situation requires or justifies such action;

i) suggest measures to deal with concentration of unemployment in urban areas; and

j) maintain records of employed persons, unemployed persons, and job vacancies within the professional branches.

These guidelines indicate the wide scope of activities of the Public Employment Administration. Although it is divided into three sections in order to promote division of work, the activities of the sections are very much interrelated. Hence, the responsibility of one division, e.g., the Public Employment Service, includes processing manpower information, and promoting training and occupational research, as well as placement of unemployed workers.

### Placement

Before the establishment of the National Employment Service, workers were recruited mainly at the door of the work-place by the employer or his agents. Such a method is haphazard and lends itself to corruption. Moreover, job-seekers may not be placed in work for which they are best suited. The creation of a National Public Employment Service is an attempt to improve the situation. Objectivity is the guideline for the Service, as the main concern of its placement activities is to promote effective utilization of manpower in the country and thereby assist in implementing the socioeconomic development programs.

The Service tries to learn of job vacancies by means of visits to employers' establishments, telephone conversations, and other contacts with employers. After compiling the details regarding particular vacancies, the Service helps employers through its publicizing facilities and/or by selecting candidates from among people already registered. This saves employers time and money which otherwise would be wasted in interviewing casual callers or dealing with written applications from persons who are not suitable for the existing vacancies. On the other hand, the Service registers workers seeking employment, recording particulars which help to establish the applicants' qualifications and the types of jobs for which they are suitable.

When it is impossible to submit a worker who fully meets the requirements that an employer has specified, the Service provides less-capable alternative candidates with full explanation of the situation.

### The Role of the Public Employment Service in Promoting Training

In Ethiopia, shortages in skilled personnel categories and high illiteracy rates among persons who are in the productive-and-working ages are obstacles to effec-

five implementation of development programs. The Second Five-Year Development Plan estimates that 30,000 additional skilled workers--operatives, supervisors, and foremen--will be required for the plan period. Hence, training must be undertaken not only in vocational schools but also on the job and in evening schools.

Participation of private enterprises is imperative. At present some employers, such as the FIAT Company, give skill upgrading courses to their technicians, whereas others, like the Ethiopian Airlines, assist their employees to attend evening classes in the university. Some others, including A. Besse & Company, have given scholarships to students to pursue advanced studies abroad. However, much more can be done by entrepreneurs with some guidance and advice. Realizing this, the Public Employment Administration seeks the participation of employers in its human resources development programs. On the basis of the "Foreign Nationals Employment Regulations of 1964," work permits for foreign employees are given on condition that the employer ensures that special programs are or will be undertaken to train Ethiopian nationals in the skills required by the enterprise. If an employer thinks that trainable candidates are available within the enterprise, he submits information about them and commits himself to their training. However, if he wants to hire someone from outside the firm, the Public Employment Service presents him with candidates who have the necessary background. Such candidates are expected to replace foreign personnel when they have acquired enough know-how.

#### Manpower Information and Advice

To promote social and economic progress, a manpower information program to enable data on human resources to be gathered, evaluated, and dispatched regularly is urgently needed. At present, lack of adequate manpower information makes it difficult for ministries, agencies, and other organizations to undertake planning. Manpower information is required for many purposes, such as global economic planning, organizing and operating vocational training programs, administering the Public Employment Service, making educational plans, framing and implementing labor legislation, devising and operating social security measures, considering employment policies and plans, and formulating the policy of Ethiopianization.

Hence, with full realization of the importance of a manpower information program for economic development, the Public Employment Administration has assumed full responsibility for its progress. It is empowered by Article 11(c) of the Public Employment Administration Order, 1962, to collect and publish information and statistical data regarding the employment situation in the country. It is concerned with identifying relevant and required manpower information, coordinating the collection of data, data analysis, and preparing and distributing manpower publications.

The Public Employment Administration has begun to play its role of manpower information supplier by planning the nation's first manpower survey, now underway. The Administration collects employment data through its employment offices, which have the responsibility of compiling and issuing employment information. The Public Employment Service headquarters has a register of employers which helps

local employment offices to record details useful for employment service operation and dissemination of manpower information. The register is designed to be a source of information not only to the manpower research and statistics section of the Public Employment Administration, but also for other divisions of the Labor Department and interested government agencies, such as the Ministry of Commerce and Industry and the Ministry of Education. Moreover, employment offices provide information about manpower supplies and requirements through periodic reports based on registration of job vacancies and job-seekers.

The tasks of the Employment Service include dispatching information and advice to all inquirers. The Service, for example, gives advice about occupational possibilities and information regarding occupations and industries, qualification and experience requirements, and vocational training available. This activity of the Employment Service is of some significance inasmuch as there is no other vocational guidance and counseling agency as yet.

### Occupational Research

The occupational research function of the Public Employment Service furnishes technical support for employment placement and employment market analysis. Because of its day-to-day contacts with workers and employers, the Service plays a key role in assisting the research program by supplying occupational information and by helping to develop vocational guidance and employment counseling activities. It is also playing an important role in the development of an Ethiopian national occupation classification system.

### Conclusion

The Public Employment Service in Ethiopia promotes efficient utilization of human resources. Though it is a young institution, the responsibilities that are entrusted to it make it an important one. Apart from matching jobs and workers, it assists in vocational training and in development of a manpower information program. However, in order to fulfill the needs of the country, its organizational elements must be strengthened. As it is a new agency, it lacks experience and adequately trained staff. Although its potential value for human resource development is great, Public Employment Service accomplishments on a nationwide scale thus far have been limited and have demonstrated the desirability of an eventual network of offices throughout the country. The administration is now working toward a Service which will operate effectively throughout the country.

## COORDINATION IN MANPOWER PLANNING AND ADMINISTRATION-- THE INDIAN EXPERIENCE

Austen J. A. Tauro

The importance of manpower planning was realized in India as early as 1947. Ad hoc committees were appointed from time to time to examine and advise on various problems. These committees brought together for a short time the expertise of experienced persons and served an extremely useful purpose, but it was soon felt essential to have a machinery which would ensure continuous attention to manpower planning and coordination among various agencies working in this field. The more important of these agencies are:

a) The Census Organization which conducts a decennial census. The information collected must serve the needs of the planning and administrative agencies.

b) The Ministry of Health which is responsible, inter alia, for medical education and the family planning program. Despite an increase in annual enrollment capacity in medical colleges from 2,675 to 11,500 from 1950 to 1965, there is still an acute shortage of doctors to carry out family planning schemes, particularly in rural areas.

c) The Ministry of Labor, Employment and Training which administers the Employment Exchanges, the Employment Market Information Service, the Apprenticeship Act, and Industrial Training Schools, and is responsible for vocational guidance.

d) The Ministry of Education which is responsible for the extension of educational facilities at all levels and, in particular, in engineering and science.

e) The Planning Commission which formulates the plan for economic development.

The preparation of a manpower plan is essentially an exercise in coordination which is a delicate and diplomatic process calling for guidance, persuasion, and patience. A coordinating agency must win the confidence of those with whom it deals and be firm, when necessary, without being authoritarian. In India, it was decided that such an agency could best function within the Ministry of Home Affairs which was not itself directly responsible for any economic function but had, nevertheless, the authority and prestige to ensure effective coordination.

The Directorate is a small organization of about 20 persons. It is difficult to define its functions, but a description of some of the work done may be illustrative. The Manpower Directorate serves as the Secretariat for the Cabinet's Manpower Committee. This arrangement ensures that the Directorate has the opportunity to examine all major manpower policy proposals. In actual practice, the Directorate is associated in inter-Ministry deliberations from the earliest stages and is represented on most committees or groups which are working on any matter which has manpower implications. Quite frequently the Directorate takes the initiative in

eliciting comment or arranging meetings to discuss manpower questions. For this purpose papers are prepared and circulated to serve as a basis for consideration and discussion. The Directorate had, in preparation for the Fourth Plan, attempted forecasts of the requirements of various categories of qualified manpower during the next decade. Mention may be made in particular of estimates of engineering personnel at the graduate and diploma level. Using a ratio of investment to additional engineers required, forecasts were attempted based on assumptions regarding likely levels of investment, the nature and intersectoral distribution of such investment, and its phasing. The requirements of the defense establishments and nondevelopmental sectors were also taken into account. Aggregate estimates thus arrived at were broken down by category and by specialty.

The circulation and discussion of these estimates has led to the preparation of three different sets of estimates. The first worked out by the Education Division of the Planning Commission is based on an assumed ratio between the growth of the industrial sector and the stock of engineers. Using a similar approach but different sets of assumptions, a London School of Economics team (working with the Perspective Planning Division of the Planning Commission) and the Institute of Applied Manpower Research (mention of which will be made later in this paper) arrived at very different results. These various sets of estimates are being studied in the Manpower Directorate and discussions are being held with the object of arriving at a working basis for planning the expansion of facilities during the next five years.

The Directorate acts as the secretariat to a high-powered interministerial committee called the Technical Manpower Committee. This body was formed in 1962 after the declaration of a state of emergency in the country following the Chinese attack on our borders. The Committee is concerned with manpower in the context of emergencies and deals with schemes for mobilization, modifications of curricula to meet specific requirements, acceleration of courses where critical shortages appear, and staffing practices. The principal object is manpower preparedness so that the community is ensured of essential supplies and services in a period of emergency.

At the insistence of the Directorate, all State Governments have created manpower cells and each Ministry and Government undertaking has nominated a manpower officer or formed a manpower cell. The Directorate maintains liaison with these units and provides information and guidance. The Directorate has initiated a number of studies through the agency of the universities, ministries, and other organizations. All reports and publications are examined in the Directorate and suggestions are made for their improvement or for further inquiry.

Acting on information regarding imminent retrenchment of civil engineering personnel from a number of major undertakings where the construction phase was coming to an end, the Directorate obtained the approval of the Government for the formation of a committee, which includes representatives of all major agencies employing civil engineers, to undertake a detailed study of future requirements. The terms of reference of the committee include the study of measures to improve interregional mobility and encadrement practices which will ensure continuity of employment and maximize utilization.



The Directorate is responsible for policy matters connected with the repatriation of highly-qualified Indians studying or working abroad. In 1958 a pool was formed to which any Indian abroad with postgraduate qualifications in science, technology, engineering, or medicine may, on application, be admitted. The pool provides temporary employment to the repatriate by attaching him immediately on his return to a university, laboratory, hospital, or other suitable institution. During the period of such attachment he is paid a monthly stipend which, by Indian standards, is adequate to maintain a small family in modest comfort. During the last eight years over 1,500 scientists have thus been assisted to return to the country. The Directorate also maintains liaison with the Public Service Commission which deputes from time to time a member of the commission to interview Indians abroad at various centers. The Commission prepares panels of candidates found suitable for different categories of posts and they are automatically taken into consideration when vacancies arise, without further application or other procedure.

In 1962, the Directorate sponsored the establishment of an Institute of Applied Manpower Research which is unique in that it is probably the only one of its kind devoted exclusively to research in the manpower field. It is an autonomous body, constituted as a society. Its General Council includes representatives of the central governments, chambers of commerce, private industry, and the labor unions. The Institute has done useful and interesting work during the last three years. The first task which was carried out was the collection, compilation, and integration of all available data relating to manpower in the country. This "Fact Book on Manpower" has been of considerable use to planning agencies and is continually reviewed and kept up to date by the Institute.

The Institute also carried out a survey of engineering manpower with the aim of determining the existing stock, its distribution and occupational pattern, and suggesting methods for closer coordination between educational and employing agencies. A series of informative and thought-provoking papers emerged from this study and certain proposals relating to the sharing of training responsibility between educational institutions and industry have already been accepted and implemented by some major undertakings in conjunction with selected engineering colleges.

The Manpower Directorate is very closely associated with all aspects of work in the Institute and is represented on its General Council, and its Executive and Research Programs Committees. The Directorate also provides the means whereby the papers of the Institute receive due attention in the ministries and organizations concerned.

This account of the activities of the Manpower Directorate is intended only to illustrate the nature and diversity of its functions. The approach and the effort has been, as far as possible, not to impinge on the responsibility and jurisdiction of any agency but to foster manpower awareness and to keep the manpower situation under continuous review. It is difficult to make any positive assessment of the efficacy or utility of the Directorate. In the field of coordination, unfortunately, it is occasional failure rather than sustained success that is more dramatically

demonstrated. Be it stated, however, that in the last decade there has been no glaring instance of failure in manpower administration or planning which can be attributed solely, or even largely, to failure in coordination.

The location of a Manpower Directorate in the Ministry of Home Affairs has possibly no parallel in any other country. While there are advantages in locating such a unit in a ministry which itself has no specific or restricted interest in manpower for economic development, such a decision must be taken in each country in the light of its governmental organization and pressures. "In the end," as Professor Harbison has pointed out, "the crucial question is whether the machinery works."

## AN EVALUATION OF THE VOCATIONAL EDUCATION PROGRAM IN LIR'

Victor D. Krakue

It is current practice to list a country's resources in terms of natural resources, agricultural crops, and industrial products. Seldom, however, is anything said about the skilled manpower to exploit natural resources, process agricultural products, and make available manufactured and industrial goods. But skilled manpower is obviously essential to the development plans of all countries.

In order to plan any educational system--be it vocational, industrial, or academic--four main elements must be given specific attention. These are the pupil, the teacher, the instruction to be offered, and conditions under which training is to be accomplished. This paper attempts to analyze the vocational education of Liberia in light of these criteria.

### Selection of Vocational Students

Vocational training should be provided only for selected groups of students. Since the purpose of vocational training is to equip people for useful employment in specific occupations, it follows that it should be given only to people who have decided to enter, or who have already entered, the occupation for which training is to be provided. In addition to having made a definite vocational choice, each person admitted to a training course must be able to profit from the instruction, and to qualify to engage in the occupation. Hence, a plan must be devised to ensure that only properly-qualified persons are admitted to vocational classes. The methods used to measure the progress of a pupil in the academic work of school will be of little use in determining his ability to profit from vocational instruction. Vocational courses must not, however, be regarded as dumping grounds for pupils who do unsatisfactory work in other school subjects.

### Qualification of Vocational Teachers

An essential qualification of the vocational teacher is competency in the occupation for which he is to provide training. A certain amount of general education is desirable, but it can never serve as a substitute for vocational ability. In addition to competence in the occupation that is to be taught, the vocational instructor must have the ability to teach others. This ability, like others, is developed only through training and experience.

If the vocational training of skilled workers in Liberia is to be carried out successfully, it will be necessary to ensure an adequate force of trained and competent teachers. For this reason candidates for teacher training should have a good academic background with the experience and ability to absorb training. Consequently, teacher training courses should attempt to improve skills with emphasis on the principles of teaching shop and related classes.

Considering, however, that there are very few semiskilled or skilled Liberians currently employed in business or industry, acute problems arise in recruiting persons with ability who can be trained as teachers for vocational schools and institutions. This training might, however, be made available to Booker Washington Institute graduates who are now employed in industry.

### Instruction Given in Vocational Classes

The curriculum of vocational courses should be based upon the knowledge and abilities needed by workers in occupations for which training is being offered. The success of a vocational course will depend largely upon the extent to which conditions found in training programs are similar to working conditions for, if the conditions are similar, adjustment problems will be minimized.

### Conditions Under Which Training is to be Given

The public school system is the one public agency that should be responsible for organizing instruction. The schools should give consideration to the vocational training needs of the people, and assist in helping meet these needs. It does not necessarily follow that all vocational training should be given by the schools. Many people will and should secure a large part of their training on the job. The schools can, however, do much to assist in training these people by supplementing work experience with formal instruction. The public program of vocational education should be so organized that the total training needs of the country are considered and provision made for giving assistance to all groups that need it. There should be sufficient flexibility so that emphasis can be changed as the needs of various occupations change.

Attention has been called to the need for utilizing all possible facilities for training workers. In making use of such facilities, it is frequently possible or necessary to develop new plans and types of classes. It has been found that some excellent provisions can be made for training through the organization of cooperative classes. The ideal situation is that in which training is provided to the people who want it in the place and at the time they can use it.

A well-rounded program of vocational education will utilize to the fullest extent the opportunities for training which are offered by farms, industry, stores, offices, and homes of the community. The vocational programs in Liberia are not restricted to those offerings available only within the confines of the school property but are based on the working facilities of the area served.

### Cornerstones for Training of Vocational Workers in Liberia

Four institutions around which the vocational education system in Liberia will be built are:

(1) The Booker Washington Agricultural and Industrial Institute. Founded in 1929, the Booker Washington Institute was the first vocational high school in Liberia. The Institute offers four years of vocational and technical training in agriculture, auto mechanics, building construction, bookkeeping, communications, drafting, electricity, machine shop, plumbing, home economics, and secretarial science. Concerted effort is directed toward the training of skilled workers for independent business and industry, government, and crafts. Since its inception the Institute has contributed immensely to the development of semiskilled manpower in Liberia. But the training could be improved by better staff, classroom facilities, textbooks, and equipment.

(2) The Liberian-Swedish Vocational Training Center. Realizing that it is impossible for the Booker Washington Institute to provide vocational training for all skilled manpower, the Royal Swedish Government built and equipped one of the best vocational training centers in Liberia. This center offers a variety of trades in the areas of mechanical repairs, auto repairs, electricity, and woodwork.

(3) The Bong Mining Company Vocational School. Recognizing the urgent need for skilled workers and the training of more Liberian nationals, this German mining company opened a training center in 1964. The school offers courses of instruction in mechanics, welding, motor car mechanics, heavy-duty mechanics, plumbing, and electrical wiring.

(4) The Firestone Vocational School. The objective of this school is to provide training for workers who are presently employed so that they may acquire sufficient skills, technical knowledge, and safety judgment in various occupations to increase their competence. Areas of instruction include auto mechanics, welding, lathe work, cabinetmaking, mechanical drawing, and masonry.

#### In-Service Training

There is an urgent need for basic and advanced training of workers in Liberia, and it would be appropriate, in my opinion, if more interest were given to introducing this type of training throughout the country. Training courses could be arranged so that employees spend two days a week in school and the remainder of their workweek in the plant applying their training. Courses should be open to all employees, regardless of age, provided they could profit from the training and meet necessary educational qualifications.

## A SKETCH OF MADAGASCAR

Michel Raveloarison

Though it is a country of tradition, Madagascar easily adopts new ideas. It has always subscribed to a democracy that permits all opinions on the problems of the day to be expressed. The young Republic considers public opinion to be a precious instrument for its government. The Government devoted the first years of independence to strengthening sociopolitical stability and creating institutions appropriate for a modern State.

The first Five-Year Plan for economic development is now entering its second year. It started with the establishment of infrastructures necessary for the country's development. This has facilitated, for example, better distribution of products in the various parts of the island, better information for the different strata of the population, and a more exhaustive inventory of the country's natural resources. The Malagasy Plan, like the country's law and regulations, is characteristically suggestive or simply indicative, rather than imperative.

The limited nature of government intervention is reflected in the fact that there are three kinds of enterprises in Madagascar. Private enterprises dominate processing industries and marketing channels. Mixed companies, whose capital is supplied by both Government and private investors have, in general, sought the approval of the Government in order to enjoy the benefits of the investment code. Government enterprises are involved in enterprises for research, exhibitions, or public services (communications, railways, etc.).

During the execution of this plan, the State plays the role of promoter. It invests in areas where private entrepreneurs hesitate or delay to do so despite the Government's suggestions, as was the case with the State farm of Antsirabe, for example.

### The People's Reaction

The Malagasy people are devoted to progress. It is so important in our national value system that it is one of the three elements of the national motto, "liberty, fatherland, and progress." It is understandable, therefore, that people are readily drawn to regions where the economic possibilities are good.

In cities: The well-known phenomenon of the rural exodus has had advantages as well as disadvantages for us. It has encouraged reconsideration of the urban policy which is now resulting in improved housing and a permanent contact between the rural inhabitants and the townspeople.

In other regions: Generally, people who are tired of the city return to the country where they serve as prime movers in the rural culture and the money economy. Having lived in a city environment, the migrants retain habits and manners

which, when brought face to face with tribal customs, bring about a certain revolution. Experiments are now in progress in Ambila, on the east coast, and Sakay, in the middle west, to organize ruralization movements.

The wage-earning population is relatively stable, but its average level of vocational preparation leaves something to be desired. This is a development bottleneck that the government is attempting to eliminate primarily by a wage policy which uses remuneration as the major incentive to employers as well as to workers. Each wage bracket corresponds to a vocational skill, and the territory is divided into five wage zones corresponding to differences in the cost of living.

Employers have abundant manpower available, and there will be no manpower shortage to make difficulties for them as they establish industries in Madagascar. This manpower comprises:

(a) skilled workers who earn relatively high wages since their competence has been tested;

(b) semiskilled workers who are more numerous since they can be trained in Madagascar; and

(c) laborers who form a mass with varying skill levels and are very mobile, and easily retrainable in the occupations needed for development. Their qualification is the result of a special effort that has succeeded in the education of the masses of children and adults. The problem of excess supply of labor is becoming a matter of concern, however, because the inhabitants are eager to be informed and anxious to participate in the money economy.

The country's population is in flux, and manpower policy has reached the point where it is advisable to plan the distribution of human resources among the various sectors of the economy. One sector which appears to be of immediate importance is agriculture. It provides a veritable reservoir of jobs. The services sector enjoys a certain prestige, whether deserved or not, and attracts more candidates than it needs. In this sector, there have been numerous experiments in occupational retraining with positive results. Industry remains the greatest manpower problem, especially with regard to vocational guidance and training.

Women have access to the same jobs as men, with the same rights and prerogatives. The only restrictions on them relate to their physical limitations and to their role as mothers. As for children, since school attendance is obligatory up to the age of 16, only after this age do they come under a policy to incorporate them into the labor force.

### Conclusion

It would be ambitious to attempt to describe a country's situation in a few lines. This brief paper contains only a few examples picked at random through observation of Malagasy development policy.

The preparation, execution, and control of an economic development plan has never been an easy task. The Malagasy Republic has experienced and is experiencing all the imaginable difficulties, but it has two important advantages: climate and domestic peace. This peace is the result of a political system that is becoming part of the country's tradition and will influence future generations. It is a Malagasy principle to prepare the life of future generations, generations that comprise the human resources of the future and that are the concern of five ministerial departments in the Government today.

We might conclude that if new attitudes enable economic progress to continue, Madagascar will soon reach the threshold of take-off.



## IMPACT OF LABOR LEGISLATION ON MANPOWER IN THE REPUBLIC OF MALI

Mohamed Dicko

Prior to the French Law of December 15, 1952, establishing an Overseas Working Code, Malian employees who were not civil servants had no guaranteed employment and were not covered by a social security system. This situation had a great influence on the wage earners and it muffled the role of local manpower, preventing it from influencing the functioning or organization of labor in Mali. The Law of December 15, 1952, gave a more equitable share of bargaining strength to the employees who had at last a weapon to defend their interests against their employers.

This Code is interesting in that it lays down the criterion that qualifies a person as an employee:

...an employee is any person (regardless of sex or nationality) who has accepted work for a salary, under the direction and the authority of any other entity physical or moral, public or private, secular or religious, termed 'employer'.

After achieving national independence, the National Assembly of Mali, on August 9, 1962, promulgated the Labor Code and the Code of Social "Precaution" in favor of salaried employees. While most of the Law of December 15, 1952, was retained in the new Code, some innovations taking into account the political, economic, and social conditions were inserted.

The following are the innovations which ameliorated the lot of our work force:

1. Article 38 obliges an employer who wants to release an employee who has been working for a period exceeding three months to ask beforehand the permission of the Regional Labor Inspector.

2. Article 44 states that an indemnity for "services rendered" should be paid to an employee leaving of his own free will, if he has worked 10 years in the same enterprise.

3. Article 9 states that an allowance should be given to young apprentices after one year of apprenticeship according to the stipulations of the law.

4. Article 45 makes a provision for an indemnity to old wage earners who are retiring. The amount of this indemnity is determined on the same basis as that in the case of firing (Article 38).

5. Article 87 legalizes a bonus based on seniority for all employees, etc.

The Code of Social "Precaution" of the Republic of Mali covers the following risks to employment and domestic life:

- (1) Injuries to workmen;
- (2) illness contracted on the job, or because of it;
- (3) family allowances (during pregnancy and after birth);
- (4) solidarity allowance for old workmen;
- (5) retirement; and
- (6) part of the burden of illness, according to the provisions of collective agreements.

Those provisions and measures which protect and benefit our labor force have not yet reached the goal we have set of eventually covering all professional and domestic risks for the majority of the rural and urban population. These measures illustrate the concern of my Government and of its party, the Sudanese Union RDA, to assure better living and working conditions for our working masses, in accordance with our political philosophy and the economic possibilities of our country.

Mali labor legislation has had a great impact on the workers of our nation who see an increasing range of job opportunities and also the social benefits to be derived from them. It has also had the desirable effect of increasing workers' consciousness of their worth and of social goals. This new consciousness is illustrated by creative initiatives taken in all fields of our national economy. The Malian woman, better protected and better treated, takes an active part in the economic development of the country. Her work allows her to have more opportunities to develop her talents, and she no longer is confined to the role of housewife.

In conclusion, I want to say that our labor legislation represents in its general scope the will of the Republic of Mali, a country with limited economic means, to give its share to the world for the welfare of man.

## EDUCATIONAL REFORM AND ADMINISTRATIVE PERSONNEL TRAINING IN THE REPUBLIC OF MALI

Pierre Nègre

The defects, indeed the failures, of "colonial education" have led the Government of Mali to carry out educational reform commensurate with its policy and aspirations. To clarify the nature of these reforms, this paper will give a general description of the school system in the Republic of Mali, and administrative personnel training.

### 1. The School System

The framework of the school system comprises:

A. General education

B. Technical and vocational education

A. General education--General education is divided into three levels:

(1) Primary level. This is the core of the entire Malian school system and it entails two courses of study.

(a) A primary course of study of five school years undertakes to teach all young people how to read and write and provides them with elementary instruction.

(b) The second course of study, lasting three years, leads to a *Diplôme d'Etude Fondamentale (DEF)* (high school diploma). At the end of this course students undergo a preliminary orientation to secondary or higher education or training schools for middle-level personnel.

(2) Secondary level (secondary education). The courses at this level are relatively brief and correspond to the last three years of secondary study under the colonial system. These years of study lead to the Malian "*Baccalauréat*," similar to the French *baccalauréat*. Upon completion of this level, students may proceed to higher education.

(3) Tertiary level. This is an innovation of education reform and is being initiated with the creation of a few schools of higher education. University administrative personnel and the technical elite of the nation will be prepared at this level.

B. Technical and vocational education--As in general education, students for technical and vocational education come from different cultural backgrounds. This education is preparing the skilled manpower and technical supervisory personnel

necessary for the country's economic development. Technical and vocational education may be divided into three levels:

(1) Elementary level. This level entails three years of study at a trade center or in a section of a technical high school, following the first five years in a general primary school. This study leads to the "Certificat Aptitude Professionnel" (CAP) (trade certificate).

(2) Middle level. Study at this level leads to the technicians' certificate corresponding to three years of training after the DEF.

(3) Higher level. Two types of training may be distinguished:

(a) Five years of study after the DEF lead to the "production" of field or first-class engineers.

(b) Four years of study following the "Baccalauréat" lead to the "production" of planning or second-class engineers.

Training of teaching personnel--Here, too, there are three levels of training:

(1) School teachers for the first course of study. The instructors are recruited at the high-school level on the basis of a competitive exam and receive one year of teachers' training before they are sent into the field.

(2) Teachers for the second course of study. Entrance to the teachers college for secondary school instructors is open to those who possess their DEF. Course work lasts 23 months.

(3) General high-school teachers. Teachers' college for training of high-school teachers is strictly reserved to those who have a Baccalauréat. Three years at this school lead to preparation for a diploma of higher studies equivalent to the French licence.

## II. Training of Administrative Personnel

Malian educational reform is primarily directed at training administrative personnel and skilled manpower. This training policy is being carried out through:

A. Trade schools

B. Trade centers

C. Special training of the best government employees

A. Trade schools. Today, four institutions provide training for executive personnel:

(1) Ecole Nationale d'Administration. This school is for general administrative personnel and those in economic services. It includes two courses (A and B). Its students have two types of educational background:

(a) "Baccalauréat" or any diploma equivalent of Course A

(b) DEF or any equivalent of Course B

An annual competition allows government trainees in B and C to enter one of the two courses. Each course of the school is comprised of five sections:

(a) general administration--for civil administrators and administrative attachés;

(b) economic--for inspectors and supervisors of financial and economic departments;

(c) magistrature--for judges and court clerks;

(d) labor--for inspectors and supervisors of labor and social legislation; and

(e) diplomatic--for the diplomatic corps.

The duration of these courses is: Class A--"Baccalauréat" plus three years; Class B--DEF plus three years.

(2) Ecole Nationale Supérieure (teachers' college--for high school)

(3) Ecole Nationale d'Ingénieurs (national school of engineering). This school trains public works planning and field engineers. The courses are as follows: "Baccalauréat" plus four years for second-class engineers; DEF plus five years for first-class engineers.

(4) Ecole Polytechnique d'Agriculture. The most recent school for higher studies will produce executive personnel to assist in the development of rural sectors. Just as at the Ecole Nationale d'Ingénieurs, training will be on two separate levels: DEF plus five years of study for engineers in the agricultural, rural, and forestry fields, and in animal husbandry; "Baccalauréat" plus three to four years' training for agricultural, hydraulic, and forestry engineers.

Training of middle-level personnel--Each ministerial department has its own institutions for training technical personnel. Efforts are being made to give the Ministry of National Education an effective role in coordinating these activities, and has already made it possible to coordinate recruitment and training. Thus, when the student leaves school, integration and placement in the civil service present no major problem.

B. Trade centers. These centers are in charge of training technical personnel in Class C especially, and sometimes in Class B. There are both public and private trade centers, the curricula of which are strictly controlled by the Ministry of National Education. The course in these centers invariably lasts for three years following the first level of primary education.

C. Special training. In order to allow certain competent employees to acquire new knowledge, indeed choose a new career, there are training classes or courses which last anywhere from six months to four years. These courses are generally given abroad and are regulated by Decree 23 PGRM of February 26, 1964. Under this Decree, it is stipulated that courses will be the responsibility of the Minister in charge of planning and the coordination of economic and financial matters, who shall determine whether or not they are desirable. During his course, the trainee receives either his full salary or a grant the amount of which, determined by Decree 23 PGRM, varies according to the trainee's class. It should be added that these classes may be financed by foreign organizations, particularly by international organizations (UNESCO, AID, WHO, ILO).

Thus, through its educational reform and its training policy for administrative personnel, the Republic of Mali is trying to eliminate its shortage of skilled manpower and, in general, of competent personnel necessary for the nation's social and economic development.

## EMPLOYMENT BALANCE IN A LONG-TERM PROJECTION OF THE MOROCCAN ECONOMY (BASE 1964 -- HORIZON 1985)

Ahmed Nadifi and Mohammed Youssfi

In this paper we will investigate in order, population expansion, education, and the employment balance. This balance will be determined on the basis of the assumption of 3.5 percent rate of economic growth.

### Population Data

1. Population expansion. The population projections are limited mainly by assumptions about the rate of "induced reduction of fecundity." On the basis of this assumption, it is thought that the birth rate will drop to 35 per 1000 by 1985 and to 20 per 1000 by the year 2000.

If government action does not attain the anticipated goals, and the birth rate is 42 per 1000 by 1985 and 35 per 1000 by the year 2000, the total Moroccan population will be 24,100,000 in 1985 and 37,540,000 in the year 2000. Even if the birth rate were to drop to 20 per 1000 in the year 2000, the demographic growth rate would remain at about 1.7 percent annually between 1985 and 2000, for the age structure of the population sustains the gross birth rate at a high level. The great majority of the population of reproductive age in the period from 1985 to 2005 will be born between 1970 and 1985, a period when the birth rate would drop only from 50 to 35 per 1000.

It has been assumed that the mortality rate, which will go down from 17 to 10 per 1000, will reach a plateau between 1985 and the year 2000.

2. Population distribution between urban and rural areas. The distribution of the population between urban and rural areas will be determined on the basis of alternative assumptions,  $U_1$  and  $U_2$ :

$U_1$ --The urban population will grow at a rate of 5.45%, and the rural population at a rate of 1.33%.

$U_2$ --Rural population will grow at a rate of at least 1.7% annually, and urban population at least 5% annually.

3. Education. In 1964, 30 percent of the educated population were women; in 1985, 38 percent will be women. Between 1964 and 1985, the total number of educated men will increase from 975,000 to 4,210,000 and the total number of educated women from 400,000 to 2,460,000. Thus, the total number of educated men and women in the labor market will be 6,670,000 by 1985. It is well to emphasize the importance of increasing enrollment in primary schools between the years 1975 and 1990 in order to ensure expanding enrollment in secondary, higher, and technical education between 1985 and 2000.

Supply of Labor

The labor market equilibrium will be determined by comparing labor supply (economically-active population available on the labor market by 1985) and labor demand (jobs offered in the different sectors of activity).

1. Economically-active population: Table 1 shows the distribution of the economically-active population under the various assumptions about urbanization.

Table 1

Urban economically-active population by 1985:					
U <sub>1</sub>	Urban Increase:	5.45%	U <sub>2</sub>	Urban Increase:	5%
	15 to 64 years	6,070,000		5,560,000	
Rural economically-active population:					
U <sub>1</sub>	Rural Increase:	1.33%	U <sub>2</sub>	Rural Increase:	1.7%
	15 to 64 years	6,872,000		7,302,000	

2. Supply of labor (economically-active population available in 1985): Economically-active people who are neither students nor military personnel constitute the potential economically-active population. Variable rates of availability will be applied to this population according to sex, age, and urban or rural residence.

Strong assumption about the rural exodus: (U<sub>1</sub>). Available urban economically active population:

rural population growth: 1.33%  
urban population growth: 5.45%

Using this assumption, the available economically-active urban population in 1985 would be: 2,500,000 men and 750,000 women, a total of 3,280,000 available economically-active persons.

Weak assumption about the rural exodus: (U<sub>2</sub>). Available urban economically-active population:

rural growth: 1.7%  
urban growth: 5.0%



The available rural economically-active population is distributed as follows: 2,266,000 men and 726,000 women, a total of 2,992,000 economically-active people in the urban areas.

Strong assumption about the rural exodus ( $U_1$ ). Available economically-active rural population: there will be an available economically-active population of 3,120,000 men and 1,730,000 women, a total of 4,850,000 economically-active people available in rural areas.

Weak assumption about the rural exodus ( $U_2$ ). Available rural economically-active population: there will be an available economically-active population of 3,350,000 men and 1,860,000 women, a total of 5,210,000 economically-active people in rural areas.

Demand for Nonagricultural Labor

The labor supply, as it has just been determined for the urban population, should be compared with the availability of jobs in industry, commerce, services, and government in order to project levels of urban unemployment, with emigration as an adjustment item.

1. Fundamental data: Three major groups of employers can be singled out: Group I--Manufacturing, construction, and public works; Group II--Commerce and services; and Group III--Government.

2. Two assumptions will be presented: In Group I:  $H_1$  Optimistic assumption: Stability of the handicraft industry;  $H_2$  Pessimistic assumption: Decline of the handicraft industry. In Group II:  $H_1$  Average growth of productivity between 1.5% and 2%;  $H_2$  Average growth of productivity between .25% and .75%.

3. Results: Nonagricultural Employment, 1985

Table 2

	H <sub>1</sub>	H <sub>2</sub>
Group I .....	914,700	800,700
Group II .....	994,000	803,900
Group III .....	372,000	372,000
Total .....	<u>2,280,700</u>	<u>1,976,600</u>

These results can be compared with the total number of nonagricultural jobs in 1964, amounting to 1,227,000. Under assumption  $H_1$ , there would be a three percent increase in nonagricultural jobs annually. There would be a 2.25 percent annual increase under assumption  $H_2$ .

At the end of the period, the total number of nonfarm jobs available under assumption  $H_1$  would be 16 percent higher than under assumption  $H_2$ . Under assumption  $U_1$  (rapid urbanization), the number of nonagricultural jobs available to the rural population would rise to 610,000, and under assumption  $U_2$  (less rapid urbanization) to 650,000.

Combining different pairs of assumptions we find the number of nonagricultural jobs available to the urban population in 1985:

Table 3

Assumptions .....	$U_1H_1$	$U_2H_1$	$U_1H_2$	$U_2H_2$
Jobs .....	1,670,000	1,630,000	1,370,000	1,330,000

Assuming that the relative number of urban agricultural jobs will remain constant between 1960 and 1985, the number of agricultural jobs available to the urban population would be 120,000 under assumption  $U_1$  and 130,000 under assumption  $U_2$ .

### Conclusions

If the extreme assumptions  $U_1H_1$  and  $U_2H_2$  are crossed, the number of unemployed will be 1,240,000 and 1,780,000, respectively, assuming a growth of 3.5 percent in the economy. In 1964, the total number of nonagricultural jobs was 1,230,000 and the educated population totaled 1,370,000. In contrast, by 1985 the number of educated people will be 6,670,000 and the number of nonagricultural jobs will be only 2,280,000.

The expansion of secondary, technical and higher education, as well as of the military service, would reduce the supply of labor in 1985 by lowering the labor force participation rate of young people. Lowering the retirement age from 64 to 55 years will affect only seven percent of the economically-active population. A restrictive policy on the employment of women would be difficult, for the number of educated women will have risen from 400,000 to 2,460,000.

On the basis of the assumption of a 3.5 percent growth in the economy, it will be difficult to improve the standard of living in the countryside and consequently difficult to curb the rural exodus. In any case, the role of national promotion in settling the rural population is not negligible. Finally, an emigration policy for filling jobs offered in Western European countries might be considered as a partial solution to unemployment.

## MANPOWER PLANNING IN PAKISTAN UNDER THE THIRD FIVE-YEAR PLAN

Mohamed A. Syed

Established by a free vote of its citizenry on August 14, 1947, Pakistan covers an area of 365,529 miles. Its present population is estimated at 110 million persons with a labor force of 30 million.

The heavy dependence of Pakistan upon agriculture is shown by the fact that about 25 million persons are engaged in agriculture and only 8 million persons in nonagricultural sectors. Of this 8 million persons, it is estimated that more than 3.8 million people are actively employed in private and public sectors. This is not to say that all of the remaining 4.2 million persons are unemployed, since underemployment is heavy.

Rapid economic and industrial development has created the problem of skilled manpower shortages which must be met in the shortest possible time. Industrial establishments have helped considerably through on-the-job training. Much remains to be done, however, and a great many objectives are yet to be achieved in various sectors of the economy.

For the purposes of planning, a Planning Commission has been established under the leadership of the President, F.M. Ayub Khan. All ministries are represented by a planning cell supported by a statistical unit. The plans of all the ministries are centrally consolidated, coordinated, and implemented by the Planning Commission which sanctions the necessary funds for the plans passed and approved by it. Collection and preparation of manpower statistical data is the responsibility of the national employment exchange services under the control of the Provincial Ministry of Labor.

### Manpower Planning

In the sphere of planning we are faced with many difficulties. The development of manpower planning and budgeting has been far too slow and has resulted in many shortages of labor and inadequate coordination between manpower requirements on the one hand and education and training programs on the other. The labor market itself suffers from many imperfections. In many cases the services of skilled persons are not utilized where they are most urgently required, and skilled labor often does not receive its scarcity value.

There has been tremendous growth in our economy during 1950-1960, but deterioration in the employment situation could not be avoided due to a rapid growth in population and a great influx of refugees from India. The flow of labor from rural to urban areas has caused great unemployment in cities and towns.

Successive manpower surveys and the 1961 population census have shown a high degree of disguised and potential underemployment in agriculture, traditional manufacturing, construction, petty trades, and services as indicated by the low-level productivity of labor in these trades. It is difficult to measure the real magnitude of unemployment, but the terminal year, 1964, of the Second Plan showed that at least 20 percent of the labor force was not used for any productive purpose during the year.

After 1960, the economic growth of the country arrested the trend of increasing labor wastage but did not diminish the level of unemployment, although it did absorb increases in the labor force. About 1.6 million jobs were created in the nonagricultural sector and a similar number of persons employed in the agricultural and rural works program sectors.

It is estimated that the increase in the labor force during the Third Five-Year Plan will be about 4.2 million persons. Against this increase in the labor force, it is estimated that 5.5 million new jobs will be created in the following sectors during 1965-1970.

Table 1

Agriculture .....	2.5 million
Manufacturing .....	.95 million
Construction .....	.65 million
Trades and services .....	1.40 million
Total .....	<u>5.5 million</u>

In the field of accountancy, commerce and banking, no figures of requirements are as yet available, while the estimated output of schools is 2,800 diploma-holders. Total requirements of diploma and certificate holders in engineering are estimated to be at 330,000, as against the output of 125,000 persons. These estimates include the output of only regular training institutions. The institutes of WAPDA, the railways workshops, the Karachi shipyards, and the civil aviation of PIA and broadcasting have their own training programs.

Through a special study undertaken by the Planning Commission, it has been revealed that technical personnel generally lack practical training and field work, knowledge of up-to-date production techniques, and knowledge of labor problems. Accordingly, the following measures to improve the quality and quantity of skilled manpower are suggested by the Planning Commission: (1) more emphasis on practical training and field work; (2) provision of modern laboratories for research; (3) systematic on-the-job and in-service training; (4) training of more technical teachers; (5) yearly refresher courses; and (6) better wages, terms, and conditions of service for skilled manpower.



In order to have the necessary skilled manpower for the Third Plan, the following steps have been taken in the field of technical education: the present annual intake of engineering colleges is 1,630. The object is to increase it to 3,300 per year and graduate 6,000 engineers a year by 1970. For this purpose, the engineering universities at Dacca and Lahore will be developed for the promotion of post-graduate studies and research. New engineering colleges will be opened at Khulna, Rajshahi, Chittagong, and Hyderabad, and engineering colleges at Karachi and Peshawar will be further expanded.

The present annual capacity of polytechnic and training institutions is 4,100. This capacity will be increased to 14,000. In these institutions, greater emphasis will be laid on the practical training. Various industrial units will allow their workshops to be used as training facilities.

Commercial institutions such as banking, insurance, and other private industrial concerns have developed rapidly and demand large numbers of qualified typists, stenographers, accountants, etc. Subsequently, training facilities in these occupations have been provided by the Government.

The present annual intake of our education department's vocational schools is 8,300. This will be increased to 50,000 per year. The objective is to have a total output of 110,000 persons per year. In addition, skilled craftsmen will be educated by training institutes of the labor department and various other private and public industrial concerns.

The plan provides evening-class instruction programs at polytechniques, training centres, vocational schools, and commercial institutes. In most of the secondary schools, workshops will be opened. Mobile workshops will be sent to rural areas to improve the skill of the rural craftsmen using traditional methods. During the plan, emphasis will be placed on improving and expanding facilities for teaching science and technology. Foreign training facilities and scholarships will also be utilized.

To achieve these goals, it is necessary to gear educational patterns to the needs of our economy and industry. For this purpose, general education up to the 6th class is of utmost importance and may be made compulsory for every person. From the 7th class up to the 10th, most of the middle and high schools need to be converted to vocational education and should be provided with the necessary equipment for training in smithy, electricity, carpentry, and masonry, etc. Admission to these trades may be made subject to aptitude tests and no one should go according to his own choice without basic aptitude.

Admission to medical, science, and engineering colleges is subject to the passing of matric and FSC examinations in the very high first divisions. I feel that this standard should be applied for admission to colleges in art subjects also, for this will avoid educating hundreds of thousands of boys and girls in subjects which are not wanted in the country and which result in losses to them and to their parents. Much of this "mid-education" is due to the lack of vocational guidance facilities.

Establishment surveys conducted by the employment exchanges have proved to be a good index of employment trends in various spheres of the industrial economy and at present are used as a basis for vocational guidance and employment counseling of educated and partially educated job-seekers.

These employment counseling and vocational guidance programs should be extended to schools and colleges also. Moreover, I feel that the consolidated summaries of establishment manpower surveys may be circulated to all the middle and high schools, and colleges. Close cooperation between the employment service and the board of secondary education seems essential.

To assist job-seekers, the number of employment exchanges will be raised from 21 to 42 in 1970. There will be 10 university placement bureaus for the placement of college students in part-time jobs during the vacations. A program of workers' education will be initiated. An institute for providing industrial and occupational health facilities will be opened. A program for provision of insurance in case of injury, maternity, and sickness will be set up. Other programs will include the regulation and protection of workers' wages and earnings and an industrial workers' special housing corporation.

### Family Planning

The greatest and most difficult problem to be faced by Pakistan is the population explosion. At present, population is increasing at a rate of 2.6 percent per year-- much higher than desirable. The danger of the population increase has been realized and is being solved in the best possible way through the process of family planning. A separate division for family planning has been created to insure expeditious implementation of programs in this field, and for the Third Plan a sum of Rs 280 million has been allocated.

The objective of the program is to reduce the birth rate of 55 per thousand to 45 per thousand. To achieve this target, 20 million couples which include almost all the women in the reproduction ages will be induced to practice family planning in one way or another.

All the cities and towns have been divided into various family-planning sectors with a supervisory staff which surveys each house, inducing women with two or more children to have IUD insertions. The response in cities and towns is very encouraging. Better results and a reduction in population growth are expected.

### Conclusion

Pakistan has recognized her manpower planning problem. Manpower survey sections at each employment exchange and at the headquarters have been permanently established. At six-month intervals an establishment survey by occupation is conducted. From these surveys data of available, surplus, and deficient manpower

figures are collected and consolidated according to occupational titles. This information provides figures on employment levels six months hence and for the present one. At the same time, a survey of all commercial, technical, and vocational institutions is made, as is an assessment of existing training facilities in various trades. Thus, we are in a position to forecast the requirements of different categories of skilled manpower.

Under the essential personnel registration regulations, 107 categories of technicians, engineers, and doctors are obliged to have their names registered at the nearest employment exchange if they are not in government service. Thus, the establishment survey, the survey of technical and other institutions, and the compulsory registration of essential personnel keeps the government, to a large extent, fully informed about the availability and the deficiency of skilled manpower and necessary action is taken accordingly. The registration of job-seekers at the offices of national employment provides information of existing unemployment by category. Periodically, employment offices submit special reports with respect to all existing and future economic activities in the areas of their respective jurisdictions.

## THE LABOR MARKET IN SENEGAL SINCE NATIONAL INDEPENDENCE

Samba Thierno Bâ and Galandou Fall

The increase in unemployment in Senegal after national independence led the Senegalese Government to conduct a survey of the manpower situation. A census of the unemployed was taken in 1961 by the National Labor Service, in cooperation with the Ministry of Technical Education, and with the assistance of an expert from the International Labour Office. The findings of this survey were as follows:

- (1) The number of unemployed was approximately 12,000, or 10 percent of the total number of wage earners at that time.
- (2) One-half of the unemployed (6,000) were concentrated in Dakar and in the Cape Verde region.
- (3) One-half of the unemployed, according to the census in Cape Verde, had come from the interior of Senegal and from the States of former French West Africa.
- (4) One-half of those without work were unemployed in the European sense of the word; that is to say, they were workers who at some time previously had obtained a work contract and afterward lost their paid employment and, from that time on, were unable to find any other employment, whether paid or not.

The Ministry of Technical and Supervisory Personnel Training made a second survey, in conjunction with the National Labor Service, on Senegal's skilled labor requirements. We list some of its conclusions:

- (1) According to the National Development Plan at the time, it was established that 14,000 positions in public and private sectors would be available to Senegalese skilled workers, white-collar workers, and middle-level and high-level administrative personnel.
- (2) During the same period, 2,900 positions for craftsmen were to be filled.
- (3) Africanization of jobs held by Europeans in Senegal in 1961 would result in the progressive replacement of the foreigners over an undetermined period of time in 500 top executive positions and 3,500 administrative and technical positions.
- (4) Moreover, once these positions or jobs are filled by qualified Senegalese according to the age pyramid of wage earners, it will be necessary to take care of the additional manpower resulting annually from the increase in the population, even after allowing for retirements. The rate of increase was around 2.6 percent in 1961.

It should be emphasized that currently unemployed workers do not have the skills for which the needs outlined above have been ascertained. It is for this reason



that unemployed surplus workers in certain sectors have been retrained for jobs where the demand has not been met. For instance, carpenters have been re-trained as boat builders. Thus, a double need appears:

- (1) need for a policy to retrain unemployed workers; and
- (2) need for a vocational training policy.

### Evolution of Unemployment

The statistics of the National Labor Service give an idea of the unemployment situation during the years 1964 and 1965.

Table 1

Activities	UNEMPLOYED						Total
	Senegalese			Non-Senegalese			
	Men	Women	Total	Men	Women	Total	
Business and white-collar workers ...	2,109	164	2,273	392	332	724	2,997
Construction and public works .....	4,297	15	4,312	263	4	267	4,579
Miscellaneous industries .....	1,862	265	2,127	211	13	224	2,351
Domestics .....	455	271	726	185	43	228	954
Unskilled labor.....	3,360	---	3,360	908	---	908	4,268
	<u>12,083</u>	<u>715</u>	<u>12,798</u>	<u>1,959</u>	<u>392</u>	<u>2,351</u>	<u>15,149</u>

With the same period, the placement offices of the National Labor Service placed a total of 3,915 formerly unemployed persons, distributed among the various sectors, as follows:

- Industry and commerce: 1,580 as against 2,997 unemployed registered at SMO (the National Labor Service).
- Construction and public works: 500 as against 4,579 unemployed registered at SMO.
- Miscellaneous industries: 900 as against 2,351 unemployed registered at SMO.
- Domestics: 400 as against 954 unemployed registered at SMO.
- Unskilled workers: 535 as against 4,268 unemployed registered at SMO.

### Causes of Unemployment

After giving these data, it is advisable to note the causes of unemployment. Certain causes have been clearly shown above: the rural exodus to Dakar; the

absence of large-scale construction projects; the population explosion; and the lack of job training.

But we cannot ignore more fundamental causes. As in all underdeveloped countries, there is a great imbalance between the demographic structure and the level of development, which, in the industrial and urban areas even more than in the rural areas, determines the number and types of jobs to be filled. Structural disruptions in Senegal today are destroying what yesterday appeared to be a relative balance among the primary (agriculture), secondary (industry), and tertiary (commerce and services) sectors. This unstable balance was part of a primary goods exporting economy, which measures taken in the course of the first four-year development plan aimed to eliminate.

### Government Participation in the Fight Against Unemployment

Our Government knows that the essential factor in the struggle against unemployment continues to be public or private investment using domestic funds and foreign aid. For this reason, its investment policy is motivated by a desire to create new jobs even if that does not constitute the essential inspiration of the second Senegalese development plan.

Since the struggle against unemployment requires funds disproportionate to our present capabilities, the Senegalese Government pursues multiple policies of creating new employment opportunities through a combination of private investments and foreign aid, regionalization of the implementation of the plan, and retention in world markets of price supports for the exports of developing countries. That is why we have legislative and regulatory machinery that permits the Government to lessen immediately the most baneful effects of our national curse.

Several measures have been taken in pursuit of a high employment level:

(1) The necessity of giving the National Labor Service an absolute monopoly in matters of placement.

Law No. 61-34 of June 15, 1961, establishing a Senegalese Labor Code, transformed the Labor Bureau into a public service directly responsible to the Ministry of Labor and Social Security. Article 199 of this new Labor Code gives the employment service a general monopoly as a placement and unemployment bureau, a monopoly which extends to both the public and private sectors when workers coming under the Labor Code are concerned. Decree No. 620146 of April 11, 1962, organizing the Labor Service, and the law of July 19, 1965, amending Article 199 of the Labor Code to establish an administrative authorization as a requisite for hiring workers, were issued on the basis of these precedents.

The policy of protection of Senegalese labor is all the more justified since surveys taken in Senegal have revealed that 12,000 or 19 percent of the paid jobs in the country are held by foreigners. Table 2 indicates the role of foreigners in major sectors.

Table 2

<u>Branches of Activity</u>	<u>Senegalese</u>	<u>Miscellaneous Foreigners</u>	<u>Percentage of Foreigners</u>
Agriculture, forestry .....	2,308	212	9
Mining and quarries .....	1,514	485	32
Industry .....	12,246	2,183	18
Construction .....	13,320	1,207	9
Electricity, gas, water .....	1,141	277	24
Commerce, banking .....	10,876	4,313	40
Transportation .....	10,485	1,384	13
Services .....	8,222	1,830	22
Miscellaneous activities .....	<u>1,566</u>	<u>66</u>	<u>4</u>
Totals .....	61,678	11,957	19

(2) Prohibition against unreported work and moonlighting

A law was passed on June 13, 1962, prohibiting unreported work and moonlighting. This was an anti-unemployment law designed to make the existing job opportunities available to as many people as possible.

(3) Registration of wage-earners in a single series

This regulation makes it possible to follow each worker throughout his career by reports of changes of status recorded and computed by the Labor Statistics Service. By this means, it will be possible to "individualize" occupational training efforts made by the Government under the development plan; that is, to adapt training to the experience, level of education, and aptitudes of each worker.

(4) The creation of a pilot-center for accelerated training

The purpose of this training center, which is under the direction of the Ministry of Technical and Supervisory Personnel Training, is to provide accelerated training of unskilled workers, with a view to enabling them to acquire the equivalent of a C.A.P. (certificate of vocational aptitude), thereby making it possible to use them on the labor market quickly.

(5) The establishment of training workshops

These workshops have a triple purpose: to employ youth immediately by using their skills for constructive purposes in keeping with the needs of economic development; to give them occupational training, thereby enabling them to play a more useful role; to cultivate in them a liking for work--especially manual labor--a sense of discipline, and a feeling of belonging and being responsible to the community.

Conclusion

In light of these particulars, it is easy to see that the distressing problem of unemployment in Senegal is being examined thoroughly by the Government from these four complementary standpoints:

(1) Stimulation of the employment market by encouraging private investments and by launching public works and housing construction programs.

(2) A full employment policy, related to the development of rural areas and to an extension of the industrial conversion processes.

(3) A policy of job qualification and training in conjunction with retraining surplus manpower in certain areas and training to improve skills of employed workers.

(4) Policy of wages, living conditions, and standards.

In order to succeed in all these endeavors, the Senegalese Government has not neglected the urgent necessities of achieving better synchronization between the various instruction levels, in particular of integrating technical education, and of providing improved labor and manpower services.

It is impossible to imagine an employment policy in Senegal capable of coping with current problems unless it is formulated in collaboration with all of the services concerned, especially those in the field of education, which are responsible not only for public education but also for the supervision of education and training in the private industrial sector.

# MANPOWER AND EMPLOYMENT SERVICE IN THE SUDAN

Mahgoub Beshir

## Introduction

The Sudan, the largest country in Africa, is bordered to the north by the United Arab Republic, to the east by the Red Sea and Ethiopia, to the south by Uganda, Kenya, and the Congo, and to the west by Chad. The Sudan was under British-Egyptian rule until 1956 when it gained full independence. Like many other colonized countries, the Sudan faced many obstacles to development but is now making good progress. The country is ruled by a democratic, parliamentary government, freely elected by the people, and is establishing good relations with all nations.

The Sudan is an agricultural country but, as few innovations were allowed during the colonial period, traditional agricultural methods predominate. Modern systems are now replacing the old and agricultural activities are progressing satisfactorily. More than 80 percent of the 4 million engaged in economic activities are employed in agriculture. Cotton is the main product and represents 60 percent of the value of exports of the country. Seasonal workers employed in cotton-picking are recruited from rural areas to work in the Gezira Scheme (the largest in the country and shared between Government and farmers) and also the smaller, privately-owned schemes.

## Population

The Sudan has a population of 13 million of which less than 10 percent live in urban areas. The rest are rural and nomadic people who have, of late, begun to walk into the city to seek employment. Untrained and unskilled, they now create a burdensome problem for the Government. If population movement is not carefully and correctly managed we will, no doubt, find some parts of the country completely abandoned because of the migration of people to the city in search of employment. It is, therefore, the task of the Department of Labor to handle this matter very carefully.

The Department of Labor has, as yet, only seven employment exchanges for the whole country, of which the Khartoum Employment Exchange was the first to function in December 1955. These seven employment exchanges shoulder the responsibility for the registration and placement of those unemployed persons who voluntarily visit them. The records kept show only the numbers registered and those employed, and since these are the records for the seven exchange offices only, they do not provide figures for the entire country. It is for this reason that a complete labor force survey covering the whole of the country is essential for the proper management of the Nation's manpower.

### Present System

The ordinance presently in force demands that every unemployed Sudanese who reports to the employment exchange be registered and issued a certificate which he is required to hand to his future employer, who in turn must fill in the appropriate columns, sign and return it to the issuing office, if the employment of that person is to last for more than one month. No employer is allowed to engage any unemployed person who does not possess a registration certificate. Employers are requested, though not required, to report vacancies to the employment office. Nominees are then selected, according to the requirements of the employer, and directed to him to select the suitable person(s). Instructions are given to Government establishments to report all their vacancies to the exchange. Private establishments cooperate in this respect to some extent. It is hoped that amendments will be made to the existing ordinance requiring all employers to report vacancies to the employment exchange so that every person may get a fair chance for employment, rather than leaving it to the discretion of the employer to hire whomever he wishes, giving no consideration to priority of registration. In many cases the employer engages a person before he is registered, and then sends him along to the employment office to obtain that certificate. At the exchange, persons who possess the very same qualifications, sometimes better, lose their chance because that employer is not ordered by law to report his vacancies. Hence, the importance of the suggested amendments to the ordinance. One of the weak points in the present system of registration is the absence of trained interviewers and counselors at the employment exchange. The unemployed person may demand registration under a certain trade for which he is not qualified; e.g., an assistant carpenter might demand registration as a carpenter and the clerk at the counter has no choice but to register him as such. When later he applies for employment, or when he is nominated to an employer, it is revealed that the man is really not a carpenter but an assistant. For this reason employers are often discouraged from reporting further vacancies. Based on such cases, the employer finds a reason for not using the employment exchange and the harmful favoritism finds its way into the field of employment. Many qualified persons remain unemployed simply because they have no relatives to advise them of the existence of vacancies and recommend them to that establishment.

The registration clerk does, in many cases, rely on testimonials presented to him by the person demanding registration and, on the basis of those testimonials, he nominates the man for the job. It frequently happens that the employer discovers that the man nominated for the job is not up to standard and that the testimonial is an exaggerated one issued by a previous employer who wanted to get rid of the man.

### Manpower Surveys

We do not at present have proper manpower surveys for the entire country. Accurate manpower information would be of great benefit to all Government establishments, especially education authorities and the Ministry of Finance.

Because of the high costs of these surveys and because of the very limited financial means presently available, it is difficult to conduct surveys. A possible solution would be to ask the existing Department of Statistics, whose main job is conducting the Population Census, to conduct a special survey on manpower on behalf of the Department of Labor.

The Sudan, which has long been an agricultural country, is now trying to modernize its agricultural methods. The change will, no doubt, cause unemployment among farm workers whose jobs are even now being taken by machines and who have already marched into the city. These persons, who have no trade other than farm work and who are all almost illiterate, need to be taken care of by the Government. A solution has to be found for the Sudan economy cannot continue to be as dominated by agriculture as it has been.

The Sudan now has taken the first step towards industrialization. We have two textile factories which consume a great part of our short-staple cotton in manufacturing cloth for local needs and for export to other countries. Long-staple cotton, one of the best varieties grown in the world, is exported because it earns a large amount of hard foreign currency. The two existing factories, installed in the capital, employ nearly 9,000 workers, and it is hoped that this figure will increase with the establishment of more textile factories which would satisfy all internal requirements and allow exportation. There are now in the Sudan many other small industries in operation--sugar, brewing, and fruit canning--but we cannot yet claim that the Sudan has converted from an agricultural to an industrial country.

The Sudan desperately needs expatriate technicians in the various fields of industry, and these we import from more highly-developed countries. They come to the Sudan for the purpose of running newly-established industries and, at the same time, to train Sudanese understudies.

The Department of Labor possesses vocational training centers where intermediate-age boys, who were unable to enroll in secondary schools, receive instruction in various trades and are employed by Government and private employers as assistants. Until quite recently, this type of training was not acceptable to these school boys who thought of nothing except white-collar work. Having at last realized that this type of work (white-collar) requires qualifications higher than they possess, and due to the wide publicity and inducements to enter vocational training centers, many have requested enlistment. Management, however, could accept only limited numbers for fear of training more than the present needs of the country.

Since the Sudan is becoming an industrial country, it is important to plan and prepare for the training of the required number of qualified workers. It would be desirable for the Department of Labor to play a role in achieving this goal. This would provide an opportunity for the Department to create activity in the employment exchange by supplying the required workers, and would win the good faith of both workers and employers. As manpower needs in manufacturing are expected

to increase, due consideration should be given to creating interest in industry among school students by introducing industrial training in primary and secondary schools. For this purpose, the Ministry of Education should be approached about planning the suggested scheme.

The Ministry of Education already possesses and runs a technical institute from which students graduate as engineers (mechanical, construction, electrical, etc.) and these do find employment with Government and private establishments. Since the country will need more of them for its developing industry, however, due consideration will have to be given to planning for future requirements. There are other Government and private establishments conducting technical training for young men who, after the successful completion of their training, join the service of the establishment providing that training.

Technical education is now assuming great importance in the Sudan since it has become evident that this type of education is of vital importance for meeting present and future needs for skilled men. Below are the technical education stages in the Sudan, giving statistical data on the number of schools and enrollment for each stage.

Table 1

Stage	Year	Number of schools	Enrollment
Technical Intermediate schools .....	1955/56	4	680
	1958/59	12	1,390
	1961/62	17	2,016
Post Intermediate schools .....	1955/56	-	-
	1958/59	4	225
	1961/62	6	432
Technical secondary schools .....	1955/56	1	69
	1958/59	1	322
	1961/62	1	370

### Senior Trade School

A senior trade school was established in 1960. Students spend two years specializing in courses such as plumbing, machine shop engineering, and auto engineering. A modern building with up-to-date equipment has been established with the assistance of the Agency for International Development. This school is expected to play a leading part in the training of technicians.



### The Khartoum Technical Institute

This Institute consists of schools of engineering, commerce, fine and applied art.

From the foregoing information it is apparent that the Ministry of Education, having realized the great importance of technical education, is now heading toward the goal, and it is sincerely hoped that these efforts will be strengthened to help in building up the industry of the Sudan.

## MANPOWER PROBLEMS IN SUDAN

Osman M. Habib

### Introduction

The Sudan was under British rule for over 50 years and became an independent country in January, 1956. During the period of colonial rule the country was only slightly developed. It was an agricultural economy with little industry. Education was kept at a shamefully limited scale, only providing the limited number of people required to keep the office machinery of the Government and private enterprise (mostly British) going. This situation applied to all sorts of education--academic and vocational. Moreover, the country was left in a poor financial condition. At independence the country found itself with no money, no industry, and no education, conditions which make it difficult to establish a government in a country of one million square miles with about 11 million population. In addition, the country also had limited means of transportation and communication. Added to the foregoing is the fact that we were required to pay high compensation to the British staff who were working in the Sudan Government for termination of their contracts of service.

### The Economic Plan

The economic plan which was drawn in the first days of independence sought to encourage capital investment in industry and to invite foreign capital for this purpose. The Government has also undertaken an active part in establishing some industries. The overall purpose of the scheme was to make use of the available raw materials, to curtail imports to a minimum so as to save hard currency, and to create jobs for the Sudanese. The response of private capital, foreign investment, and the Government has been very encouraging. Quite a number of industrial establishments have been started, in several different fields of industry.

At the beginning of the period of renaissance, people began, in large numbers, to move from the rural areas to the urban areas where new industries were being established. The reasons for this migration were to change living conditions, to earn more money, to enjoy the urban life, and to learn new skills. These are natural human desires experienced by people in all developing nations. Few of these migrants had skills, and many lacked basic education.

### The Education Plan

Great emphasis was placed on education which was run for the most part by the Government. A large number of schools opened, especially in rural areas where education was scarce. Education was free at lower levels and gradually up to the university level. Technical education was set up in different occupational

fields. Vocational training was also established. On-the-job training by the Government in different public works agencies and in the Government-owned industries was rapidly introduced. The contribution of private enterprise to this training was also excellent. At the same time, large numbers of Sudanese were sent abroad to gain further academic and technical higher education. Others were sent abroad for on-the-job training. In this way the Sudan was able to create, in a very short time, a supply of manpower to meet the needs of the developing economy.

### The Renaissance Period

Industries went through a period of renaissance during the initial days of their establishment and before native manpower was available to take an active part in the running of these industries. To staff the new industries it was necessary to recruit skilled labor from abroad. But aliens with high skills usually demand very high salaries and a number of other perquisites such as housing, transportation, long vacations with free air tickets to their homes and back. Moreover, an alien is usually allowed to transfer a certain proportion of his salary to his home and thereby uses the hard currency which the country needs.

### Recruitment of Aliens

Hard and fast rules were issued to govern the recruitment of aliens. In order that the alien be of maximum use, the following criteria were to be observed:

1. The alien should be well-qualified to meet the requirements of the job. Proper scrutiny of his testimonials and career should be made before signing any contract.
2. He should speak Arabic or English, and preferably both.
3. He should undertake to train one or more Sudanese to assume his job responsibilities at the expiration date of his contract.
4. He should sign a contract of service showing all the terms of service governing his employment.

No employer would be allowed to recruit an alien unless he met the above criteria and, above all, the Commissioner of Labor would certify that there were no Sudanese who could do the job.

The importation of aliens greatly aided the start of industries. Some of the aliens were very cooperative and faithful and have trained a good deal of native manpower. Others did not do so because they were certain that when the domestic artisans learned their jobs there would be no hope for extending their contracts and they would have to leave the country. This they did not want and,

consequently, they began to treat the Sudanese studying under them badly so that they would leave the service before the alien's contract was over. Therefore, a new Sudanese had to be picked to undergo training with that alien who was given an extension in his contract. Employers were of the opinion that their industry would not be well run if the aliens went away, and they often persuaded Sudanese to leave their employ and fought for securing extensions for aliens.

This situation made the job of the Department of Labor very difficult. The Parliament was pressing the Department of Labor to place Sudanese in critical posts quickly in order to satisfy the constituents who thought that there was no need for such aliens. This was quite a task during the first years of independence but now the situation is much better because most of these posts, whether in the public or private sectors, have been Sudanized.

### Labor Mobility

Because of transportation difficulties industry was centralized in the big cities, especially Khartoum, the capital. This situation caused large-scale migration from the rural areas to the cities. People came in great numbers and because of the urgent need for manpower were able to find jobs or on-the-job training to acquire the skills that would enable them to fit easily into the economy.

At first job openings were plentiful and, because of this, labor mobility from one employer to another and from industry to industry was high. This high mobility was caused by the scarcity of qualified manpower, and employers gave incentives to attract skilled workers to their employ, particularly high wages. Now that the skills are found in good numbers, the mobility from one industry to another and from one employer to another is very low.

### Migration

A number of Sudanese skilled artisans emigrated to other neighboring countries such as Saudi Arabia, Kuwait, and Libya where they were badly needed and, consequently, received high wages. Teachers from the Sudan have emigrated in large numbers to the countries mentioned above, as well as to other Arabian countries. There are also many unskilled Sudanese who are working in the United Arab Republic and Ethiopia.

### Agricultural Workers

As mentioned earlier, most of the labor force in the Sudan is engaged in agriculture. In the past, entire families worked on the farm but, with the introduction of new machines, less labor is needed. Consequently, newer generations move to urban areas looking for jobs in manufacturing, construction, transport services, and the military. Some of these workers come to the urban areas to work three

or four months during the slack season in agriculture between harvest and planting, and then move back to the rural areas for farm work. There are other agricultural workers who work year-round on the farm and never come to the urban areas. Agricultural workers who work on farms irrigated by rains move in large numbers to the urban areas in seasons when the rainfall is not adequate.

### Cotton Picking

The Sudan is the second largest producer of long-staple cotton. It was found that machine picking spoils it and, therefore, such cotton must be handpicked. In spite of the high density of population in the area in which this type of cotton is grown, there is a shortage of pickers every year. The reason for this may be that the job of picking is a hard one and pay is not commensurate with the task done. It was necessary for the Government, the Gezira Board (the semi-Government organization running the Agricultural Scheme), and the farmers to take the initiative in annually moving a big labor force from the western part of the country to the Gezira Scheme in the middle of the country. These cottonpickers move back to their home places as soon as the job is over.

### Labor Laws

There is no social security or unemployment insurance in the Sudan and, therefore, labor has to be protected by a number of labor laws. I will describe each of these laws briefly:

The Workshops and Factories Ordinance governs safety precautions and first aid requirements to be provided by the owners of the establishments and are subject to inspection by the Department of Labor.

The Employers and Employed Persons Ordinance covers the basic conditions of service such as the hours of work, overtime payments, basis of employment-- monthly salary, weekly or daily wage, length of notice of termination of service, sick and annual leave, gratuities, and so on.

The Workmen's Compensation Ordinance deals with accidents sustained during the course of employment and contains detailed provisions on the various disabilities resulting from industrial accidents. It regulates the periodical payments to a worker who is unable to perform his duties because of accidents.

The Trade Union Ordinance concerns the formation and functioning of trade unions. It also deals with work stoppages, strikes, and union contracts.

The Trade Dispute Act regulates the relation between the employers and workers who have no trade union. It is the basis for collective bargaining.

The issuance of these laws and a few others was necessary because, in a developing country where industry is just beginning, labor stability is necessary. Therefore, these laws are much concerned with this fact and, apparently, the qualifying factor in the laws governing the terms of service is the length of tenure.

The Department of Labor which is entrusted with enforcement of the labor laws has a team of inspectors whose job is the creation of good industrial relations between the employers and workers. The goal of industrial peace towards which this department is working appears nearly to be achieved.

## THAILAND'S EMPLOYMENT POLICY, 1966-1971

Prom Panitchpakdi

The Second Five-Year National Economic and Social Development Plan of Thailand (1967-1971) recognizes that manpower planning has to be closely integrated with national development planning at all stages, because human resources constitute not only an important factor of production but also a moving force of economic transformation. Thus, the plan attaches considerable importance to manpower planning and aims at development and more efficient utilization of Thai manpower. In order to achieve these objectives, the plan has a three-fold approach:

1. to generate employment opportunities, at least equivalent to the increase in the labor force;
2. to promote employment in rural areas with a view to relieving underemployment; and
3. to improve the quality of human resources by education, training, and upgrading of skills so as to meet the manpower requirements of present and future programs of economic and social development.

The Second Plan has made a beginning in its attempt to raise the productivity of workers and to provide more gainful employment for unutilized manpower, paving the way for a progressive reduction of underemployment in the near future and toward the goal of full employment in the next 10 or 15 years.

### Labor Force Growth

Estimates of labor force and population magnitudes during the next 15 years are shown in Table 1.

Table 1. SUMMARY OF ESTIMATES FOR POPULATION AND LABOR FORCE  
(In millions)

	<u>1966</u>	<u>1971</u>	<u>1976</u>	<u>1981</u>
Total population .....	33.2	39.2	45.1	51.2
Population aged 15 and over .....	18.0	21.3	25.2	29.8
Labor force aged 15 and over .....	14.8	17.1	20.2	23.8
Percentage of c to b .....	82.2	80.3	--	--
Percentage of c to a .....	44.6	43.6	--	--

The labor force in 1966 represents 82.2 percent of the population aged 15 and over, while it is assumed to be about 80 percent in 1971, 1976, and 1981. The forecast of a decline in the labor force participation rate rests upon an assumption of declining participation by younger age groups as a result of expanding educational opportunities and to some extent in the older age groups due to earlier retirement.

As indicated by Table 1, the labor force will increase by 2.3 million during 1966-71, 3.1 million during 1971-76, and 3.6 million during 1976-81. Even if the birth rate does not decline after 1970 as assumed, there will be no change in the figures on labor force increase up to 1981, for those who constitute the labor force in that year will have already been born in 1966.

### Agricultural Labor Force

The First Plan of Thailand has indicated that the proportion of workers in agriculture should be brought down to 70 percent of the total work force in the next 20 years (i.e., by 1981). Table 2 illustrates the anticipated proportion of workers in agriculture during the next 15 years.

Table 2. WORKERS IN AGRICULTURE  
(In millions)

Year	Percentage of workers in agriculture	Total labor force	Number in	
			Agriculture	Nonagriculture
1966 .....	79.7	14.8	11.8	3.0
1971 .....	75.8	17.1	13.0	4.1
1976 .....	72.8	20.2	14.7	5.5
1981 .....	70.0	23.8	16.7	7.1

The figures in the right-hand column of this table show the number of jobs which must be generated in the nonagricultural sector if the percentage of workers in agriculture is to be brought down to 70 percent by 1981. It also implies a high level of investment to provide new jobs to keep pace with labor force growth. The number of nonagricultural jobs required will be 7.1 million in 1981 as compared to 3.0 million in 1966, which is an increase of over 100 percent.

### Employment Targets

A macrostudy of the employment potential of the plan has been made, based on anticipated gross domestic product of each sector of economic activity. Productiv-



ity changes have been adjusted, for the estimated sizes of agricultural and non-agricultural labor supplies also have been taken into consideration. Based on this approach the increase in employment anticipated during the Second Plan period is shown in Table 3.

Table 3. EMPLOYMENT POTENTIAL, 1966-1971  
(In millions)

Economic Sector	1966	1971	Increase 1966-71
Agriculture, forestry, etc. ....	11.63	12.70	1.07
Manufacturing and mining ....	0.74	1.03	0.29
Construction, electricity, water supply, etc. ....	0.15	0.24	0.09
Transport and communication ....	0.24	0.35	0.11
Trade and commerce ....	1.03	1.39	0.36
Services .....	0.79	1.03	0.24
Total .....	14.58	16.74	2.16

The employment potential of the Second Plan in the public and the private sectors is 2.16 million, which is about the equivalent to the increase in the labor force (2.3 million) after allowing for a small amount of frictional unemployment.

#### Organization of Labor Market

The employment market in Thailand should be organized more efficiently so that job-seekers can be brought into contact with employers as promptly as possible. Geographical mobility of labor can be promoted to eliminate unemployment and ensure better utilization of manpower. For this reason, the employment service operated by the Department of Labor is being expanded to four regions of the country and existing offices will be strengthened.

#### Rural Manpower Program

Because agricultural operations are seasonal in character, it is quite common for some agricultural workers to leave their villages in the slack seasons in search of work, while those who remain in the villages spend their time on low-productivity work. This problem is especially great in Thailand where over three-fourths of the

agricultural workers are engaged in rice production which is highly seasonal. We propose to start a pilot project of Rural Manpower Utilization with the main objective of providing supplementary work for agricultural workers in the slack seasons in one or two regions which suffer chronic underemployment during the off seasons. The works undertaken will be labor-intensive in character, such as small irrigation projects, village roads, well-digging, and cleaning of ponds, and will enhance community development and agricultural development. The workers will be paid at a rate slightly lower than that prevailing in the slack season labor market.

### Full Employment Objective

At present unemployment is not a serious problem in Thailand. According to the Labor Force Survey (July 1963) the percentage of unemployment in all urban areas is 2.3 if we include only persons actively looking for work and 5.4 if we also take persons who are thinking of looking for work. However, we expect that the rate of unemployment will increase, particularly if new entrants to the labor market are not adequately trained to take jobs requiring improved skills and technology. The overriding aim of manpower policy is to achieve full, productive, and freely-chosen employment in the course of the next 15 years by making an all-out effort to develop and utilize manpower resources to the best advantage of individuals and the nation.

## SOME SUGGESTED POLICIES FOR EDUCATIONAL INVESTMENT IN THAILAND

Buasri Thamrong

Thailand is the only country in Southeast Asia that has never experienced colonialism. In 1964 the population of this country was about thirty million, of whom 94 percent were Buddhists. It is expected that at current rates of increase, the population in 1980 will amount to fifty million. At present the literacy rate is approximately 70 percent. Although the Thai comprise an overwhelming majority, there are many minority ethnic groups, some of which play significant roles in the country's social and economic life. The most important minority groups are the Thai-Malay, Thai-Islam, Chinese, and Vietnamese.

Apart from some minority group problems, Thailand is fortunate in not having language and religious difficulties. Most of the Thai are Buddhists and the Bangkok dialect has been adopted as the official spoken and literary language of the country. Some 80-90 percent of the population are engaged in agriculture which provides a substantial proportion of the national income and government revenue. Economically, the Chinese have dominated both foreign and domestic trade whereas the Thai prefer agriculture and government service.

Some economic diversification has occurred recently. Surplus revenues and foreign loans are being used for many enterprises and some encouragement is being given to foreign private capital to exploit and develop minerals and other resources.

Although the economy is growing, several basic economic problems persist; for example, the rapid growth of population, the threat of unemployment, low agricultural and industrial productivity, the high cost of capital, and the increasing need to conserve natural resources. Rural life, though less subject to disorder than urban life, suffers from the disadvantages of low productivity, inadequate water supply, limited educational facilities and medical services, and malnutrition. As a result, rural people are steadily migrating into Bangkok and other cities, causing urban congestion and creating serious difficulties with respect to housing, health, employment, and education. Crime and juvenile delinquency are also increasing. The country is politically stable, although Communist penetration and subversion, especially in the Northeast, has given some cause for concern.

Education, if it is to be effective, must try to cope with the changing conditions described above. Industrialization, for example, points up the need for improved science and vocational, as well as technical, education. Crop diversification indicates the necessity for broader agricultural education and increased research. Education for change, in which students are acquainted with past, present, and possible future changes and their effects on daily living, would also appear to be an essential ingredient in both elementary and secondary education.

Structurally, the basic pattern of Thailand's educational system may be regarded as 7-5-4, i.e., 7 years of elementary education, 5 years of secondary education,

and four years of higher education. Usually four years of primary education are required for all, and the new scheme of national education provides for an additional three years of compulsory education. Decisions about the rate and nature of the extension have been left to the Ministry of Education.

At present there are about 4,500,000 students in the elementary grades of which, unfortunately, only one-ninth are in the upper grades (5-4). Large numbers of students drop out at grade 4 or below. The attrition rate is high mainly because the rapid growth in enrollment has adversely affected the quality of instruction. Several thousand schools are in very poor condition, provision of books and equipment is inadequate, supervisory services and in-service training are insufficient, and a high proportion of teachers are unqualified.

At the secondary level, enrollment data reveal the following significant features:

1. Only a small proportion of students (less than 10 percent) enter secondary school.
2. Of those who enter academic schools, approximately 80 percent complete grade 10 and 20 percent complete grade 12, indicating a major dropout at grade 10.
3. There are large numbers of students in the academic stream as compared with those in the vocational stream.
4. For vocational education there are large numbers of students in the upper level (grades 11-13) as compared with those in the lower level (grades 8-10). Enrollments in secondary education are increasing steadily at a rate of about 10,000 a year, a formidable challenge to the Government to provide necessary schools, teachers, and facilities. Private schools, which at present carry about half the children, are unlikely to be able to keep pace with the growing demand. Despite the encouragingly high qualification of teachers, there are obvious deficiencies in the quality of secondary education. Reasons for this are the shortage of textbooks, instructional materials, and inadequately-equipped laboratories.

Vocational education is the "Cinderella" of the Thai educational system. The declining popularity of the lower vocational schools may be traced to the unenlightened courses of study, the comparatively poor quality of teachers, the scarcity and inadequacy of the equipment, and adverse attitudes of the community to vocational studies. The schools themselves tend to operate in a vacuum--isolated from the dynamic changes which are taking place in the economy.

A recent study on secondary education has indicated that the present number of graduates in secondary education is far below the requirements and, unless expansion of education is made quickly, the country will face a serious shortage of skilled manpower. Personnel shortages are found among nurses, agricultural assistants, technical supervisors and other subprofessional occupations.

As for higher education, there are at present seven universities, financed and controlled by the Government. The total enrollment is about 18,000, and annual output about 4,000 graduates. There seems to be a surplus of graduates in political science, and law and social administration, while at the same time, there is a shortage of engineers, medical doctors, veterinarians, agronomists, and fishery personnel. Also, the need for teachers who are university graduates is very great and urgently requires an expansion of teacher education.

In view of the fact that investment in education for the country must aim at solving current problems and meeting the needs of both individuals and society, it is suggested that investment policies for education contain the following elements:

1. Primary education investment, other than the fulfillment of the 4-year compulsory attendance requirement, should aim primarily at improving the quality of education rather than rapidly expanding compulsory education to 7 years. To a certain extent this means the foregoing of a poor education at grades 5 to 7 for some children in the short run in the interest of a better education for many more children in the long run. More emphasis should be on the reduction of dropouts and wastages by improving the quality of teachers, teaching methods, provision of textbooks, teaching materials, and improvement of school buildings and facilities. Since major causes of dropouts are often social in nature, e.g., parental opposition and lack of means, it is suggested that such things as social expenditure be introduced into education.

2. Curriculum revision and improvement at the primary level should be made with the aim of making education more relevant to local conditions, while keeping the interests and needs of children in focus. A distinction should be drawn between rural and urban curricula.

3. Secondary education should be expanded as quickly as possible to fulfill the demand for manpower needs and at the same time to provide more educational opportunity for children.

4. Secondary school curricula should be revised to provide more choices for students in selection of courses according to interests, aptitudes, and needs. In carrying out this policy, certain administrative measures will have to be made such as the consolidation of some vocational and academic secondary schools, the transfer of teachers, and the improvement of administrative and management procedures in the schools.

5. More emphasis should be placed on the quality of private secondary schools. Recruitment of qualified teachers to replace those unqualified and the upgrading of existing teachers and in-service training programs should be encouraged.

6. In both levels of education, high priority should be given to these critical areas in the Northeast and the South. This is in keeping with the overall national policies.

7. The education of teachers should be viewed as the very heart of the development plan. This means that the expansion and improvement of teacher-training schools and colleges must become priority matters. Neither can in-service training of teachers be ignored. In view of the changes in structure and substance of the elementary and secondary education, necessary changes will also have to be made at the teacher-training level.

8. At all levels of education, attention must be given to minimizing health, nutrition, and other social, cultural, and economic problems.

9. To lower the illiteracy rate among the adult population and to provide continuous education for students who drop out of schools, adult education programs should be strengthened. For illiterates, a functional literacy program should be adopted to teach them not only to read and write but also to improve their vocational aptitudes. Apprenticeship programs should be extended to dropouts.

10. The expansion and improvement of universities should be geared more closely to high-level manpower requirements through control of the distribution of students in various specialized fields.

## THE RURAL EXODUS, ONE OF THE CAUSES OF UNEMPLOYMENT IN LOMÉ, TOGO

Pascal Ajavon

Most developing countries, and particularly Togo, are suffering from the movement of rural population into urban centers. Approximately 3,500 immigrants, principally from rural areas, are registered yearly in Lomé. The majority of them are very young, the average age being between 19 and 25 years. With few exceptions, these young people from the country understand, once they have arrived, that the urban economy cannot use them. Yet, it is out of the question for them to return to the village. Those among them who have learned a certain craft, but who lack the capital to establish themselves, work at their trades off and on. Many others obtain occasional employment in the city despite their inadequate intellectual equipment. The consequence of this phenomenon is increasing unemployment in Lomé (approximately 15,000 in 1965), the growth of slums, poverty, juvenile delinquency, and other urban problems.

The causes of the rural exodus are numerous. Lomé attracts many because of what appears to be an easy life, high wages, and numerous amusements. The rural school system, particularly at the primary level, instills hope in the young villagers who dream of a job in the capital city, even though they have a very low level of education. The living conditions of the Togolese peasant discourage young people from staying in the countryside. Agricultural production is used almost entirely for family consumption. Often there is malnutrition and undernutrition. Since the protein ration is too small to ensure good health and a sustained productive effort, the marginal productivity of agricultural manpower is very close to zero. Added to this is the small income of the peasant, estimated at about \$80 a year, which obviously gives him very little purchasing power. The consequence is that the rural youth, with a certain amount of education, leave the village to live with relatives in Lomé where they look for jobs.

### Suggestions on Urgent Needs for Togolese Development

In order to keep the bulk of the rural inhabitants in the countryside, it is necessary to transform traditional agriculture through organization of training courses for peasants, teaching them the best way to work the land, and the use of fertilizer, pesticides, draft animals, and farm machinery. There should be strong emphasis on farmers' cooperatives in order to induce our farmers to organize with the help of agricultural credit as well as contributions by each of the members.

The Government should take measures to encourage the establishment of certain regional industries patterned after those in Ganavé and Dadja which make starch and printed fabrics, respectively. It should, at the same time, provide these areas with schools, dispensaries, youth centers, and social facilities.

It has become urgent to reconsider the entire educational system of Togo, which presently is not adapted to national needs. The great acknowledged defect is that schooling divorces children from Togolese problems by regarding occupations in the abstract and by accenting classical education to the detriment of technical, professional, and agricultural education. The consequence is that a much larger percentage of the total number of students is enrolled in classical education than in technical education. Agricultural education is practically nonexistent. The Government has undertaken a vast program to give education a rural emphasis in order to remedy this state of affairs.

A final potential solution to the problem of rural exodus is a reduction in the rural population growth rate, which is around 2.6 percent in the villages of Togo.

The first Five-Year Plan has taken this phenomenon of rural exodus into consideration, and projects for rural development have been stressed. The Sociétés Régionales d'Aménagement et de Développement (regional planning and development associations), which were established in January 1966 to improve rural conditions, should make it possible to reduce rural emigration and thereby lessen urban unemployment within five years.



## MIGRATION OF TURKISH WORKERS TO WEST GERMANY

Nevzad Yalçintas

One of the most important events in the economic life of Turkey in recent years has been the flow of Turkish workers to Western Europe, chiefly to West Germany. In 1965 there were 132,741 Turkish workers in West Germany, 10.4 percent of the total number of foreign workers in that country. The number of Turkish workers in West Germany is constantly increasing and in Turkey more than 500,000 workers have registered to go abroad. The emigration, a new feature in the economic and social life of Turkey, began in 1960.

The migration of Turkish workers to Western Europe is closely connected with the structure of employment in Turkey. The Turkish economy faces a problem of unemployment and underemployment in almost every economic sector. Wages are relatively much lower than those in Western Europe. In view of the fact that the rate of population increase in Turkey is among the highest in the world (2.9 percent in 1960), that the net movement of persons from rural areas to the major cities continues, and that the rate of industrialization is inadequate, the problem of unemployment and underemployment becomes crucial. Movement of workers to Western Europe is a direct result of the unemployment and underemployment prevailing in Turkey, and barring unexpected and dramatic changes in the Turkish and German economies, this movement will continue in the coming years.

### Unemployment in Turkey

The main cause of unemployment in Turkey is the rapid increase of population. In 1927 the population of the country was 13.5 million and it has more than doubled in 38 years, reaching 32 million in 1965. The most pronounced increase in population took place between 1950 and 1960. The main reason for this has been the decrease in the death rate. One observes a reduction in the rate of growth of population between 1960 and 1965 from 2.9 percent to 2.4 percent. This is not the result of an important decline in the birth rate but of the emigration of Turkish workers to Western Europe. Estimations made in the Five-Year Plan, according to the medium assumptions of fertility, indicate that Turkey's population will continue to grow rapidly in coming years and will reach 41,579 million in 1975.

As a result of a rapid increase in the population, the age group 14 and under constitutes the most numerous part of the population. This group is a big consumer group and yet, being an important source of labor supply, will aggravate the existing unemployment problem if the rate at which new jobs are created remains the same.

Paralleling increases in population, the number of persons entering the labor force has also increased rapidly. Table 1 indicates changes in the size of the labor force.

Table 1. LABOR FORCE IN TURKEY  
(Thousands)

1927	4,877
1935	6,972
1940	7,875
1945	8,123
1950	10,724
1955	12,040
1960	12,993
1965	14,000 (estimated)

Because of the lack of precise census data, and the nonexistence of unemployment insurance, the number of openly unemployed persons is not known accurately. There are, however, many signs of open unemployment in urban and rural areas. Some estimates have been made in accordance with the application of the Five-Year Development Plan in annual programs. In the program for 1964, for example, it was estimated that there were 1.2 million unemployed persons out of a labor force calculated at 14.7 million.

According to an analysis of the Mediterranean Regional Project, OECD, there is hope of solving the unemployment problem, "only if participation rates fall...." Unless this occurs, the new jobs created will not be sufficient to absorb the increased manpower supply arising from a three percent population growth rate. This in turn depends on a structural shift in employment from agriculture to industry and services. The unemployment estimates in Table 2 exclude a significant amount of underemployment in agriculture. Present estimates suggest that nearly 1.5 million persons were underemployed in the summer of 1960. Under the usual definition of underemployment, the total may have risen to eight million in mid-winter.<sup>1</sup>

Table 2. ESTIMATED POPULATION 15-64 YEARS OF AGE,  
ACTIVE POPULATION AND UNEMPLOYMENT, SELECTED YEARS, 1962-1977  
(Millions of persons)

	<u>1962</u>	<u>1967</u>	<u>1972</u>	<u>1977</u>
Age group 15-64 .....	15.7	18.0	20.9	24.2
Economically active population (labor force) .....	13.4	14.4	15.7	17.0
Unemployment .....	1.5	1.2	0.9	--
Labor force participation rate .....	85.3%	80.0%	75.1%	70.2%

Source: Mediterranean Regional Project, Turkey, OECD, Paris, 1965, p. 32.

<sup>1</sup> First Five-Year Development Plan 1963-67, Ankara 1963, English edition, p. 409.

In reducing the unemployment level in Turkey, one of the most important factors has been the migration of Turkish workers to Europe. This transfer of surplus manpower abroad provided the Turkish economy with the hard currency which the country needs urgently. The economic prospects in Europe, particularly in West Germany, show that the movement of Turkish workers can continue for at least the coming 5 to 10 years.

### Labor Shortage in West Germany

Germany lost an important part of its population and territory because of the Second World War. The increase of population since 1950 and the projections for the years 1970-1975 are shown in Table 3.

Table 3. POPULATION IN WEST GERMANY (WITH BERLIN)  
(000)

<u>Years</u>	<u>Population</u>	<u>Index</u>
1950 .....	49,989	100.0
1955 .....	52,382	104.8
1960 .....	55,433	110.9
1965 .....	58,655	117.3
1970 .....	60,405	120.8
1975 .....	61,870	123.8

Source: Statistische Jahrbuch, 1965

The yearly rate of population increase in West Germany has been 1.1 percent between 1950-1964 which is far below that of Turkey. The categorization of the population according to age groups in West Germany is different than in Turkey. The rate of participation in the labor force of West Germany is diminishing mainly because of the low birth rate and the increasing number of elderly persons.

The rapid growth of the German economy necessitates large increases in the labor force and creates job vacancies which cannot be filled by increases in the domestic labor force. Thus West Germany, like the other highly industrialized West European countries, needs foreign workers to maintain its rate of economic growth. The need of Germany for foreign workers is not a new one. Before the First World War, for example, there were proportionately more foreign workers in Germany than there are now.

West Germany is importing foreign workers to cope with its labor shortages, and the number and percentage of these workers in the population have been continually increasing since 1955. The bulk of foreign workers in West Germany come from the Mediterranean countries.

**Table 4. FOREIGN WORKERS IN WEST GERMANY BY NATIONALITY**  
(In percentage of total foreign workers)

	<u>1955</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>
Italian .....	9.42	43.55	42.95	40.57	36.88	31.00	30.90
Spanish .....	0.63	3.40	10.05	13.31	14.48	15.46	15.51
Greek .....	0.75	4.65	8.65	10.54	13.09	15.43	15.60
Turk .....	--	0.89	1.02	2.33	3.34	7.41	10.40
Portuguese .....	--	--	--	--	--	0.38	0.90
Yugoslav .....	2.63	3.15	2.54	3.60	5.47	5.68	5.49
Dutch .....	27.76	12.02	8.80	8.07	7.16	6.46	5.12
Others .....	58.81	32.34	25.98	21.58	19.58	18.18	15.98
	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>

While the percentage of workers coming from Italy and the Netherlands has been decreasing, the percentage of Spanish, Greek, Turkish, and Yugoslavian workers has been increasing.

#### Turkish Workers in West Germany

Unemployment in Turkey and the labor shortage in West Germany has resulted in the emigration of Turkish workers to that country. The social and political conditions for this emigration were convenient. The transfer of Turkish workers to West Germany first began in 1960 and has increased. As indicated in Table 4, the percentage of Turkish workers in the total number of foreign workers in West Germany increased from 0.89 percent in 1960 to 10.40 percent in 1965. The number of Turkish workers going to West Germany increased every year until 1964. In 1961 only 1,207 workers left Turkey for Germany whereas in 1965 the total was 54,741 as of September, 1965. All evidence indicates this number is likely to increase. There were still 699,700 job vacancies in West Germany to be filled in 1965. Turkey can supply West Germany with unskilled, and to some extent semiskilled, laborers. The West German employers, in general, are satisfied by the job performance and the discipline of the Turkish workers.

The emigration of Turkish workers to Germany is administered and directed by the Bureau of Employment Service (iş ve işçi Bulma Kurumu) Ministry of Labor. The Bureau has the authority and power to direct job offers coming from abroad to any administrative region in Turkey. In so doing the Bureau can regulate the stream of migration within Turkey and give priority to the areas stricken with the most unemployment. The breakdown of the workers already working in West Germany, according to original geographical regions in Turkey, is shown in Table 5

Table 5. REGIONAL ORIGIN OF TURKISH WORKERS IN WEST GERMANY 1965

	<u>Percentage</u>
North-Central .....	17.2
West .....	14.5
Marmara .....	38.2
Mediterranean .....	4.1
Northeast .....	2.7
Southeast .....	0.4
Black Sea .....	12.6
East-Central .....	4.3
South-Central .....	6.0
	<u>100.0</u>

Source: İş ve İş gücü raporu İş ve İşçi Bulma Kurumu Ankara, 1966.

<sup>2</sup>See: Tuna, Orhan. *Turkiyeden Federal Almanyaya İşgücü Akimive Meseleleri*. İktisat Fakültesi Mecmuası. Cilt 24 N. 1-2. 1965. İstanbul

Table 5 shows that the bulk of the Turkish workers in West Germany came mainly from the Marmara, North-Central, and Western regions of Turkey. One of the important reasons for this is the fact that three major cities of Turkey--İstanbul, Ankara, İzmir--are located in these regions.

The Turkish workers are concentrated in the Nordrhein-Westfalen, Baden-Württemberg, Südbayern, and Hassen regions of West Germany. This can be explained by the distribution of Turkish workers by industry; the greatest number of them are working in heavy industry and mining. Those regions of West Germany are, in general, the centers for these industries.

The emigration of Turkish workers to Western Europe, chiefly to West Germany, has economic, social, religious, and administrative implications.<sup>2</sup> In 1966 an estimated 90 million dollars is expected to be sent to Turkey from the savings of Turkish workers in Western Europe, a valuable source of foreign exchange for the Turkish economy. An overall survey has recently been conducted by Turkish and German resource teams headed by Professor Dr. Orhan Tuna, İstanbul, Turkey, and Professor Dr. Otto Neuloh, Saarbrücken, Germany, on the emigration of Turkish workers to West Germany. The findings of this survey are yet to be published.

# THE ASWAN HIGH DAM MANPOWER PROBLEM WITH PARTICULAR EMPHASIS ON THE PROBLEM OF INSTRUCTORS

Mohamed M. El-Hadeedy

## Introduction

My selection of the topic of this paper is a result, in part, of my personal involvement with manpower problems of the Aswan High Dam. I also chose this subject because the High Dam project is a major undertaking of a developing nation and because the project is successful, has been true to schedule for six years, and only two more years remain for the completion of construction.

If manpower planning and development are problems for developing nations, they should be expected to manifest themselves more prominently and menacingly when the nation is small, the project is big and one that has to adhere to a rigid time schedule. Regarding Aswan, we must add to the list of difficulties the fact that the High Dam is being built at a most unfavorable geographical location insofar as living conditions are concerned. It is far from the metropolis, the climate is extremely hot, and housing and other facilities are almost nonexistent for newcomers. All of these considerations have a direct bearing on the manpower problem.

The successful solution to manpower problems at the High Dam site furnishes some proof for the thesis that manpower problems need not cripple the developing nations because they can be dealt with effectively on the basis of short-term and long-term policies.

## The Manpower Problem on the Project

The number of people employed on the High Dam increased from 15,000 persons in December 1962 to 34,000 in 1964. More than half were skilled laborers, and almost all of them came from no closer than 600 to 700 miles from the work site. This might give an idea of how difficult the situation was. Other problems can be listed as follows:

- (1) the heavy demand for skilled manpower for industrial development elsewhere;
- (2) the wide variety of occupations included in the work force by ISCO standards, some 300 in the technical fields alone;
- (3) the immense change in occupations required at different phases of the project;
- (4) the lean labor market in the Aswan area;

(5) administrative problems, e.g., the accommodation of some 50,000 people moving into Aswan;

(6) the wage problem; and

(7) the problem of new skills required for new types of work and equipment.

Some of these obstacles, such as wage and administrative problems, were dealt with easily enough through incentives. However, during 1962, a careful survey showed a need for 6,000 more skilled workers in mechanical and electrical engineering. The only solution was training.

Training takes time and involves a high initial investment. However, the situation justified the expenditure of time, and training periods were shortened by choosing the students from among graduates of other training institutions such as those run by Ministries of Education, and Industry. Although they do a good job, the specializations produced by other training centers hardly fit the specific needs of the project.

Another significant experience is that, during 1963, an effective plan was established for an on-the-job training operation that provided the site with no less than 1,000 new, young, and ambitious workers, alongside the graduates of the training process in the centre, to which we will refer. These were students in the last year of vocational training schools. It was arranged with the Ministry of Education that the curriculum of the last year be altered so that students would be through with their theoretical studies by January. The rest of the year, that is until June 1963, was spent in actual on-the-job productive training in Aswan under a contract signed by both the student and the personnel department.

### The Training Centre

The High Dam Training Centre today is probably the largest in the Middle East. But, like all new establishments, it has suffered a manpower problem of its own; it always lacks instructors. Highly-skilled personnel are employed at the site but they are too indispensable to be used as instructors. To solve this problem on the High Dam Training Centre, two main methods are applied. The engineers and technicians assigned as staff members of the centre are given brief courses on the techniques and methods of training, but these courses are hardly enough to make a very good instructor. The other method is to have any director of a company or sector send over with his workers, who come to the centre for training, one or two of his technicians or engineers to help in the training process. How good they are depends entirely on how important the training is in the director's estimation.

The High Dam experience underlines an important point. It is imperative that developing nations establish training institutions for preparation of instructors. This involves a great deal of difficulty, but it is essential that this phase of development be given the attention it deserves.

## ASWAN REGIONAL PLANNING IN THE UNITED ARAB REPUBLIC

An Introductory Note on the Human Resources Development Centre with Special Reference to Educational Planning for Manpower Development

Mohamed Ali El-Shinnawy

### Introduction

The Aswan region is located in the southeastern part of the United Arab Republic. Since 1960 this region has been given an important role in the development of the nation. Until the advent of the High Dam project, Aswan remained virtually unchanged for generations. The construction of the High Dam and the establishment of large-scale industries such as the chemical fertilizer factory, the iron and steel plant, and the paper pulp and sugar factories, have had a great impact on the economic and social life of the people living in the area. The economic picture of the region prior to 1960 was essentially that of a rural border province with the exception of relatively large-scale phosphate and iron-mining operations begun in the late 1950's. The investment in Aswan during the first Five-Year National Plan (1960-1965) reached 12.5 percent of the total investment budget of the country, although the population of the Aswan Region is only 1.5 percent of the national total.

By virtue of its location and the tremendous amount of investment earmarked for the region since 1960, Aswan has become the focus of much economic activity. The construction of the High Dam has provided the stimulus for rapid and extreme change in the city and the region as a whole. The resources of the area have been rediscovered, the potential for development is being vigorously assayed, and experts are searching and evaluating the natural, physical, and human resources of the region. The population of Aswan city has jumped to 125,000 and that of the region has reached 500,000. New plants have been constructed, new social and public facilities are being built through a crash program, and vast agricultural tracts are being opened.

### The Regional Planning of Aswan

The Government of the United Arab Republic realized the need for a high degree of coordination of all activities and measures in the Aswan Region if the hopes placed on Aswan were to be realized. Toward the end of 1963 steps were taken to maximize the development and expansion possibilities in Aswan. A planning, research, and experimentation agency with an independent status and a high degree of authority was created to deal with the development of the region. The agency has an executive board chaired by the Governor of Aswan with a membership of the twelve under secretaries of the ministries concerned. The central aim of the agency is to exploit the resources of the area to the maximum degree possible and



to develop the economic and social potential of the region. In March 1964, an international conference was held in Aswan attended by 150 top government officials and experts, both foreign and national. The conference established guidelines for all aspects of the development of Aswan.

From its inception, the agency has operated on the thesis that to be fully productive, development activities must be based on factual information and scientific research. With this approach as the keystone, the first steps taken by the agency were the organizing and staffing of seven development centres: Mineral Resources Development, Industrial Development, Agricultural Development, Human Resources Development, Water Resources Development, Transportation Development, and Environmental Planning. Each of these seven centres is responsible for surveying, cataloguing, and evaluating the resource potentials of its sector, for analyzing present methods, and for preparing detailed development projects to make optimum use of those resources which hold the greatest productive promise.

Each of the centres has at least one strategy board to provide direct linkage between the centre, the planning agency, and the implementing ministry. In all cases, these strategy boards include at least two members from the ministry concerned and two from the planning agency. The strategy board is responsible for setting up the policy of the centre, and it approves the projects which are prepared for implementation. Therefore, approval and support at both the local and national levels can be ensured in advance for each proposed project. This approach guarantees that the overall program of the ministries will be furthered and, at the same time, leaves the responsibility for proper research, planning, analysis, experimentation, and evaluation with the individual centres. It ensures that staff and finance required to implement a project will be forthcoming and that there will be adequate technical supervision at the local level during project implementation. It also allows for the fullest possible use of local services and personnel, and encourages strong local support.

We believe that this device, which ensures practical planning and links planning directly to project implementation, is the unique strength of the Aswan Regional Planning Agency. A second advantage gained from this organizational device is that it brings the planning and executive functions into a cooperative effort with joint responsibility for success.

#### The Human Resources Development Centre

The Human Resources Development Centre is charged with the task of ensuring that professional, technical, skilled, and semiskilled manpower needed for the expanding economy will be available in sufficient numbers in the future. The centre is responsible for planning the training and development of manpower required to meet the needs of industrial growth and economic development, and to match manpower demand with manpower supply without leaning heavily on the supply of technicians and skilled workers from other regions of the nation. The centre is also charged with planning the development of the educational system at all levels, the provision

of pre-service and in-service training for employees, the development of community and social services, and the improvement of health, welfare, and family planning facilities. The centre is concerned with the people of Aswan, both as economic agents and as beneficiaries of the development of the region. But the real development of Aswan in the future and the degree to which that development can be enduring and self-sustaining will depend on how well the youth of today and tomorrow are prepared for vocations. Recognizing this, the centre gives youth special attention in its planning surveys and priority in its development programs.

It must be noted that many problems begging for solution have arisen in the wake of the unprecedented industrial revolution in the Aswan region. Among these problems are the weakening of traditional family ties, the transformation of the role and status of women, the growing numbers of maladjusted individuals, the growth of an unskilled labor reserve, bad housing and slum areas, and undernourishment. The multiplicity of social problems brought about by industrial and technological development demands the elaboration of an intelligent and bold policy of social planning that gives due consideration to the human resources on which such development depends and in whose interest it should operate. The needs of all population and age groups have to be determined in advance in order to meet the needs of the developing economy.

The jurisdiction of the Human Resources Development Centre runs the gamut of activities including educational, cultural, social, welfare, and manpower fields. The plans developed by the Human Resources Development Centre in the fields of education, adult education, community development, pre-vocational and vocational training, agricultural extension and guidance, local leadership training and development, and management development have received worldwide attention and are financed by the Ford Foundation, the United Nations Development Fund, and other international organizations such as UNICEF, UNESCO, FAO, WHO, and ILO. The centre has a sizeable Egyptian staff assisted by international and foreign experts.

The remainder of this paper will be concerned with one specific field, namely, educational planning for manpower development.

#### Educational Planning for Manpower Development in Aswan

One of the first major activities of the centre has been to consider what can be done to relate formal education in the region to the needs of its growing economy and to the realities of its community life. The centre carried out a survey of the educational facilities in the area and found that preschool facilities were extremely limited in both urban and rural areas. Enrollment in the elementary school for children of primary school age in the Aswan region reached more than 56 percent in 1964-65. In that year, enrollment reached 53,292 of which about 62 percent were boys and 38 percent girls. The 1964-1965 enrollment level was some 117 percent higher than it had been ten years earlier. Large numbers of pupils repeat the final year of primary school, resulting in less than optimal utilization of facilities and funds. The great discrepancy between the number of places available

in preparatory schools and the number of applicants results in the inefficiency mentioned before and in a major proportion of the children having to leave school after six years. Relatively few girls, especially rural girls, go beyond primary school. The primary school curriculum is too much oriented to the needs of the minority who continue in school, and even they would benefit more if some practical subjects were taught. There is too little practical content in the curriculum at all levels, and vocational guidance is totally lacking. Opportunities to receive practical training are available for relatively few dropouts, and past programs have been planned with little concern for their practical value to the student.

The Human Resources Development Centre recognized the need for immediate action to develop the educational system in order to meet the increasing demand for technicians, foremen, and trained and skilled manpower. It has recommended the establishment of an experimental school in Aswan. As a matter of fact, the Ministry of Education also recognized this need but was overburdened with details of administering the national system for a rapidly growing youth population. Specialists in teacher-training institutions also see the needs and have ideas that might be useful, but they are rarely in a position to put these ideas into practice in the school system. What has been needed is a way to bring these people together and to provide them with opportunity and mechanism to find ways of improving the situation in Aswan. The Human Resources Development Centre was able to satisfy this need by approaching the Ministry of Education, the Dean of the Faculty of Education (Ein Shams University), and the directors of other teachers' colleges. As a result of this initiative, specialists from these organizations worked together in a committee called the "Technical Committee for Planning and Developing Education in Aswan" under a strategy board composed of the Under Secretary of the Ministry of Education for Planning, the membership of the Director General of Aswan Regional Planning, the Director of the Human Resources Development Centre, the Director of the Educational Division of the Human Resources Development Centre, and the Superintendent of Schools in Aswan.

The committees worked together through the summer of 1965 to plan the first stage of the experimental school. That stage was inaugurated in September 1965 in one of the secondary schools of the city of Aswan. The school is being gradually transformed from a girls' secondary school to a coeducational, preparatory-secondary school, starting with the first-year classes at each of the two levels. These classes have a new curricula that has been modified from the standard one. What was felt to be unnecessary course duplication has been eliminated and new elements have been introduced to relate studies more directly to the region in which the students live, based on the concept of a "core-curriculum."

The core-curriculum has proved to be of great importance for the following reasons:

- (1) It stems from the community and deals with its major problems.
- (2) It relies heavily upon the student's activity and his dynamic response.
- (3) It is not supervised by one teacher, but by a team of supervisors.

(4) It is not confined to one particular subject but to a cluster of subject matters.

(5) It increases the student's ability and widens his horizon of knowledge because he participates in the planning process and shares in carrying out the plan.

(6) It enables the student to use the scientific method in his approach.

(7) It helps the student to appreciate what is called "education pour la vie par la vie."

(8) It increases the student's sense of appreciation for his community and enhances his knowledge of its potentialities.

The program of the Experimental Comprehensive School emphasizes the importance of practical studies for boys and girls and, therefore, considers these studies as an integral and prominent part of the new curriculum. Modern and diversified practical studies have been introduced into curricula to introduce students to simple crafts which will help them to build elementary work aptitudes and acquaint them with certain aspects of working life. The program of the school also includes refresher courses for teachers, new teaching methods and aids, upgrading teachers' ability in teaching foreign languages, and establishment of an elaborate system of counseling and guidance.

Technical education and vocational training are also receiving great attention. The appropriate ministries, local authorities, local employers, and teaching specialists are being brought together in a regional council to review existing facilities in the light of the needs of the Second Five-Year Plan and the manpower forecasts prepared by the Human Resources Development Centre. Greater coordination and new facilities are being planned. A variety of independent institutions active in the field will be welded into an integrated program to meet the needs of the region.

In conclusion, it is crystal clear that the "multi-dimensional" approach adopted by the Human Resources Development Centre has already demonstrated its value though it has been in operation for less than one year. Largely because of the semiautonomous operation of the centre, projects have moved from the planning stage into implementation with unusual speed. The Aswan pattern avoids the pitfalls of heterogeneity and clearly places the responsibility for development activity of each sector in one centre. With lines of authority and responsibility sharply defined, delays and bureaucratic red tape are minimized and projects move forward much more rapidly. The fact that the Human Resources Development Centre is responsible for implementing development plans adds another useful dimension to the program. The centre must "live with" its plans and, through its continuing service function, assist in their implementation. Awareness of these responsibilities has a sobering influence and tends to sharpen the focus of the planners on the practical aspect of each problem.

## FOREIGN LABOR IN VIETNAM

Luu Nguyễn Trọng

Foreign labor is a problem that worries the South Vietnamese Government today. For several years, numerous foreign workers have been coming to settle in the country in order to work in different activities, especially construction. The statistics, in view of our unusual situation, are still insufficient to permit us to classify these workers by detailed occupational categories.

A demographic survey made in 1962-63 in Saigon gives the following results:

(a) Out of Saigon's total population of 1,430,000 inhabitants, there are:

1,240,000 Vietnamese (86%)  
174,000 Vietnamese citizens of foreign origin, especially  
Chinese (12.2%)  
15,300 foreigners from Europe and Asia (1.1%)

(b) Actively employed population:

294,500 Vietnamese  
88,500 Vietnamese of foreign origin (especially Chinese)  
6,300 Foreigners  
TOTAL 389,300

(c) The breakdown of the foreign workers is as follows:

liberal professions, general technicians	480
administrative personnel	420
clerical personnel	720
commerce	3,720
agriculture, forestry, fishing, and the like	120
craftsmen, highly-skilled workers	480
athletic and recreational services	300
unclassified	60
TOTAL	<u>6,300</u>

We do not have statistics on foreign workers in the provinces. Moreover, these figures would have little importance for Saigon, the capital of the country and an important commercial port, is the center of nearly all commercial and industrial activity.

A few remarks should be made with regard to workers of Chinese origin. The number of Chinese in Vietnam is very high, constituting between 12 percent and 20 percent of the total population of Saigon. In certain areas of activity such as textiles, restaurants, and small shops selling notions, the Chinese outnumber the Vietnamese.

In 1956, a decree issued by the President of the Republic stipulated that foreigners born in Vietnam would become Vietnamese citizens automatically, that is to say, without any formality. Therefore, it is no longer possible under the law to discriminate between Chinese and Vietnamese workers. But, in practice, the Chinese still form a society apart, retaining their language and customs.

### Foreign Workers of Other Nationalities

Since 1964, large American construction companies have come to establish themselves in South Vietnam to work for the army. For example, and referring only to Philippine and Korean workers, the following table will bring out the importance of the foreign labor force employed by a large company on May 4, 1966.

<u>Places of work</u>	<u>Americans</u>	<u>Other nationalities</u>	<u>Total</u>
Saigon	1,332	1,656	2,988
Provinces	1,135	2,089	3,224
TOTAL	2,467	3,745	6,212

If we add to these figures the number of foreign workers employed by other businesses since 1962, the total foreign labor force in South Vietnam comes to 15,000 people.

Moreover, according to the plans of foreign firms to have large contingents of skilled Philippine and Korean workers make up for local shortages, the total number of foreign workers could reach 20,000 in the next few months. The proportion of foreign workers to Vietnamese workers would change from 1.6 percent in 1962 to 3 percent by the end of 1966.

### Regulations Governing the Employment of Foreign Labor

The South Vietnamese Government, with the aim of promoting foreign investments, has placed no restrictions on the employment of foreign workers. The work permit previously issued by the Minister of Labor is no longer necessary. A residence visa must be obtained, however, from the Minister of the Interior. This employment policy, which one might consider too liberal, recently led to criticism by the Vietnamese working class. For one thing, it hinders the training of supervisory personnel which the country needs and contributes to the high cost of living.

For the above reasons, new measures on the immigration of foreign workers are necessary. The proposed Decree-Law drafted by the Labor Ministry for regulating the matter will be submitted shortly to the Chief of State for examination and signature. In anticipation of the changes likely to be made at the last moment,

we can cite here only the guiding principles that have motivated its formulation. Far from systematically preventing the employment of foreign workers, the new regulation aims only to protect Vietnamese labor against competition from non-essential immigrant workers. Any foreign worker desiring to in-migrate to Vietnam must first obtain a work permit from the Ministry of Labor, which will make its decision according to the local labor market and the actual technical skill of the person concerned. Permission will be granted for one year only and for a specific enterprise even if it is later to be renewed and extended. However, special arrangements will be provided for those foreign workers who have rendered outstanding service to Vietnam or have had family ties there. An order providing for the enforcement of the Decree-Law issued by the Minister of Labor shall fix the proportion of foreign workers to Vietnamese workers for each enterprise.

In order to produce good results, the employment policy with regard to foreign labor must be supplemented by a job training program. The 1966 budget of the Ministry of Labor provides for an increase in credit (four times that of 1965) for the addition of new courses and the recruitment of new instructors. In addition, apprenticeship in a shop and on-the-job training must not be neglected. It is imperative that the corps of labor inspectors and supervisors check the employers' compliance with the provisions set forth in the labor code. Certain large concerns have even agreed to establish job training centers for adults who have no military obligations. These people are to be paid a reasonable allowance during the entire apprenticeship period. This means that, until additional supervisory personnel are trained, we must still resort to the use of foreign skilled workers.

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