DOCUMENT RESUME

ED 118 802 CE 006 335

TITLE	Knowledge and Policy in Manpower: A Study of the Manpower Research and Development Program in the Department of Labor.
INSTITUTION	National Academy of Sciences - National Research Council, Washington, D.C. Committee on Dept. of Labor Manpower Research and Development.
PUB DATE	75
NOTE	178p.
EDRS PRICE	MF-$0.83 HC-$10.03 Plus Postage
DESCRIPTORS	Evaluation Criteria; *Evaluation Methods; Federal Legislation; *Federal Programs; Labor Force; Labor Problems; *Manpower Development; Manpower Needs; Policy Formation; *Program Descriptions; *Program Evaluation; Program Improvement
IDENTIFIERS	Manpower Research; *Office of Manpower Research and Development; OMRD

ABSTRACT

The document presents an analysis of the progress in the research and development (R & D) efforts of the Department of Labor as embodied in the Manpower Development and Training Act, which combined an inquiry system and a mission-oriented operating system in a single agency. The analysis is presented in two parts. Part 1, The Manpower R & D Program: An Evaluation, discusses some issues related to social science R & D in government and to manpower policy and manpower study. Factors for evaluating R & D programs and major objectives of manpower policies are identified. Findings based on the accomplishments of the Office of Manpower Research and Development (OMRD) are discussed, and recommendations to improve the program are given. Part 2, Manpower R & D in a Mission Setting, provides an historical account of the institutional and policy context within which the manpower R & D program has operated. Labor issues that have affected the Department of Labor and future manpower problems are reviewed. The major characteristics of OMRD are examined: (1) the R & D program; (2) budget, legislative mandate, interactions, and staff capabilities; (3) management (planning, implementation, and dissemination of results); and (4) utilization of OMRD project results. Methods and sources used in the study are appended. References are included. (Author/EC)

Knowledge and Policy in Manpower

A Study of the Manpower Research and Development Program in the Department of Labor

NATIONAL ACADEMY OF SCIENCES

Knowledge and Policy in Manpower

A Study of the Manpower Research and Development Program in the Department of Labor

Committee on Department of Labor Manpower Research and Development
Assembly of Behavioral and Social Sciences
National Research Council

NATIONAL ACADEMY OF SCIENCES
WASHINGTON, D.C. 1975

Notice: The project that is the subject of this report was approved by the Governing Board of the National Research Council, whose members are drawn from the Councils of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. The members of the Committee responsible for the report were chosen for their special competences and with regard for appropriate balance.

This report has been reviewed by a group other than the authors according to procedures approved by a Report Review Committee consisting of members of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine.

Library of Congress Catalog Card Number 75-37384

International Standard Book Number 0-309-02439-0

available from
Printing and Publishing Office
National Academy of Sciences
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

Printed in the United States of America

PREFACE

This is a report of the early stages of a pioneering effort in the Department of Labor. This effort began in 1962 with the inclusion of provisions for research and development in the Manpower Development and Training Act (MDTA). It was one of the nation's first organized attempts to combine an inquiry system and a mission-oriented operating system in a single government agency. Such combinations had occurred in agencies whose research relied largely on physical and biological sciences, but seldom before on any significant scale in agencies whose research relied mainly on behavioral and social sciences. The inclusion of an inquiry system in an operating agency is a measure of confidence in the methods of science for judging the adequacy of other parts of the agency and for ensuring that changes in policies or programs are guided and informed by inquiry.

At the first stage, the Department of Labor had to proceed under assumptions of uncertain validity and almost no historical precedence. It was necessary to assume, for example, that a federal agency could provide an acceptable, if not always an ideal, environment for policy-oriented social science research and development. The difficulties resulting from this assumption were inevitable; the goals and purposes of a mission-oriented, program-operating system do not always coincide with the goals and purposes of an inquiry system. It was also necessary to assume that research and development capabilities were available or could be developed. The difficulties resulting from this assumption were also inevitable, since researchable problems in manpower do not often fit the tidy taxonomies of research in the traditional academic disciplines.

In addition, the word "manpower" itself connotes many dimensions of human resource development. Both as a term of art and as an area of public policy, manpower incorporates a host of economic and social considerations as these relate to people's entry into and progression within the world of work: education and training, health and nutrition, job discrimination, management of the national economy, operation of employing institutions, worker productivity, labor mobility and migration, workplace standards and regulation, wage determination and collective bargaining, and income security. The Department of Labor adopted the term manpower in the early 1960s--when the Manpower Administration was created--to embrace a broader set of concerns than represented by the terms "employment" and "training." In recent years, however, the word manpower has come under attack for its sexist connotation. At this time, the Department of Labor is considering abolishing the word manpower from its administrative and program structure.

During the early stages of the manpower R&D program, it became clear that an inquiry system within a federal agency faces other complexities that are unique and little understood. To justify its existence, such a system has to be linked with an administrative authority within the agency that affirms it as a part of a broader, operationally oriented mission. The evidence of this link and internal support is the level of priority attached to inquiry within the agency and the extent to which the agency incorporates the results of that inquiry in its mission.

However, an inquiry system must also be affirmed by sources external to the agency. Unlike most of the research in such fields as space and weaponry, manpower research is not a one-agency or even an exclusively federal matter. Manpower programs and concerns for manpower problems occur at many different levels and in many different institutions and jurisdictions. The external legitimizers include state and local sponsors and operators of manpower programs, those who have oversight or inter-agency relationships with the Department of Labor, and the academic community.

The Department of Labor began its manpower R&D program under necessary but untested assumptions and under unique organizational circumstances. The process of formulating more realistic assumptions and the task of accommodating organizational complexities have become as much a part of the pioneering effort in manpower R&D as has the substance of the program. That is one of the continuing challenges for a federal agency engaged in R&D.

Such was the background that preceded the Department of Labor's request to the National Academy of Sciences-National Research Council to review, assess, and make recommendations regarding the manpower research and development program. The terms of reference for the review, assessment, and recommendations covered six general topics:

(1) the quality of the researchers and the research capabilities supported;

(2) the contributions of the research supported to the knowledge in the manpower field (methodological, empirical, and theoretical) in relation to research supported from other sources of funding;

(3) the potentiality for practical applications of the knowledge and findings resulting from R&D projects;

(4) the ways in which and the extent to which such knowledge and findings have or could be utilized, and in what settings and by whom;

(5) the relevance of the Department's R&D efforts to and actual influence upon the development of national manpower and related policies and programs; and

(6) the effects of the Department's R&D efforts upon the demands for, education and training of, and supplies of researchers in the manpower field, as well as upon the growth and characteristics of research facilities (academic, profit and non-profit, and governmental).

The inquiry launched by this Committee was among the first of its kind--an inquiry focusing on the role of a government R&D office whose work was closely related to the behavioral and social sciences. The Committee viewed research and development in manpower as an activity to be justified in terms of conclusions reached or findings applied to program improvement or change, the discovery of new dimensions or complexities in familiar problems, the challenge afforded existing beliefs or presumptions regarding available problem solutions or in terms of a capacity to explain or clarify factors or conditions present in special problem situations related to manpower.

The Committee's report is a descriptive analysis with recommendations; it is not an encomium. Yet the Committee believes that the Office of Manpower Research and Development deserves high marks for the number of very significant substantive accomplishments it has realized through an R&D investment and also for meeting head-on some of the organizational challenges described earlier. While there is full agreement with the Committee's findings and recommendations, not every member may agree with every detail in the report.

This report was completed at a time of almost unprecedented transition, one that is multi-dimensional and very disrupting to many in the labor force: from a war to a peace economy, from a decade of government manpower programs under the Manpower Development and Training Act to a distinctly different approach under the Comprehensive Employment and Training Act, and from a period in which there was relatively little debate about policies affecting the development and employment of the labor force to one in which the intensity of the debate is a daily reminder of the uncertainty facing all people in relation to work. The impact of such transitional forces on the outlook for inquiry is difficult to estimate. Certainly there should be no counsel of resignation or neglect; there is much evidence in this report to show that R&D has added substantially to the base of knowledge and the stock of information available for guiding manpower programs and policies. The view represented by the recommendations in this report is that the contributions of R&D to future manpower programs and policies look most promising.

While this report will be of interest to federal agencies engaged in social science research and development, to legislators, to members of the scientific community interested in the organization and administration of inquiry within government agencies, to manpower specialists, and to the academic community, its recommendations are addressed to specified authorities in the Department of Labor, the agency that commissioned the review and assessment.

The nine chapters of this report are organized into two parts. Part I, "The Manpower R&D Program: An Evaluation," discusses some issues related to social science R&D in government and to manpower policy and manpower study and presents the Committee's findings and recommendations.

Chapter 1 briefly reviews the role of R&D and an R&D office in an operating agency and also explains the Committee's criteria for evaluating the manpower R&D program. Chapter 2 identifies the major objectives of U.S. manpower policies and describes the role and limitations of manpower study in providing knowledge relevant to those objectives. Chapter 3 presents the Committee's findings with respect to both the substance and management of the manpower R&D program in the Department of Labor. Chapter 4 presents the Committee's recommendations for strengthening that program--recommendations for a well-defined, policy-oriented agenda for long-term inquiry, for improving scientific capabilities in manpower, for improving R&D management and administration, for enhancing the Department of Labor's capacity to use knowledge effectively, and for determining an appropriate level of resource commitment to the manpower R&D program.

Part II, "Manpower R&D in a Mission Setting," provides a historical and descriptive view of the institutional and policy context within which the manpower R&D program has operated. Each of five chapters highlights a critical dimension of OMRD and its actions in a mission-oriented government setting.

Chapter 5 traces the course of national manpower policies, outlining the

broad range of labor force and labor market issues that have concerned the Department of Labor since 1962 and identifying manpower problems of possible concern in the future. Chapter 6 examines the major characteristics of the R&D program of OMRD and its predecessor offices, including performer choices, the scientific methods employed in projects supported, and the subject matter covered. Chapter 7 describes OMRD, focusing on its changing budget, legislative mandate, interactions with various officials and offices within the Department of Labor, and staff capabilities, all of which have influenced manpower R&D program content and effectiveness. Chapter 8 considers OMRD's management, emphasizing the strengths and weaknesses of procedures for planning, implementation (performer selection and monitoring), and dissemination of R&D results. Chapter 9 analyzes how OMRD project results are used by government decision makers within and outside the Labor Department. Utilization is the ultimate objective for a mission-oriented R&D office, and achievement on this score is highly dependent on attitudinal and institutional variables that are difficult to control. In Chapter 9, manpower policy, the substance of the manpower R&D program, and the history and operations of OMRD described in the preceding four chapters are the critical elements in evaluating utilization of manpower R&D results.

The Appendix to the Report outlines the methods and sources employed by the Committee in conducting its study.

Gordon I. Swanson, Chairman
Committee on Department of Labor Manpower
Research and Development

ACKNOWLEDGMENTS

The Appendix to this report lists the agencies and individuals whose cooperation and assistance were available to the Committee. There was full and complete cooperation by the entire Department of Labor; all reports, records, and files of the Department were available to the Committee, and all of its personnel were available for interviews. The Committee acknowledges with gratitude these contributions.

During the first six months of the study, Albert Blum served as Executive Secretary of the Committee and Jon Michaelson served as Research Associate. During the remaining eighteen months and throughout the bulk of the Committee's work, Jon Michaelson served as Executive Secretary and Aaron Nadel as Research Associate. Lynette Steele, James Thomassen, and Anthony Jiga served as Research Assistants at various stages of the study.

The Committee's Administrative Secretary throughout the entire study was Georgene R. Menk. She was assisted at different times by Ruth Jones and Patricia B. McDevitt. Editorial work on the report was directed by Eugenia Grohman.

The Committee wishes to express special appreciation for the energy, dedication, creativity, and pleasantness of the professional, support, and editorial staff.

COMMITTEE ON DEPARTMENT OF LABOR MANPOWER RESEARCH AND DEVELOPMENT

Members

GORDON I. SWANSON (CHAIRMAN), Professor, Vocational and Technical Education, College of Education, University of Minnesota

HENRY DAVID, Professor of Public Affairs, Lyndon B. Johnson School of Public Affairs, The University of Texas at Austin

ERWIN C. HARGROVE, Chairman, Department of Political Science, Brown University[1]

DAVID G. HILL, Attorney-at-Law, James, Hill, Heggs, Derek, Douglas and Company, Cleveland[2]

CHARLES C. KILLINGSWORTH, University Professor of Labor and Industrial Relations and Economics, Economics Department and School of Labor and Industrial Relations, Michigan State University

KARL R. KUNZE, Industrial Relations Division, Lockheed California Company[3]

OTTO N. LARSEN, Executive Officer, American Sociological Association[4]

RICHARD A. LESTER, Dean of the Faculty and Professor of Economics, Princeton University[5]

HYLAN LEWIS, Vice President, Metropolitan Applied Research Center, New York City

JOHN W. MACY, JR., President, Council of Better Business Bureaus, Inc., Washington, D. C.[6]

DAVID Z. ROBINSON, Vice President, The Carnegie Corporation of New York

JULIUS ROTHMAN, Associate Director, Department of Urban Affairs, AFL-CIO, Washington, D. C.[7]

PHYLLIS A. WALLACE, Professor of Management, Alfred P. Sloan School of Management, Massachusetts Institute of Technology

---

[1]Currently, The Urban Institute, Washington, D. C.
[2]Currently, Bartunek, Bennett & Garofoli, Cleveland
[3]Currently, Oxnard, California
[4]Currently, Professor of Sociology, University of Washington
[5]Currently, Professor of Economics, Retired, and Dean Emeritus of the Faculty, Princeton University
[6]Currently, Development and Resources Corporation, Washington, D. C.
[7]Deceased, December 1974

CONTENTS

PART I

THE MANPOWER R&D PROGRAM: AN EVALUATION

Chapter 1

INTRODUCTION: EVALUATING SOCIAL SCIENCE RESEARCH AND DEVELOPMENT IN GOVERNMENT

POLICY AND SCIENCE IN A MISSION SETTING

Government support for research and development (R&D) in the behavioral and social sciences is predicated on the belief that knowledge and information regarding individual behavior and social interaction can contribute to the development of effective policies. The key characteristics of social R&D in government are that no automatic match exists between knowledge-generating processes in science and knowledge-utilizing processes in public decision making and that, for most subjects, the structure of scientific disciplines does not correspond to the structure of policy interests. Further, both policy and science are dynamic in nature, each evolving in a manner somewhat distinct and independent from the other. Thus, under the best of circumstances, results from behavioral and social science study are likely to be only a blunt instrument for addressing complex policy concerns.

There is wide diversity in the manner in which federal departments and agencies have adjusted to the fundamental problem of matching knowledge-generating with knowledge-utilizing processes. One approach is to procure R&D in discrete units to fulfill specific needs. R&D of this "directed" nature can be used to develop and refine measurements of social processes, develop new or more detailed understanding of the factors underlying social problems, identify possible future social or economic issues before they become matters of pronounced public concern, or gauge the effectiveness of existing policies. An alternative approach involves government investment in the development of the sciences themselves. A wide variety of techniques, including provision of support for graduate and post-graduate training and efforts to develop new teaching facilities or to create new types of organizations in which researchers representing different disciplines can interact, can be used to ensure that the scientific expertise available to explore social problems grows at a pace commensurate with the speed and shifting emphases of policy formulation.

In a department or agency with a strong operational focus--what the Committee has called a mission setting--the social R&D function takes on added dimensions of opportunity and constraint. On the positive side, the conclusions reached or findings supplied by R&D may lead relatively quickly and easily to program changes or to better understanding about the complexities of familiar problems. In addition, R&D efforts tend to attract and help build a community of informed interests surrounding a policy area, contributing to the enthusiasm, criticism, and debate essential to the continued integrity and vitality of that policy area.

At the same time, however, R&D performance in a mission setting can be inhibited by the institutional tensions that inevitably exist among the operating systems that develop, guide, and execute policy. A new or different perspective may be difficult to achieve when social science R&D is directed predominantly in the interest of reinforcing, justifying, or implementing existing administrative or legislative policies. In addition, responsibility for many social policy areas normally extends across a number of agencies, departments, and branches in (and often beyond) the federal establishment; this can make it difficult to define the appropriate scope and objectives for R&D within an agency charged with a single aspect of that policy area.

The needs of an R&D program in a mission setting can also magnify the limitations that exist in the structure of the behavioral and social sciences for providing results relevant to policies and programs. In defining and examining significant social problems, it is often desirable to borrow and synthesize theoretical constructs, modes of analysis, perspectives, and observations from established disciplines such as economics, psychology, and sociology. This synthesis, however desirable and necessary from a government standpoint, provides scant mooring for a category of research that might be referred to as "basic" or "fundamental."* Thus, such research is difficult to describe or sustain in an agency setting.

When little consensus exists among operating and inquiry systems regarding R&D goals and emphases, scientific criteria of performance may conflict with those posited by an agency or department for its R&D program. The use of R&D results in decision making may not be a full test of R&D relevance or quality, since well-developed findings may be ignored (particularly if they conflict with established policies or beliefs) and unvalidated or poorly tested R&D findings, or negative findings, may be acted on (particularly if there is political support for such findings). Thus, a mission-oriented agency may not be sufficiently independent to maximize or optimize the tenets of good inquiry covering basic and applied concerns; it may be forced into an unnatural stance with respect to policy research; and it is not well insulated from evolving views within society of the significance (or the lack of significance) of research in the policy process.

FACTORS IN EVALUATING THE MANPOWER R&D PROGRAM

In its evaluation of the Department of Labor's manpower R&D program, the Committee emphasized four factors: substantive contributions, strategy, scientific capabilities, and management. Chapter 2 reviews the nation's manpower policy and the nature of manpower study, which provide the context for assessing the program's substantive contributions. The other three factors are assessed in light of the general criteria presented in the rest of this chapter.

---

*We define "basic" or "fundamental" research as inquiry into behavioral and social phenomena within a framework provided by disciplinary knowledge and methods that is as independent and as detached as possible from the values and imperatives of the public policy process.

R&D Strategy

An R&D operation in a mission setting faces conflicting demands. It can be conceived and employed as the lead element of a system of long-term policy and program development or it can be directed as a supporting activity for current operations. The first alternative recognizes the variable, contingent, and frankly experimental nature of most social and economic policies, as well as the generally undeveloped state of knowledge regarding their impacts; it actively seeks new ideas around which more effective policies might be established and new modes of analysis to identify developing issues that may require policy attention. The second alternative emphasizes the importance of current problems, perspectives, and operations, as well as the need to apply in policy whatever scientific understanding already exists; it seeks guidance and assistance for essentially incremental decisions that must be made immediately.

The Committee believes that an effective social R&D program in a mission setting should address both the objectives of long-term policy and program formation and the knowledge needs of daily government operations. Such an R&D program would encourage:

- the co-existence of program components aimed at different policy interests and at different kinds of knowledge-generating objectives, with appropriate interactions among them;
- substantial areas of concentrated effort in relation to elements of continuing long-term policy concerns;
- flexibility in responding to changes in the requirements for knowledge at government policy and program levels;
- balance among short-, medium-, and long-term R&D activities to permit both response to immediate needs or opportunities and the systematic accumulation of knowledge necessary to advance the overall state of science in the subject field.

Without a sense of strategic purpose, an R&D program in a mission setting can easily become dissociated from both the mainstream of operational activities and the central lines of development in academic disciplines that may be relevant to policy problems.

Scientific Capabilities

The disciplines involved in the study of manpower vary markedly in the perspectives and analyses they apply to short- and long-term policy concerns. Similarly, different researchers and organizations represent specialized competencies, not only by subject area and methodological preference, but also in terms of inventiveness, originality, independence of thought, and in their ability to administer complicated R&D activities. There is no absolute scale for assessing the adequacy of the mix of sciences, scientists, and scientific organizations employed in any social R&D program. Instead, judgments must be made regarding the match achieved between those scientific capabilities and the nature of the policy issues under study. Tests of both the validity and the actual use or usefulness of R&D results are necessary in formulating those judgments.

R&D Management

Both R&D strategy and choices among disciplines, researchers, and research organizations are defined and executed through R&D management. In a mission setting, R&D management involves:

- planning to ensure sufficient coherence and balance among R&D activities in relation to present and future policy and program interests;
- procedures for identifying and selecting highly qualified performers and for monitoring their progress toward defined project objectives;
- mechanisms for communicating results to potential users and for encouraging actual use; and
- staff technically qualified to oversee and direct all aspects of the R&D program.

The character and relevance of an R&D program are also influenced by the extent to which management practices enable it to function effectively in the larger context of government operations. That implies continuing efforts by the R&D program itself to impart among high-level agency or department administrators an understanding of the nature of research and of its relationships to the policies and programs they oversee. In turn, such efforts require substantial concern among all participants for defining a cohesive R&D strategy and for creating an internal environment attractive to capable scientists and administrators to work as both program staff and performers.

Chapter 2

MANPOWER POLICY AND MANPOWER STUDY

MANPOWER POLICY

Manpower policy in the United States concerns people in relation to work. It blends social and economic objectives: personal and social fulfillment through employment and improved economic performance through increased worker productivity, mobility, and efficient utilization of the nation's labor force.

Manpower policy overlaps with other social policy areas. For instance, the character of income transfer and maintenance policy affects the rate of labor force participation. The economic development policies implicit in fiscal and monetary policies, in large-scale federal government contracting, and in many state and local government activities affect the demand for labor both geographically and among different occupations. Manpower policies may be affected in other ways by work-regulation policies, such as those concerning collective bargaining, occupational health and safety, and employment discrimination, which influence the availability of jobs, access to those jobs by certain groups in the labor force, and the demand for particular skills.

Government manpower policies have focused primarily on the tasks of imparting or improving job skills and affording individuals greater access to employment opportunities; they have dealt less intensively with attaining more effective labor utilization throughout the economy. Traditionally, manpower policies have adopted a highly compartmentalized view of the labor force, emphasizing youth, ethnic minorities, and low-wage earners.

Manpower policies have been compensatory, attempting to make up for the apparent deficiencies of education, of labor market operations, and of government fiscal and monetary policies by dealing with the resulting unemployment, underemployment, and poverty in the labor force. In line with changes in economic circumstances and in political, social, and intellectual perceptions, the relative attention given in the manpower policy "mix" to each of these has shifted rapidly and often since the early 1960s. The threshold level of acceptable unemployment, for example, has been frequently redefined. In addition to the shifts in the policy mix, the overall federal commitment to manpower programs has been relatively low: during 1974, for example, when over five million people were unemployed, only 440,000 program openings ("training slots") were available.

Recent manpower legislation has established a new set of rules for developing and implementing manpower policies and programs. The Comprehensive Employment and Training Act (CETA), passed in 1973, has dispersed authority for a

major portion of the federal manpower effort among state and local jurisdictions--to over 400 program agents called "Prime Sponsors"--in an attempt to overcome the real and alleged shortcomings of earlier programming arrangements.* At the same time, CETA has mandated new forms of intergovernmental cooperation: state and local officials are asked to integrate manpower with other social programs, many of which may not be under their direct control. Federal officials, in turn, must find ways to address national concerns by encouraging cooperation within a system of decentralized policy administration.

For the federal manpower R&D program, which in the past gave substantial attention to strengthening manpower operations, the new dispersion of authority under CETA poses three special problems not often associated with a social R&D program in government: (a) how to identify appropriate points of federal influence in local decisions, which is necessary for national policy formulation; (b) how to monitor, assess, and respond to growing variation in local manpower programming; and (c) how to communicate R&D results to an expanded community of manpower practitioners (program planners, administrators, and operators).

MANPOWER STUDY

Issues in Manpower Study

Manpower study has focused on issues concerned with the supply of labor, the demand for labor, and the operation of labor markets. Progress in manpower study has been hindered by the enormous range of circumstances in which employment takes place, encompassing a wide variety of conditions and intricate and complex interrelationships among people and institutions. Generalizations about manpower and manpower problems are limited by the heterogeneous character of labor markets, which involve different systems of employment practice in various occupations and localities. Workers and jobs are also extremely diverse, usually more so as one moves up the job hierarchy. The motivations of the employee and employer, and hence the terms and conditions of employment, have many dimensions; work involves not only economic, but also psychological, social, and governance (collective bargaining, seniority, formal and informal work rules, etc.) aspects.

The categories used to classify and study jobs and workers necessarily include some variations in job content and in worker characteristics, attitudes, skills, and productivity, thus creating problems of measurement and comparability between employers, employees, and jobs. Job content is especially unpredictable because of its close association with relatively independent changes in technology, continuous modification in industrial processes, and variations in consumer demand for goods and services.

Labor markets are a dynamic system; the matching of workers and jobs is a continual process, with data and information frequently changing. Since many

---

*Chief among those shortcomings were a highly categorized array of manpower training programs with substantial degrees of overlap and conflict in operation and the absence of strong institutionalized mechanisms to ensure that programs were related to actual local needs.

employers and employees adopt a work-career horizon in thinking about jobs, it is difficult to examine occupations and occupational structure at any given point without considering employer and employee aspirations, expectations, and investments (particularly in human capital). Thus, knowledge about labor markets and about individuals in labor markets has time as well as place limitations.

The development of a complete empirical and theoretical picture of the ways in which labor markets do and should operate, as well as relate to one another, requires analysis at two levels: the macro level--national or economy-wide--and the micro level--local area, occupation, or workplace. There are problems in trying to mesh these two perspectives: at the macro level because homogeneous behavior is often assumed but difficult to validate; at the micro level (which has tended to be the dominant approach in manpower study) because an appropriate unit of analysis is often difficult to specify and aggregations or generalizations are problematical. The two vantage points may provide conflicting diagnosis and guidance with respect to the same policy issue.

Directions in Manpower Study

From the time of Adam Smith, the dominant emphasis in manpower study was on the economic factors that help determine labor supply and demand, in particular on the factors that can be measured by a monetary standard. In this century, there has been growing appreciation among researchers of the importance of non-economic factors that influence individuals' and labor market behavior. These factors, such as motivation, alienation, uncertainty, and resistance to institutional change, may have economic effects, but their character cannot be described or measured adequately only in monetary terms; economists and other behavioral and social scientists have been grappling with this issue. (A substantial concern within the discipline of economics has been the attempt to incorporate such factors into models of market operation.)

Government support for manpower study has promoted the investigation of characteristics (primarily non-economic) of individual behavior, of employing and employment-promoting institutions, and of markets that have effects on the economic performance and treatment of certain classes of workers. This support has helped to broaden the concepts and measurements of economic analysis. Study of manpower policy issues has heightened the interest of researchers from all disciplines in market imperfections and helped to spur economists in particular to extend their theory and analysis to try to account for such familiar phenomena as lack of knowledge among workers about job opportunities, faulty communication among individuals and institutions regarding current and future skill needs, and geographic barriers to labor mobility.

Each of the scientific disciplines (economics, sociology, psychology) and fields (education, industrial relations, social work) relevant to manpower study has its own theories, perspectives, and methodological preferences for explaining and predicting individual behavior and social interaction. Even within a discipline or field, there is often debate about methodological approaches. This has been especially so in economics, the discipline historically most concerned with manpower. While these disagreements are not unique to manpower (among areas of social policy), they have impeded the formation of consensus regarding the significance and validity of results in labor force analysis and labor market study.

The diversity of approaches is illustrated by a discussion of some recent directions in the three major areas of manpower study.

Factors Affecting the Supply of Labor

Efforts to identify and gauge the importance of non-economic factors that play a role in labor force behavior have focused intensively on groups with special disabilities in the labor market: racial and ethnic minorities, welfare recipients, youth, and other low-income groups. A range of cultural considerations--including language, sociopsychological elements in the formation of attitudes and aspirations with respect to work, and the barriers imposed by discrimination--have proven significant for explaining supply responses among these groups. Another critical variable in labor force participation (particularly of these groups) is health. Measurements of the precise effects of these factors remain a major challenge for science in this field.

Although the findings generated about these subjects have been important for manpower study and, in some instances, for policy planning and program design, they explore the behavior of individuals representing only a small portion of the labor force. It is not clear whether the considerations that help explain the supply responses of disadvantaged individuals are also true for other workers. Manpower study has not been consistently linked with areas of research, such as in industrial sociology, focused on non-disadvantaged members of the labor force. The few studies that have bridged this gap are particularly important because they allow more accurate differentiation of worker characteristics, skills, and interests. Without that broad view of the labor force, it is difficult to determine whether and precisely how government-supported manpower programs help workers to advance within occupational hierarchies.

Factors Affecting the Demand for Labor

Government policy to influence the general level of employment is carried out through control of the fiscal and monetary factors affecting economic expansion and decline and is not generally regarded as falling within the domain of manpower policy. However, the effectiveness of those policies to manipulate the aggregate demand for labor is limited by imperfections of labor markets. Those imperfections may be traced to such factors as limited modes of employment progression within firms, overly flexible or inflexible systems for wage determination, technological change, collective bargaining agreements, government regulation, workplace environment, and work design. From an employer viewpoint, seniority, wage levels, technology, and the like may be crucial elements in decisions about manpower utilization--in particular, the definition of occupational structures and changes in these structures--that ultimately affect the scope and intensity of aggregate unemployment and underemployment.

Manpower study has recognized but not emphasized the importance of these aspects in determining the demand for labor. There have, of course, been studies of some factors in demand determination, particularly with respect to hiring and promotion standards, the availability and character of in-plant training, and manpower planning practices within firms, but these have not been

cumulative emphases in the field. Furthermore, the attention given to these factors in different sectors of the economy has been very uneven.

Most federal manpower efforts for the unemployed, underemployed, and poor in the labor force have been targeted at entry-level job training: not to increase the total number of jobs or to influence their distribution, but rather to help the disadvantaged become more competitive in obtaining them. (Exceptions have been public service employment efforts responding to emergency situations, apprenticeship activity, and a limited volume of support for in-firm "upgrade" instruction and training.) The tasks of improving the job prospects of other labor-force segments (the highly educated, for example) and ensuring adequate demand for labor throughout the economy overlap many spheres of policy action, cut across the jurisdictional boundaries of numerous agencies, and include large areas of private sector responsibility. This has made it extremely difficult to encourage a more integrated and thorough view of labor utilization problems in government-supported manpower study.

Labor Market Processes

Manpower study has highlighted numerous aspects of labor market operations, with no certainty that all significant processes have even been identified. Clearly, manpower decisions have both internal and external dimensions, with worker choices made in a sociocultural context as well as in response to economic variables and with employer choices influenced by an array of forces in the firm as well as in the marketplace. Traditional economic analysis, relying on conventional variables in a supply-demand framework, has proven inadequate to fully describe the complexities of market operations. Manpower studies have therefore sought, and in some cases found, ways to define labor markets and employment practices as social, psychological, organizational, information, and value systems.

The development of science along such lines poses both opportunities and potential difficulties for further understanding of manpower problems. The analysis of markets as non-economic systems has been limited by the fact that no convincing body of theory has evolved to supplement economic concepts; there are only sketchy "maps" of social or psychological interaction covering small portions of a comprehensive labor market model. Non-economic data about market processes are spotty and generally unrefined, and the various explanations of market behavior in non-economic terms, however constrained, have not been linked coherently with one another or with an economic perspective.

Thus, manpower study has been hindered by uncertainty about the precise role of non-economic factors in determining labor supply, lack of attention to several important aspects of the demand for labor, and divergent approaches in exploring labor market functioning. These factors have mitigated the effectiveness of manpower study in dealing with the problems faced by manpower policy makers. And underlying debates in both study and policy are unresolved major questions about manpower: (a) by what techniques can government most effectively supplement existing education, training, and employment systems to encourage full and equitable job opportunities for all members of the nation's labor force and (b) to what extent should government seek to modify or regulate existing education and employment systems in order to minimize the need for compensatory manpower programs designed to serve the unemployed, underemployed, and disadvantaged in the labor force?

Chapter 3

FINDINGS

This chapter presents the Committee's findings on the Office of Manpower Research and Development (OMRD), the office responsible for the Department of Labor's manpower R&D program. These findings highlight:

- the program's major accomplishments and contributions to both manpower policy and manpower study;
- the effectiveness of strategies employed in that program;
- the scientific quality of OMRD-supported projects; and
- the effects of OMRD management procedures and capabilities on the quality and usefulness of R&D results.

The Committee finds that the manpower R&D program has made a number of outstanding contributions to policy, programs, and science in the manpower field. The detailed observations in this chapter illustrate major emphases of OMRD's past work and identify factors that help explain both those emphases and their importance to government policy. They also point to a number of substantive gaps and administrative weaknesses that have developed and persisted. These observations suggest ways to design and operate a stronger manpower R&D program in the future.

BACKGROUND: MANPOWER R&D IN THE DEPARTMENT OF LABOR

The Office of Manpower Research and Development is the major R&D arm of the Labor Department's Manpower Administration.* Since the R&D program began in 1962, approximately $250 million has been spent in support of nearly 2000 projects. Despite the seemingly extensive commitment that this expenditure implies, manpower R&D within the Department of Labor (DOL) has always been considered a small part of the Department's manpower function.

*Before 1970, two different offices in the Manpower Administration were responsible for the R&D program. The Office of Special Manpower Programs administered the "Experimental and Demonstration" program, which consisted primarily of demonstration and pilot projects; the Office of Manpower Research administered all other types of R&D, primarily research projects. Throughout this chapter, references to OMRD's work include the work done by its predecessor offices.

OMRD, like many of the other R&D units in the Labor Department, has been located at a relatively low level in the Department's organizational hierarchy. Its immediate environment is defined by a large operating system, the Manpower Administration, but it must also respond to the broader policy interests of top management, where an oversight function for all Departmental R&D is vested in the Office of the Assistant Secretary for Policy, Evaluation, and Research--ASPER. OMRD's institutional and informal relationships with policy makers, program administrators, operational, analytic, and field staffs, and with other R&D units have been constantly changing. The Office has had to adjust both its program and its internal management processes to many changes of Departmental personnel and to the frequent redefinition of manpower policy and program priorities; those realities of existence in a mission setting have made it extremely difficult to define and sustain effective R&D strategies.

Program Characteristics. OMRD activities have included analyses and demonstration or development efforts directed toward particular Departmental policy and program concerns; research on fundamental scientific issues in manpower, doctoral, post-doctoral, and institutional grants to encourage researcher training or to promote the development of new types of R&D facilities; and preparation of the annual *Manpower Report of the President*, a widely distributed document that reviews the nation's employment status and prospects, explores issues of manpower policy, and discusses relevant R&D findings. There has been great variation in project duration--from a few months to a decade--with the average study lasting two or three years. Individual project costs have ranged from a total of less than $10,000 to more than $1 million a year, with the average project costing a total of $150,000-$200,000.

In covering a large range of manpower issues, the OMRD program has attempted to advance both the general and specific interests of the Department of Labor and to address both long-term manpower policy issues and short-term concerns of program administration. Efforts have been made to connect science-building thrusts not only with lines of development in certain disciplines, but also with the course of national and local policy formulation and implementation. Work related to strengthening particular manpower programs--including demonstration, development, experimental, and pilot projects, which are all classified as "Experimental and Demonstration" (E&D) projects--has served primarily to generate operational insights. E&D projects have also served to attract capable practitioners to manpower programs during their formative years, to reduce early opposition to manpower programming in many local communities, and to provide opportunities for leadership and upward mobility for participants in the civil rights movement. Those special emphases, manifest in the use of E&D projects as part of a deliberate strategy of social change, decreased substantially in importance as the pace of manpower policy expansion slowed in the mid-to-late 1960s and manpower programs became a well-established component of federal government activity.

Methods and Performers.* Virtually all OMRD projects have been conducted extramurally, through performers--contractors and grantees--in universities, in

*Data collected by the Committee regarding OMRD methods and performers are presented and discussed in greater detail in Chapter 6 of this report.

the private sector, and in government agencies. That mode of operation was consciously pursued from the start of the R&D program as a means of (a) responding flexibly to diverse Departmental priorities within the confines of a limited budget and (b) maximizing opportunities to explore new lines of study whose boundaries and content have been and continue to be ill-defined.

There has been a fundamental shift in the manpower R&D program over time: a major de-emphasis in E&D expenditures, which dominated the overall effort between 1962 and 1970, and a corresponding (although not so massive) increase in commitments to empirical research after 1970. Although the specific scientific methods employed have been diverse, there has been a clear historical trend toward greater emphasis on model-building approaches in research and toward more highly structured E&D efforts utilizing random sample and control group design to measure project effects and effectiveness.

Because of the initial emphasis on E&D, a high proportion of OMRD's performers were not social scientists, but local and state officials or staff members of local social service agencies. That changed gradually in the years prior to 1970, as such agencies increasingly engaged economists, psychologists, educators, and social workers to pursue analytic aspects of program-oriented R&D, and then quite markedly when E&D expenditures declined and projects adopted more structured approaches. Among research project performers, the overwhelming majority have been social scientists, of whom the greatest number (nearly 45 percent) have been economists.

Management.* The management practices and capabilities of OMRD have not been very different from those found in other government offices operating social R&D programs. Planning is tied closely to the annual budget cycle in the Department and emphasizes a project-by-project approach. Through the end of 1973, OMRD received independent advice in planning from a group of scientists and practitioners convened under the auspices of the Secretary of Labor and the National Manpower Advisory Committee.

OMRD uses a standard range of methods for performer selection, including peer review panels, sole source procurement, and requests for proposals (RFPs), and also encourages the submission of unsolicited proposals. Project monitoring is carried out primarily by Office staff.

Efforts to disseminate R&D project findings to potential users and to encourage actual use depend on the activities of a small Utilization Division within OMRD. Findings are reported in a variety of written forms, through informal contacts between R&D office staff and potential users, and sometimes by "clearinghouse" arrangements established under OMRD contract or grant.

The present OMRD professional staff numbers about 40, a significant reduction from its size during the first decade of the manpower R&D program. Because of retirement, other attrition, and a variety of hiring restrictions, the Office has lost and been unable to replace many of its most skilled staff.

*OMRD's approaches to R&D management are discussed in further detail in Chapters 8 and 9.

OMRD CONTRIBUTIONS TO MANPOWER POLICY AND STUDY

The Committee finds that OMRD's contributions to both government manpower policy and to scientific manpower study have been substantial and important. Specifically, the Office has

- enhanced general understanding of manpower phenomena and thus the consideration of manpower policy within and outside of government;
- helped to generate new federal manpower programs;
- directed attention to several important manpower problems before they reached crisis proportion; and
- advanced the development of analytic tools for evaluating manpower program effectiveness.

The Committee finds that many of these accomplishments resulted from cumulative efforts over time on specific topics.

At the same time, the Committee finds gaps in the pattern of manpower R&D support: subjects or questions of potentially major significance to manpower policy and manpower study that have remained undeveloped or underemphasized. Those are identified at the end of this section, and the reasons for them considered in the subsequent section of this chapter on R&D strategy.

Understanding Manpower

Measuring Manpower Problems

OMRD efforts have been instrumental in identifying and exploring the complexities of manpower problems, thereby clarifying the understanding of those problems in the policy process. OMRD research studies have given continuous attention to describing and finding ways to measure various elements of manpower development and utilization, including:

- job vacancies (169, 166, 66);*
- projection of future manpower requirements at various levels of geographic aggregation and for certain occupations (245, 131, 89, 74, 163, 253);
- the nature and extent of occupational training available to the nation's labor force (241, 193, 19);
- the spatial and occupational distribution of unemployment and underemployment (255, 7, 114, 75, 95, 248); and
- the employment experiences of certain segments of the labor force (129, 205, 254, 77, 48, 128, 151, 269, 270, 247, 30, 265, 64, 18, 150, 24, 194, 260, 217, 94).

OMRD's focus on segments of the labor force, particularly minority groups and the economically and socially disadvantaged, contributed to and helped justify a number of legislative and program developments. These included amendments to the Manpower Development and Training Act (MDTA) that provided incentives to make manpower programs more attractive to those groups, created special training programs for criminal offenders and for youth rejected in the military

*Numbers in parentheses refer to list of references found at the end of this report.

draft, and intensified manpower efforts in urban ghetto areas. Equally important, some of the OMRD-supported research helped to upgrade several government data series referenced regularly in manpower policy decisions.

Other research helped reinforce commitments by the Congress and by the Manpower Administration (commitments formalized in the 1968 MDTA amendments) to improve the quality and availability of data on job openings, to aid job seekers, and to guide decisions on manpower training program content and other Department operations. (For a sample of OMRD-supported work related to labor market information systems, see 35, 139, 228, 240, 243, 167, 230, 42.)

New Knowledge and Policy Development

The Labor Force. Since 1965, OMRD has supported the National Longitudinal Study of Labor Force Behavior, known as the Parnes Study (after its director), a large-scale, scientifically structured data and analysis effort that has tracked the employment experiences of four different groups of workers representing four major segments of the labor force (177, 178, 181, 183, 123, 124, 180, 278, 207, 210, 189, 190, 209, 176, 208, 125, 182, 179, 44, 122, 160, 57, 206, 118, 61, 171, 235, 67, 92, 164). In addition to the work done by the Study staff itself, the Parnes data have been made available for use by researchers throughout the country. (The Parnes project has also been a significant training ground for a number of younger researchers in manpower.)

Although full analysis of the Parnes data is at a relatively early stage, significant findings have already emerged with respect to:

- identifying factors associated with job acquisition, including education, health, information, formal and informal occupational training, occupational structures, and assessing their differential effects on individuals' employment experiences;
- explaining variations in labor force participation and unemployment rates among different worker groups (primarily defined by race) in terms of job satisfaction and barriers to employment, such as poor health or discrimination, that may limit access to entry-level jobs or to promotional ladders; and
- revealing the relative importance of attitudes toward work in determining occupational mobility and levels of labor force participation, especially among women.

Because of its comprehensive nature, multidisciplinary focus, and longitudinal approach, the Parnes Study has been producing results that could not have been achieved in separate studies of specific population segments or local situations.* The data represent a tremendously rich resource for further examination of labor force dynamics, including the employment behavior of family units and the importance of total family income in that behavior, in addition to more extensive analysis of the topics already explored. The data will also allow

*Longitudinal study also has several disadvantages: it is very costly, requires an extended time commitment to produce usable results, raises serious methodological problems, and calls for careful and consistent management. The relative success of the Parnes Study despite such difficulties is a great tribute to the researchers and OMRD staff involved.

study of common elements in the operations of different labor markets. Findings from future studies based on the Parnes data or similar longitudinal inquiries should also be important in the implementation and evaluation of certain manpower policies and programs of the Labor Department's U.S. Employment Service, the Office of Federal Contract Compliance, and the Wage and Hour Division, which have a direct influence on manpower utilization in the private sector. (For examples of other OMRD-supported work pertaining to the labor force, see 21, 36, 116, 211, 86, 75, 64, 10, 65, 227, 68, 9, 186, 91, 12, 155, 187, 126, 212, 275.)

Labor Markets. A comparatively smaller body of OMRD-supported research has been focused on labor market operations. However, several empirical and theoretical studies have significantly influenced understanding of manpower problems and, as a result, the context of policy thinking in the field.

The empirical and theoretical research of "dual" or "secondary" labor markets provides one example of the nature and value of those studies (67, 49, 56, 6, 64, 18, 62, 102, 227, 48, 115). The theory maintains that the secondary labor market, which is characterized by low wages, absenteeism, high turnover, and little opportunity for training or for promotion into higher level jobs, operates to keep disadvantaged workers disadvantaged. Even though the validity and analytic power of this theory is intensely debated, it has been seminal for manpower in two ways: (a) focusing the attention of national and local program administrators on the types of training and placement activities conducted under DOL auspices and (b) illuminating several lines of inquiry for future R&D, including employer and employee behavior within firms and the relationships between manpower and macroeconomic (fiscal and monetary) policies for combating inflation and unemployment.

Significant research pertaining to labor market operations has also been conducted on the subject of "job search" (213, 218, 225, 228, 229, 266, 41, 226, 230). Attention has been given to explaining the relative duration of search among several different classes of workers in terms of their attitudes, values, and expectations; to the effectiveness of different job search methods; and to the influences of different job information sources on search outcomes. Findings on this last point have prompted both OMRD and operating agencies within the Manpower Administration to explore a new range of possibilities for job information and job referral procedures (35, 228, 26, 119, 148, 158, 274, 101).

Job search has been a topic of manpower study that has benefited greatly from cross-disciplinary fertilization. Specifically, work by sociologists has challenged the validity of the job search models of other disciplines, particularly economics, prodding further articulation and refinement of the assumptions and theories on which those models were based. A recent study (88) shows that, for professional, technical, and managerial jobs, job search is often not the method used for locating job opportunities (also see 25); rather, labor market information is transmitted as a by-product of other social processes. Therefore, the search model promoted by some economists (see, for example, 231), based on deductions from theory founded on data regarding lower-level jobs, does not fit the supply side for high-level jobs.

Other OMRD studies have focused on geographically or occupationally defined labor markets. These include urban (75, 87, 223, 105, 104, 149, 145, 200, 100, 103, 102, 217, 185), small city (276), and rural labor markets (264, 151, 167); various agricultural labor markets (162, 27, 51, 234); markets for particular

professional occupations (10, 25); and labor markets in particular economic sectors, such as health, government, and construction (163, 253, 109, 81, 196, 42, 153, 84, 73, 58, 219, 155).

Work has also been sponsored exploring informal labor markets: social networks through which job information is transmitted and which may reinforce or weaken certain attitudes toward work (8). A small number of projects have been sponsored to model or simulate flows of workers through various labor markets (105, 277, 16, 115, 274, 270) and to identify potential sources of labor market disruption (173). These efforts have added to the general stock of knowledge and theory concerning employment prospects and problems; they have also highlighted some of the relationships between manpower and other major social and economic policies (for example, 11).

Labor Market Deficiencies. A strong concern for labor markets has led OMRD to analyze possible and actual deficiencies in labor market operations. Studies have examined hiring practices (46, 97, 161, 87, 239, 106), aptitude testing (98, 142, 63, 96), and promotion standards (120, 153, 224). Some effects of pension plan provisions and of various forms of unemployment compensation (such as severance pay and Unemployment Insurance) on worker mobility and job search have been assessed (130, 17, 15, 43).

There have also been studies of licensing and its influences on labor mobility and entry in certain occupations. This work (for example, 214) has incorporated the perspectives of several disciplines, including economics and psychology. Work on this topic has been especially provocative for several reasons: (a) it shows that barriers to mobility and entry imposed by licensing help to explain the contradiction apparent in the co-existence of overall high unemployment and labor shortages in some occupations; (b) it illustrates ways in which occupational regulations promulgated to achieve non-manpower purposes (consumer protection, for example) can adversely influence manpower development and utilization; (c) it reveals a severe problem (and adverse effects for manpower) with widely dispersed authority for formulating and implementing occupational regulations; and (d) it points to a pressing need to study the manpower consequences of other forms of employment regulation.

Another emphasis in OMRD's research on labor market deficiencies has been employment discrimination (7, 65, 99, 246, 254, 92, 217, 98). A substantial share of OMRD's work on this subject has been concerned with identifying various institutional barriers to equal job opportunity for racial minorities (203, 150, 206, 67, 87). These barriers include employer hiring and promotion policies and practices (63, 161, 46, 23), attitudes toward minority group workers among firm managers and employees (117), certain union activities (152, 196, 204), and problems in measuring job content (272, 202).

The most visible impact of this research has been on the apprenticeship system. A 1965 study (152) that identified serious discrimination against blacks in entry and training for certain jobs, as well as ways in which such discrimination might be eliminated, led to major program thrusts by the Department of Labor and by many unions. (For examples of later OMRD-supported work related to apprenticeship, see 153, 69, 174, 236, 45.) As a result, the number of minority group members entering skilled occupations through apprenticeship has been significantly increased.

Generating New Programs

Apprenticeship is only one example of an R&D contribution to manpower programming. Between 1962 and 1975, the largest portion of the manpower R&D budget was committed to demonstrating, developing, and testing new programs and techniques for training and service delivery, primarily through E&D projects. This followed very closely the policy emphasis, apparent in manpower legislation, on programs to compensate for the deficiencies of education, labor market operations, and broad economic management.

Especially during the 1960s, E&D projects were operated primarily as catalysts for social action, with the formal generation of information and insight regarding operational problems an important, but subsidiary concern. Thus, E&D projects sought ways to extend and adapt manpower training and services to particular segments of the labor force. These efforts paralleled and supported the development of legislation, regulations, and categorical programs aimed at the manpower problems of youth (247, 136, 268), older workers (137, 221, 222), ethnic minorities (135, 113), low-wage earners (28, 31, 197), the poorly educated (232, 52, 55, 70, 233), and migrants and migrant workers (1, 2, 211, 37). There were also projects that focused on workers in particular subprofessional and professional occupations--such as those in service occupations (34, 216, 242, 263) and in aerospace engineering (47)--in which unique economic or social circumstances were affecting employment opportunities or conditions.

As a by-product of such E&D activities, some knowledge has been gained about how individuals behave and interrelate in the labor force and how institutions operate in the labor market. Although there have been few attempts to draw general observations and conclusions from this work, important concepts about training and services were introduced into the policy context surrounding manpower decisions. One was that, given sufficient time and resources, it is possible to train nearly any individual in a marketable skill. Any particular program would still be judged in terms of the relative cost and benefits of the training, but the "trainability" of some labor force groups became a much more minor issue than it had been in the early stages of manpower policy development. Another critical concept was that outreach services are necessary to attract the participation of the disadvantaged in manpower programs. E&D projects also identified a strong political dimension in manpower programming, resulting mainly from conflicting motivations and overlapping responsibilities among labor market institutions. This has been most clearly reflected in problems of local coordination in the delivery of manpower services.

Demonstration and development activities not only influenced policy formulation and supported a number of early MDTA amendments that extended manpower services to special groups in the labor force, but also made substantial contributions to the design or improved operations and application of such categorical manpower programs as on-the-job training (OJT) (175, 55, 52), Neighborhood Youth Corps (NYC) (251, 59, 60, 198, 143, 70, 159, 54, 267), Job Opportunities in the Business Sector (JOBS) (112), and others (107, 262, 170, 271, 232, 236, 273, 85, 257, 261, 108, 50, 172, 39). On several occasions, "models" for an entire program or for major program components invented, demonstrated, and refined through E&D projects were infused directly into manpower operations. In other cases, such models underwent relatively long periods of testing before being accepted and used by the Department.

A large number of demonstration and development projects contributed to a support structure for manpower programs, developing, testing, and applying

materials for instructing manpower trainers and counselors (111, 147, 238, 252), instructional materials for manpower trainees (78, 29, 237), and non-culturally biased instruments for measuring the occupational skill interests of those trainees (110, 157). Demonstration and development projects have also given continuing attention to strengthening the operating procedures of Manpower Administration agencies such as the U.S. Employment Service (1, 2, 140, 110, 90, 4, 165, 32).

The program-generating impetus in E&D activities diminished in the late 1960s and early 1970s as manpower programming matured and then as a result of CETA (passed in 1973), which gave local and state officials authority for program development and innovation. During recent years, E&D projects have had two major foci: the design and assessment of new program approaches for hard-to-employ groups, such as alcoholics (146, 261), criminal offenders (168, 195, 156, 261, 138), and drug addicts (83, 127, 261), and methods of delivering services, such as job counseling and placement for minority group women, to groups that traditionally have not been well served by such labor market institutions as the Employment Service, union hiring halls, and private employment agencies (119).

Procedures generally employed in E&D projects also changed during the late 1960s and early 1970s. Projects were earlier conducted mainly as tools to promote policy action; more recently, increased concern has been shown for more careful analysis to ensure broad applicability of findings and results (53, 188, 146, 138). The 1970 merger of the separate manpower research and E&D offices precipitated stronger links between the diverse modes of inquiry and discovery that each had previously pursued (for example, 150 and 119, 86 and 53, 188), including a more intensive application of empirical methods for measuring outcomes in demonstration, development, and experimental efforts. With manpower policy evolving at a reduced pace and increased budgetary pressures evident in manpower programming, there has been less Departmental interest in program initiatives and greater hesitancy to assume the risks attendant to untested social invention.

Anticipating Future Manpower Concerns

OMRD has supported some work that attempted to anticipate future manpower policy concerns. This emphasis has not been as pervasive in the R&D program as efforts to measure and analyze manpower problems and to generate new manpower programs for two reasons: (a) the Bureau of Labor Statistics and various offices in other federal agencies have primary responsibility for labor force, employment, and economic projections; and (b) the Manpower Administration has experienced a period of rapid change since 1962, tending to focus its activities, including R&D, primarily on short-run operational interests rather than on long-term policy development.

Nonetheless, there are examples of R&D projects that explored certain issues well before they became major policy concerns, including studies to:

- estimate the manpower requirements that would be necessary to achieve national goals for economic and social progress (131);
- develop and improve methods to assess the manpower impacts of prospective changes in federal spending, both nationally and for individual labor markets (32, 33, 134, 133, 82);

- examine potential sources of labor market disturbance, such as illegal immigration and increased automation in particular industries (173, 155); and
- measure the potential labor force impacts of major dislocations in the economy, such as exhaustion of Unemployment Insurance benefits during a period of substantial and sustained unemployment (39, 154, 27, 201).

Many of the findings derived from this kind of work have been introduced into the policy arena through discussions contained in the annual *Manpower Report of the President* (see, for example, 258, p. 119ff).

Tools for Evaluation

Even though evaluation as such is not a formal OMRD responsibility (the Manpower Administration has a separate Office of Manpower Program Evaluation), R&D activities have helped to strengthen methods for assessing policy and program effectiveness. Part of this contribution has been indirect, resulting from OMRD's independent interest in analytic assessment of E&D projects and in accurately assessing the effectiveness of established MDTA programs (1, 2, 232, 233, 52, 40, 91, 267, 184, 13). The relatively high value of on-the-job training, outreach services, and educating the disadvantaged in basic literacy skills was established in such a manner. However, there have been other instances where findings regarding program effectiveness, particularly negative findings, have not had significant impact--in the Work Incentive Program (WIN), for example (86, 64, 18, 72, 199, 79, 121).

More directly, OMRD research has contributed to the development and use of appropriate techniques for gauging program impacts on individuals. Several studies helped to promote the adaptation of human capital theory (following Becker, 14, and others) to the measurement of training program effects (93, 267, 220, 20). These efforts should be viewed against the backdrop of broader efforts to advance quantitatively oriented evaluation research (including work by other R&D units in government) and to strengthen methods of program design and assessment through greater and more rigorous use of control group and random selection techniques. While there are still major problems in the accuracy and usefulness of evaluative research techniques, the overall quality of evaluative studies in the manpower field has been improved, and such studies have sometimes provided important indications of empirical and theoretical research needs.

Conclusion

In the Committee's judgment, the most important substantive accomplishments of the manpower R&D program have come in four areas.

1. The collection and analysis of labor force data, particularly under the National Longitudinal Study of Labor Force Behavior (the Parnes Study), permits more thorough and detailed examination of the economic, institutional, psychological, and social factors underlying employment success than ever before possible. These data lay a strong foundation for further study of manpower problems across the entire labor force, utilizing the

perspectives and methods of a wide range of behavioral and social science disciplines.

2. The development of new theories to illuminate complexities of labor market operations, especially theories that help explain relationships between market imperfections and individuals' employment experiences (which have posed challenges to other theoretical analyses and interpretations of manpower problems), provides new grounds for discussing the role and effectiveness of manpower policies.

3. Program models and techniques for serving the manpower needs of the disadvantaged have been designed and implemented.

4. New methods for assessing manpower policy and program effectiveness have been refined and applied.

This work has been characterized by sustained effort and a relatively high concentration of program resources and by a more stable and goal-oriented focus than other OMRD work. Furthermore, this work has been pursued by performers drawn from a relatively wide array of disciplines, in contrast with efforts directed toward other subjects that seem to have been dominated by one or another discipline.

Along with OMRD's major accomplishments, there have been subjects of potential significance that have been relatively underemphasized--touched tangentially in a variety of ways yet never fully confronted, partially developed, or approached and then dropped. These reflect not only gaps in the manpower R&D program, but also major deficiencies in the overall manpower knowledge base. In the Committee's judgment, there are six subjects or problems that have been identified in OMRD projects, but not systematically or directly pursued over time, that offer opportunities for measurable gain in understanding for manpower and manpower study.

1. A large number of diverse and scattered studies note the concurrent existence of locally severe unemployment and significant labor shortages in several occupations. While such facts have been a matter of general concern in much manpower study, their implications for labor market theory and for training policy have not been considered and analyzed thoroughly.

2. Another collection of projects (noted above) highlights the importance of cultural factors in the labor market experiences of the disadvantaged and some of the ways in which the cultures of the "minority" and the "majority" can interact with negative consequences for both "minority" individuals and public policies that attempt to promote effective manpower development. Such findings point to a need for new studies, using the theoretical constructs, perspectives, and techniques of such disciplines as applied anthropology and sociology, to be integrated with the approaches traditionally employed by economists in conducting labor force investigations.

3. Several studies have explored job search behavior as a potentially significant element in or modifier of conventional labor market theory,

but there are serious data (coverage and measurement) problems that must be addressed before various hypotheses and assumptions about job-seeking practices can be thoroughly tested and their importance for manpower policy fully assessed.

4. A recent OMRD-supported study (149) analyzed the deficiencies of existing theories and studies of racial discrimination in employment. Because of widespread government regulation and adjudication in this area under varying concepts and methods of measurement in different labor markets, there is an urgent need to develop more satisfactory scientific explanations of job discrimination phenomena.

5. A variety of studies commissioned to assess demonstration and development projects in manpower have pointed to the substantial role that non-treatment (institutional) variables--such as training staff skills and experience, training program contacts and relations with prospective employers, and coordination with other social program activities--can have for the effective delivery of manpower services. Concentrated attempts to strengthen methods of measurement and analysis of such factors would help enhance both future E&D efforts and the evaluation of manpower programs generally.

6. Very early studies (by OMRD and others) of technological change in industry indicated that problems of worker dislocation and adjustment would not be so severe, at least in the short-run, as had been suggested by some of the more extreme speculators in the late 1950s and early 1960s. This subject was then essentially dropped from the manpower R&D agenda even though it presents possibilities for developing new techniques to analyze changes in job content and to better understand and predict future job requirements.

The pattern of inconsistent advancement of both policy analysis and more fundamental study in manpower--exemplified in the six subjects described above--appears to be a major consequence of the difficulties experienced in attempting to define and follow appropriate strategies for R&D in a mission environment.

R&D STRATEGY

The Committee finds significant elements of a reasonably coherent R&D strategy in the OMRD program, particularly in terms of attempts to: (a) identify or develop means to promote the employability and employment of the disadvantaged; (b) understand complex labor market functions in order to provide sounder footing for manpower policy formulation; and (c) build and maintain scientific capabilities in the manpower field. At the same time, however, the Committee finds that some elements of a coherent strategy are lacking, particularly with regard to: (a) high levels of interaction among program components; (b) adequate integration of perspectives among conventional disciplines, of conclusions derived from policy-, program-, and science-directed studies, and of insights gained through theoretical, quantitative, empirical, institutional, and judgmental analyses; and (c) long-term cumulative growth of a comprehensive knowledge base

in manpower. In other words, the manpower R&D program has not demonstrated a unifying, central thrust. The Committee finds, however, that this has often been for reasons beyond OMRD's immediate control.

Problems in Strategic Development and Execution

For its first eight years, the R&D program was organizationally dispersed, which led to disparities and discontinuities between research and E&D efforts that have only recently begun to dissipate. More important, OMRD has always been asked to address diverse priorities, including program matters that were mainly operational, policy matters that were sometimes highly political, and scientific matters that were primarily theoretical and very distant from the daily routines and pressures of government. With nearly all of its limited budget and staff resources committed to extramural support and facing demands to treat new manpower issues as they arose, OMRD has had little capacity or opportunity to guide various projects and program elements in relation to one another or to piece together findings emerging from different modes and levels of inquiry into any broad conception of a policy-relevant knowledge base.

There have, of course, been attempts to establish long-term plans for manpower R&D--by groups of scientists, by OMRD staff, and through the Departmental planning process--but such efforts have seldom had lasting effect. One apparent explanation is that manpower, both in policy and in science, has been loosely defined. (Despite the progress made over the past decade, much of the terrain in manpower study remains unexplored.) Because manpower study was relatively new and undeveloped in the early 1960s, OMRD probably had no real choice at that time but to rely on the advice of leading researchers and to follow scattered "targets of opportunity" as these arose. Today, the Committee finds such a rationale less compelling, even though reasonable and informed individuals would still disagree somewhat over the features of an appropriate plan for needed long-term manpower study.

Counterposed to this argument, however, are the realities of OMRD's existence in an operationally oriented federal department, realities that place a high premium on flexible response to personnel changes and to rapid shifts in policy. Among Department officials, the Committee found only scant acceptance of the need for comprehensive, extended efforts aimed at better understanding fundamental and persistent manpower problems. Even during periods of relative stability, R&D has not been a high priority within the Department, and officials outside OMRD have seldom given thorough and continued attention to essential matters of R&D strategy: (a) what needs to be learned over the next several years in order to guide more effective policy; (b) what can be learned given the present state of knowledge and technique in the behavioral and social sciences; and (c) what can be accomplished, in terms of strengthening both fundamental and applied insights into manpower problems, at different levels of resource and staff commitment to the R&D program. Thus, OMRD has faced the dilemma that even if it formulated a cogent long-term plan for manpower inquiry (which it has attempted), it would be extremely difficult to obtain Departmental consensus and support for that plan. OMRD's response to this dilemma has been a practical one: to use some of its resources to maintain commitments to a few areas of unassailable policy or scientific importance and to pursue widely scattered objectives with the remainder. This approach has had some positive

results, but has also held several negative consequences for every aspect of the manpower R&D program.

Strategies for Policy Relevance

In covering a wide range of topics and interests, most OMRD support has been given to separate and discrete projects. Aside from a few areas of concentration, manpower R&D program expenditures have been widely dispersed. Even when a grant or series of grants has been given to a research center or institute, it has not necessarily been for work on a single subject or set of related issues. Such an approach may have been inevitable for a new field of study and for a mission-based effort (and may have been desirable in the early stages of the program in order to encourage interest among competent performers and to gain experience with a variety of R&D approaches under varying conditions), but its limitations have tended to increase over time.

Expanding and cumulative effects cannot be obtained unless successive analyses of a problem build consciously on earlier results. Without research sufficiently precise to ensure reliable bases of inference, or without well-structured and executed demonstration project efforts in a number of locations, adequate testing of hypotheses, assumptions, or policy premises is nearly impossible. When projects continually involve new and different subjects or address the same subject without thorough regard to prior treatment, important gaps or deficiencies that have appeared in past work are apt to be neglected and, thus, remain unfilled or uncorrected. In addition, support for R&D in discrete units does not promote the balance among disciplinary competencies and methods or the communication among disciplines that is necessary for effective, policy-relevant manpower R&D.

Strategies for Strengthening Scientific Capabilities

The Committee finds that OMRD has played a central role in increasing the number and improving the quality of researchers active in manpower and has helped to expand the nation's base of institutional facilities for conducting manpower R&D. The uncertainties over the proper focus of manpower study and the pressures that have mitigated against a balanced approach to strategy for policy relevance have not seriously affected OMRD strategies for strengthening scientific capabilities in manpower.

Researchers. Through a program of doctoral dissertation support for graduate students in manpower, OMRD has added more than 200 well-trained individuals to faculties in economics and other disciplines since 1965, with a small number also having served in various government agencies. The Committee finds that the quality of OMRD-sponsored dissertations compares favorably with similar work in the behavioral and social sciences. A referee panel of mature researchers has proven an effective mechanism for identifying the most promising dissertation proposals for funding. A parallel program of small post-doctoral awards has supported short-term, often innovative research by more than 100 established manpower researchers.

Institutions. Between 1966 and 1975, OMRD provided long-term (four- or five-year) funding at 19 colleges and universities for programs of undergraduate and graduate instruction and for self-directed faculty research in manpower. The Committee finds that this support has contributed to an increase of academically based manpower research centers over the past decade. However, in several recipient institutions, the grant awards were not of sufficient size to attract the "critical mass" of skilled faculty members (and students) and the additional resources from the university itself necessary to ensure continuation of manpower research and research training efforts beyond the period of OMRD support.

Between 1966 and 1974, OMRD also supported six Experimental Manpower Laboratories (EMLABS or Labs) to strengthen institutional capabilities for conducting demonstration and development projects. The EMLABS were an effort to overcome certain problems and restrictions in earlier E&D projects: (a) a two- or three-year limit that was often unrealistic in light of the start-up requirements for program-oriented activities and of the need to accumulate sufficient operational experience with new techniques to promote their wide application in manpower programming and (b) resistance experienced in recruiting skilled social science researchers to pursue analytic and evaluative tasks in assessing project effectiveness and outcomes. While several of the Labs did evolve into continuing centers of E&D expertise--providing useful results in the areas of youth programming, counseling, basic literacy instruction, and offender training--staffs in the Labs and in OMRD had difficulty directing the EMLABS program in relation to the changing array of program interests within the Department of Labor.*

SCIENTIFIC QUALITY

While strategic considerations helped to define the content of the R&D program, the quality of the work has helped determine the policy and scientific value of the projects supported. Since virtually all of OMRD's work has been conducted extramurally, the interests and competencies of the contract or grant performers were major influences on that quality. And since the broad nature of manpower requires application of a full spectrum of study methods, the match of analytic techniques to specific problems has been important as well. The Committee's own assessment, along with extensive reviews conducted for the Committee,** showed the scientific quality of OMRD-sponsored work to be varied, but generally good.

Methods

The Committee finds the overall quality of OMRD-supported work to be good--with a large majority of projects properly designed and executed with respect to

*Plans for a new round of Labs projects, designed to account for that difficulty, were recently cancelled because of budget limitations. Those plans were based in part on an independent evaluation of the EMLABS program (3).

**Five state-of-knowledge papers that reviewed past OMRD work in several major subject areas were prepared for the Committee; a listing appears in the Appendix.

scope and detail of observations, range and sensitivity of measurements, and inferences thoroughly justified by data collected and analyzed--but there have been some definite deficiencies. Most notably, a number of studies (including demonstration, development, experimental, and research projects) involved inadequate or inappropriate sampling for the nature of conclusions derived about observed changes or effects. The Committee attributes this problem to inadequate funding for some projects and an OMRD staff insufficiently experienced in the techniques of social science research to be able to recognize the possibility of such defects at the appropriate stage of project conception and design.

In addition to those deficiencies, a sizable body of early E&D efforts, operating as part of a deliberate social change thrust, utilized techniques that could not be equated with any disciplinary method nor with any identifiable style of interdisciplinary study. Results were reported descriptively, not analytically, and their validity was not vigorously tested since scientific insight was not a central purpose. The gradual diminution of the E&D role as a catalyst for government social action was accompanied by the increased application of more highly structured observational, measurement, and analytic techniques, which has led recently to greater opportunities to derive findings from E&D that could contribute to manpower study as well as manpower program development.

Changes in manpower research methods have been similar to those found in the E&D experience. Especially during the early years of the R&D program, there was an emphasis on localized case study and description. While these efforts highlighted various new dimensions of manpower problems, they provided little indication of the extent and relative severity of such difficulties. Nor did they ordinarily have sufficient scope or provide sufficiently detailed findings to contribute to fundamental scientific understanding of manpower. Again, over time, OMRD came to give increased attention to more quantitative approaches, emphasizing inferences about labor force and labor market dynamics derived from the application of sophisticated mathematical and statistical techniques (which, in comparison to institutional or judgmental analyses, place a heavier premium on data accuracy and coverage, as well as on realistic modeling assumptions). In changing its methodological mix, OMRD has helped to encourage and maintain one necessary facet of diversity in manpower study.

Performers

The performers conducting and participating in OMRD projects differed greatly in the range of their abilities and in their reputations in manpower or in academic disciplines. E&D contractors and grantees, since they included both practitioners and social scientists, represented a wider range of skills than research performers.

It is particularly difficult to judge the abilities of non-scientists engaged in E&D activities. Since the main purposes of those efforts, at least initially, were to promote and demonstrate the feasibility of new policy and program actions, substantial weight must be given such characteristics as managerial ability, commitment, political sensitivity, and inventiveness--all hard to measure systematically, particularly years after the fact. Nevertheless, the Committee believes OMRD and its predecessor offices deserve high marks for choosing and aiding the development of E&D performers whose work sometimes

influenced policies and programs quite directly, who identified a number of program approaches that were without precedent in the social policy arena, and who, in many cases, remained active in manpower well beyond the period of E&D support.

After 1970, the basis for E&D activities shifted toward more formal knowledge-generating objectives and more scientists became involved. While the Committee finds that, for the most part, this class of performers has had up-to-date scientific skills, only a limited number could be regarded as leading experts in matters of designing E&D projects and assessing their results.

The greatest number of OMRD research performers have been economists; this dominance has continued even as R&D program priorities have evolved. In the Committee's judgment, these performers (as well as those drawn from other disciplines and fields of the behavioral and social sciences) have usually demonstrated relatively high degrees of competence in their work. Nevertheless, OMRD's heavy reliance on economists can be viewed as problematic: manpower issues have significant psychological, social, and institutional dimensions, and there is evidence of important contributions by non-economists and of beneficial cross-disciplinary interchange in some subject areas (job search, licensing, and certain labor exchange functions, for example).

While a constant ebb and flow exists in the relevance of particular conventional disciplines to particular manpower policy problems, the view of manpower study as an extension of economics has been strong in many quarters. Within academia, the analysis of employment and unemployment problems has historically been regarded as a nearly exclusive province of economists. That perception has persisted, inhibiting interest in manpower R&D by researchers from other disciplines and fields. Continuing efforts by OMRD to recruit sociologists, psychologists, and others--usually to participate in specific projects--appear to have had only limited impact on this situation. Even among those who have been active in the manpower R&D program and who, of necessity, have grasped and applied the analytic modes of several disciplines in exploring manpower phenomena, there has been a hesitancy to recognize and encourage the potential insights that a more diverse group of behavioral and social scientists might bring to manpower study. A peer orientation, as opposed to a policy or problem orientation, remains operative both among researchers adhering to traditional disciplinary paths and among members of the manpower research community.

R&D MANAGEMENT

The content, relevance, and use of manpower R&D have been strongly influenced not only by OMRD's strategy and by the quality of the work, but also by OMRD management practices and capabilities. The Committee finds that the declining size and experience of OMRD's professional staff has adversely affected performance in all aspects of R&D management.

R&D Planning

The Committee finds that manpower R&D planning--outlining strategies and defining projects that can effectively fulfill those strategies--has been weakened by a significant and persistent disjuncture between the "real-time" orientations

and expectations of policy and program officials within the Department of Labor and the medium- to long-term performance requirements of many kinds of R&D. The annual planning process encourages definition of an OMRD program that maximizes flexible responses to immediate and changing needs; this flexibility has reduced the potential to benefit through sustained efforts to advance understanding of the factors underlying labor force and labor market problems. The OMRD staff as a whole is not sufficiently aware of developments in the disciplines related to manpower study to provide a broad view of long-term needs and opportunities in the field. Recent disbandment of an independent R&D advisory group to the Manpower Administration has eliminated another potential source of information and guidance to counterbalance institutional pressures that encourage pursuit of a highly diffuse OMRD program.

Performer Selection

Because federal R&D offices face a variety of circumstances in distributing contract and grant awards, federal procurement procedures provide for several selection methods. These include: competitive procedures (such as requests for proposals) when an office knows and can define precisely what it wants and a substantial number of performers know how to do it; negotiating mechanisms (such as sole source procurement), when detailed project objectives are not clear and there are relatively few highly experienced performers available in a general subject area; and responsive mechanisms (awards made on the basis of unsolicited proposals submitted to an office), to encourage the generation of new ideas and new lines of inquiry in a field. Each method has its own advantages and limitations; all should be used in a well-developed R&D program.

OMRD has employed each of these approaches to varying degrees, and, in the Committee's judgment, has generally done so properly and effectively. The Office's preferred method has been sole source procurement, a method that allows great flexibility in supplementing staff capabilities to design projects and carefully review project proposals. In recent years, however, OMRD has responded to growing demands from administrative echelons within the Department of Labor and more often used the request for proposal (RFP) mechanism.

RFPs are useful in securing results on a cost-effective basis in instances (particularly survey research) when project specifications and optimum knowledge-generating methods can be clearly determined in advance and when equally competent and experienced performers are available. (OMRD appears to have employed RFPs in such cases.) However, for work that is exploratory in focus or method, as well as for types of work in which only a few performers are especially qualified, the RFP procedure is less appropriate. Because they have a rigid time schedule for applicant response, RFPs often exclude most academic researchers, who may be the most qualified potential performers. Furthermore, to be executed effectively for all kinds of R&D projects, RFPs require far greater staff resources and capabilities than OMRD processes.* In the Committee's opinion, RFPs would be an extremely limiting and often inappropriate mechanism for selecting effective R&D performers if applied wholesale to the OMRD enterprise.

*See Chapter 8 for a more detailed discussion of OMRD operations.

Communicating and Using Results

The Committee finds that OMRD's Utilization Division has a technically competent staff, but its effectiveness has been hampered by small size, by insufficient resources (since communicating and promoting the use of R&D results is expensive), and by extremely limited opportunity to interact with potential R&D consumers. The Committee finds that a great deal of useful knowledge generated by the manpower R&D program is not being used, either in the Department of Labor and other federal agencies or at the level of state and local manpower programming. While this lack of use can be attributed to many factors, the basic problem appears to be limited capacity and interest within the manpower community generally for incorporating new knowledge into the flow of day-to-day operations or into long-range planning.

This phenomenon is not unusual; utilization is the most formidable challenge for all R&D operations--not only in fields of behavioral and social inquiry, but also for the physical sciences--involving multiple layers of interpretation and action. Even in the private sector where firms have extensive control over communications processes and internal decision making and in certain government agencies where elaborate systems have been designed in an attempt to ensure rapid assimilation of R&D results, effective utilization remains an elusive goal, just as likely to occur in an unplanned fashion as in a planned one and more often than not on an irregular basis. In order to strengthen utilization, concerted and continuous effort is necessary by both knowledge producers and knowledge consumers.*

Staff Capabilities

The Committee finds that the present OMRD staff, because of a recent precipitous decline in size and overall competence, has only a marginal capability to manage the manpower R&D program properly. This situation reflects an all-too-familiar story in government R&D operations over the past several years: pressures to reduce the size of the federal establishment, declining budgets for social programs, hiring freezes, restrictive staffing guidelines imposed by the Office of Management and Budget (OMB), and inflexible hiring procedures promulgated by the Civil Service Commission. Obviously, not all of these factors have been amenable to direct control by the Department of Labor and few could have been countered by OMRD itself.

Nonetheless, the complexities of both social science inquiry and manpower policy and program decisions have grown beyond the capabilities of many of the current office personnel. Shortcomings in the range and depth of Office staff skills that have appeared during the past several years have had serious adverse effects on all essential R&D management functions, including planning, performer selection, and the dissemination and utilization of project results.

*See Chapter 9 for a more detailed discussion of manpower R&D utilization.

R&D IN THE DEPARTMENT OF LABOR SETTING

The Committee finds that OMRD's particular organizational location has affected the manpower R&D program in significant ways. The Office's functional separation from policy-making echelons and from R&D producers and consumers in and outside of the Department has created difficulties in cooperative approaches to planning and priority setting, in communicating R&D findings, and in ensuring a stable and appropriate level of staff competence. These difficulties are particularly acute for some functions, such as planning, for which the Office of the Assistant Secretary for Planning, Research, and Evaluation (ASPER) has overlapping responsibilities.* At the same time, however, the separation has been seen by some observers and participants as an advantage, enabling the Office to maintain continuous and cumulative support for a few areas of long-term R&D interest--which have often been the source of the most striking program contributions--and to pursue relatively coherent strategies for strengthening individual and institutional capabilities in manpower study.

There are no "ideal" locations for an R&D office and no proven patterns for an R&D system. Rather, there are advantages and disadvantages associated with any location or overall organizational structure. The Committee has considered suggestions for relocating or reorganizing the manpower R&D operation in the Department of Labor and concludes that the costs attached to the various possible changes far outweigh potential benefits (both immediate and future). Moving the function to "higher" levels in the Department might increase opportunities to focus on prospective policies in manpower, but would isolate the R&D program from operational problems and issues. A move closer to operational levels, perhaps through some form of decentralization, might increase opportunities to contribute to more effective manpower programming, but would create major difficulties of project redundancy and of isolation from policy development and implementation on a national level. Neither alternative would necessarily dampen pressures that tend to focus the program on short-term, rapidly changing priorities nor guarantee an appropriate diversity of performers and methods in manpower study.

The third possibility, to split the effort--with some activities organized for exclusive direction to policy echelons and others to operating levels--would in the Committee's judgment constitute the worst of all possible worlds. Serious gaps would be created in the understanding of policies as they relate to programs and in the understanding of programs as they relate to policies.

To some degree, problems of this kind characterize all mission-oriented R&D operations in government. Desire for immediately relevant R&D findings is a natural derivative of the normally brief tenure of higher-level policy and program officials. Creating and maintaining open lines of communication to achieve agreement on priorities and to encourage innovation are problems for virtually all large organizations, public and private. Procurement practices are seldom guided by a clear sense of their effects on project performance and quality. Most government R&D units have been internally weakened by various hiring restrictions imposed during the past four or five years. Moreover, government employment, at least at a staff level, has not traditionally been attractive to technically qualified administrators and researchers in the social

*See Chapters 7 and 9 for a full description of OMRD-ASPER interactions.

sciences. Experience with structural and organizational changes aimed at more effective R&D management has shown few, if any, unqualified successes.

The Department of Labor has regarded manpower R&D primarily as a service function and has managed the R&D program as a small adjunct to operations, predominantly from the standpoint of current issues and interests. Although that approach has resulted in some significant and useful contributions to improved policy execution and program design, the Committee believes the manpower R&D program has been somewhat out of balance in its focus and that important matters of long-range policy development and scientific advance have therefore suffered from relative lack of attention. Nowhere in the Department is there a consistent view of R&D as an informing mechanism for guiding manpower policy in the broadest sense: exploring future courses of action under alternative economic and social assumptions, identifying opportunities and means to reduce inconsistencies and conflicts that can and do arise between manpower and other areas of government policy, and promoting growth within and among academic disciplines to serve prospective needs for policy and program study.

Chapter 4

RECOMMENDATIONS

This chapter presents the Committee's recommendations for strengthening the manpower R&D program of the Department of Labor. The Committee's recommendations cover:

- more balanced patterns of support for manpower study;
- continued investments in developing scientific capabilities;
- improvements in R&D management;
- increased attention to problems of utilization; and
- a realistic appraisal of R&D resources and budgeting.

The recommendations are interrelated since it is doubtful that changes in emphasis or practice in any one area would significantly influence an operation as complex as that conducted by the Office of Manpower Research and Development (OMRD).

There are, however, two key recommendations: that concentrated and continuous attention be given to a set of basic concerns for manpower R&D and that OMRD be provided with a technically competent staff. These are preconditions for all other desirable changes; both require direct action by the Secretary of Labor and more consistent policy-level consideration of R&D matters than there has been in the past.

PROGRAM CONTENT

The Committee's assessment of manpower R&D program results highlighted the value of extended efforts to explore subjects of fundamental science and policy concern. That assessment indicated the need for a more consciously patterned structure of R&D support in manpower--a structure that encourages balance between a stable, continuing focus on the factors underlying manpower problems and an ability to respond flexibly to unanticipated developments in manpower policy, programming, and research.

Identifying the appropriate levels of support for particular projects on a year-by-year basis in order to create and maintain such a balance is a difficult task. It requires consensus within the entire Department about specific short- and long-term R&D objectives. While some of the Committee's recommendations for planning and review procedures would facilitate the development of that consensus, only strong Departmental leadership--which could be exercised most visibly through direct commitment by the Secretary of Labor and by the Assistant Secretary for Manpower--will guarantee serious and sustained consideration

of an appropriate manpower R&D program for the future. The Committee believes the following recommendations cover major elements of such a program.

Opportunities to Build upon Current Knowledge

The strengths of OMRD-supported manpower study present clear opportunities for promoting further advances in the understanding of manpower problems and better informed choices regarding well-established issues of manpower policy and program concern.

The Committee recommends that the following subjects continue to receive major OMRD support:

Longitudinal labor force research, building upon the Parnes Study. This work should be continued beyond the present cutoff point in fiscal 1976: (a) by using the data and findings already derived as a basis for developing and conducting other longitudinal research activities that, for example, would further illuminate the transition from school to work, career paths, and the relationships between manpower development, occupational employment patterns, and demographic change; and (b) by systematically analyzing the longitudinal data already available with particular regard to such problems as labor market discrimination, underemployment, income stability in family units, and the regulation of working conditions and standards.

Empirical and theoretical studies of labor markets. These studies should address: (a) the impact of institutional policies and practices, especially those within firms, on occupational mobility, discrimination in hiring, promotion, layoff, and the effective utilization of manpower resources and (b) labor market operations, with more intensive application of the methods of social science disciplines other than economics.

Studies of the labor market problems of the disadvantaged. Special attention should be given to cultural factors, such as language, sociopsychological elements in the formulation of attitudes, aspirations, and beliefs with respect to work, and the barriers to employment and promotion resulting from the attitudes of non-disadvantaged workers.

Studies to advance methods of evaluation research. Particular emphasis should be placed on developing measures and procedures for more accurately assessing the significance of institutional variables, such as staffing, program structure and coordination, and employer relations, in the delivery of manpower training and services.

Opportunities for New Knowledge Related to Continuing Issues

Several subjects that have been relatively underemphasized in OMRD's activities are important for manpower policy and program decisions. These are subjects in which significant gaps in the current knowledge base require attention.

The Committee recommends that the following new subjects receive major OMRD support:

The demand side of manpower problems. In particular, attention should be given to identifying, measuring, and analyzing relationships between manpower utilization and technological change that shift requirements for various job skills and occupations and affect worker productivity in various sectors of the economy.

The effects of collective bargaining and labor agreements on manpower utilization. This should include study of the administration of such agreements within firms, for particular occupations, and at the national level.

The interrelationships between manpower policy and other social and economic policies. In order to more precisely determine the effectiveness of alternative approaches to problems of unemployment, underemployment, and poverty in the labor force, study of this subject requires participation by a wider range of behavioral and social scientist researchers than have been involved to date.

Opportunities for Knowledge on Developing Issues

A number of policy and program issues--several of which OMRD has been studying on a limited basis--are becoming significant concerns in manpower policy and programs.

The Committee recommends that OMRD's exploratory efforts in the following subjects be expanded:

The implications of continued high levels of inflation for manpower development and utilization and for the effectiveness of various manpower policies.

The impact of the Unemployment Insurance system on levels of unemployment.

Illegal immigration and its impacts on labor markets.

The behavior of political units under CETA. This should include study on a comparative basis, as such behavior affects training program outcomes and the balance between manpower supply and demand in local labor markets.

The impacts of various Department of Labor regulatory activities on manpower development and utilization. The most important such activities to be considered are occupational health and safety regulations and enforcement of federal contract compliance, equal pay, and age non-discrimination laws.

The impacts of increased labor force participation by women. The most significant impacts to be explored involve manpower utilization within firms, employment discrimination policies and enforcement, and family incomes.

Opportunities for Increased Use of Social Science Methods

While effective manpower study requires a wide diversity of approaches to inquiry, there are opportunities for OMRD to apply particular social science methods more frequently, more intensively, or in different ways in its overall program. Such emphases might contribute to higher quality findings and to R&D results that are more relevant to issues of policy implementation and effectiveness as well as to problems in program operations.

The Committee recommends that OMRD expand its use of certain social science methods:

Experimental techniques in program design. These should be used in the development and assessment of new treatment modes for specific manpower program client populations and in exploring alternative organizational arrangements for delivering manpower services on a comprehensive area-wide basis.

Continuous monitoring of demographic, occupational, and technological trends. This could provide the basis for extensive analysis of possible future manpower problems and their implications for manpower policies and would also provide a focal point for intramural research by OMRD staff.

Efforts to strengthen techniques of local labor market analysis. This work should include pilot studies in several jurisdictions focused particularly on methods of collecting and analyzing up-to-date labor force and labor market data.

This program for future manpower study is ambitious, reflecting the serious nature of current manpower problems and the need for new knowledge to strengthen manpower policies and programs.

SCIENTIFIC CAPABILITIES

The Committee has noted OMRD's major contributions to the range and quality of performer and institutional resources for manpower study. OMRD's efforts have taken three programmatic forms: small grants for doctoral dissertations and

post-doctoral research training, grants to institutions for teaching and research activities in manpower, and experimental manpower laboratories.

Small Grants

Doctoral dissertation and post-doctoral grants have been productive mechanisms for developing manpower researchers. Because of the Comprehensive Employment and Training Act (CETA) and the serious national manpower problems likely to persist throughout this decade, future knowledge needs in relation to manpower policies and programs can be expected to expand, necessitating continued (if not increased) attention to the supply of manpower researchers. In addition to economists, skilled and experienced researchers in other behavioral and social science disciplines are needed to help address several critical issues of manpower policy and program. These issues, such as the role of cultural factors in labor force behavior and the place of manpower in a broad economic and social policy context, require wide disciplinary involvement for thorough and integrated investigation.

The Committee recommends that the Department continue vigorous support for both the doctoral and post-doctoral grant programs and that these programs place greater emphasis on attracting a wide range of behavioral and social scientists to manpower study.

Grants to Institutions

Between 1966 and 1974, OMRD support for teaching and self-directed faculty research at 19 academic institutions contributed to an increase in the number of universities permanently committed to the development of manpower curricula and study. In the 1974 cycle of four-year grants, given to 13 institutions, OMRD expanded the grant functions to include: (a) training manpower researchers at the graduate level; (b) conducting R&D studies relevant to local, state, and regional operations under CETA; (c) improving the skills of CETA program administrators, through short training courses and seminars; and (d) establishing permanent links for communicating R&D results in manpower to operating program levels.

A number of these functions are not those ordinarily associated with the usual and traditional forms of institutional grant support by government. The Committee views this as an imaginative response to the new knowledge and knowledge utilization requirements imposed by CETA, but seriously doubts that all the designated functions can be executed effectively at present funding levels.

The Committee recommends that OMRD evaluate grantee performance to date and consider measures to at least double the size of all continuing grants.

Experimental Manpower Laboratories

The functions once performed by the Experimental Manpower Laboratories appear less essential today than they were in the 1960s. Demonstration and development

projects have declined in importance with respect to their share of OMRD's budget. Furthermore, CETA has partially shifted the locus of responsibility for program development from the national to state and local levels. If OMRD reinstitutes a Labs-type program, the Committee believes that it should be tied closely to current Departmental plans for a cooperative R&D/technical assistance process that will respond to the needs of CETA officials for information about new training program designs.* The Committee also believes that OMRD should consider tying any Labs-type program to the CETA-related efforts of institutional grant projects.

A New R&D Institution

With attention in manpower policy and R&D evolving toward greater emphasis on issues of local program operation and with problems of unemployment and productivity certain to remain important at the national level throughout the 1970s, there is a growing need for knowledge that relates national and local manpower policies and programs to each other and to other economic and social policies and programs. The Committee has identified several subjects that should be addressed as first steps in establishing such a knowledge base (increased attention to manpower problems from a demand perspective, studies of the connections between manpower and other policy areas, and studies of the behavior of government units under CETA), but the findings from such study would also need to be integrated with other knowledge to provide broad, long-range guidance for government manpower policy and programs. The Committee believes that such integration requires an institutional capability in manpower that does not currently exist.

> *The Committee recommends that the Secretary of Labor consider development of a National Center for Manpower Study.* A National Center for Manpower Study would be an R&D institution with a mandate for manpower study that extends across departmental boundaries in government, with substantial independence to define and pursue subjects for study, and with a relatively large permanent staff drawn from a wide range of behavioral and social science disciplines. Such an institution would add a strong scientific perspective to national policy debate regarding manpower problems in relation to federal responsibilities for economic management, income maintenance, education, health, and systems of decentralized social program administration. Since such a National Center for Manpower Study would require substantial financial support--at least $3 to $5 million annually after an appropriate start-up period--and would provide knowledge and analysis relevant to numerous departments and agencies, joint funding by OMRD and other federal R&D offices should be considered.

*These plans are discussed in some detail in Chapter 9.

PROGRAM MANAGEMENT

In addition to a well-structured program for study and stronger scientific capabilities, management practices in planning and performer selection will have to be strengthened if OMRD's effectiveness in policy and program terms is to be substantially improved. Furthermore, significant increases are clearly needed in the size and competence of the OMRD staff.

The overall basis for Committee recommendations on program management is a recognition that OMRD must address a wide variety of subjects for an equally wide array of audiences. To do this well, the Office must be able to: (a) maintain responsiveness to current policy and program interests; (b) counterbalance that near-term emphasis with a view of continuing, long-term knowledge needs; (c) integrate findings and conclusions drawn from both immediate and sustained inquiry as a source of feedback and guidance in modifying and redirecting future activities; and (d) ensure quality in all work supported.

R&D Planning

The current Departmental process for determining priorities is directed primarily by short-term perceptions and experiences. This process is inadequate for identifying and selecting promising areas and questions for concentrated R&D attention and for integrating emerging findings and changing policy requirements with a comprehensive strategy that encourages a balance between continuity and flexibility in R&D expenditures. To achieve this balance, planning must be guided by an awareness of fundamental policy issues, of the state of knowledge in pertinent subjects, and of manpower R&D outside the Department. That awareness can best be achieved through procedures that permit continuous interchange between the worlds of science and policy.

The Committee recommends that the Secretary of Labor direct the Assistant Secretary for Manpower to develop a long-term plan for research and development related to manpower policy through:

The establishment of an advisory committee to the Assistant Secretary for Manpower. This committee should be composed of researchers, policy makers, and program operators, with responsibility for working with the Manpower Administration in the identification and selection of subjects for sustained R&D attention.

A continuous survey and analysis of manpower and related R&D efforts of other federal departments and agencies. This activity should be carried out through a special staff assistant to the Assistant Secretary for Manpower.

In addition, program operations under CETA require a special view of local needs in R&D planning.

The Committee recommends that the Secretary of Labor also establish mechanisms by which the Assistant Secretary for Manpower can obtain

advice directly from local and state program officials in order to aid in the formulation of plans for R&D that are attentive to local concerns.

It will be critical to mold these disparate sources of information into an overall R&D plan that achieves coherence and interaction among program components, concentration and continuity of effort, a degree of flexibility in response to changing knowledge and information requirements, and balance among short-, medium-, and long-term R&D activity. As the Department is currently organized, responsibility for this integrative function is divided between OMRD and the Office of the Assistant Secretary for Policy, Evaluation, and Research (ASPER).

The Committee recommends that the Secretary take such steps as necessary to strengthen the capability of either or both OMRD and ASPER to carry out this function.

Performer Selection

Given the necessarily broad character of manpower study and the diversity of scientific methods it requires, past debates about appropriate performer selection procedures in the OMRD program have been somewhat misdirected. Every selection procedure has advantages and disadvantages with respect to maintaining fair competition in making contract or grant awards, encouraging particular groups of performers to submit proposals, and imposing requirements for technical understanding on R&D office staff--all factors that ultimately affect the quality and usefulness of work undertaken and results produced.

Federal procurement regulations are well founded in allowing R&D operations wide latitude in employing a variety of mechanisms suitable for differing circumstances. It is unlikely that any R&D program that relies on any single selection procedure will achieve maximum effectiveness. The applicability of a given procedure for a particular project is a function of the character of planned study and the available supply of performers qualified to carry out that work.

The Committee recommends that OMRD, in its annual plan, identify and provide thorough justification for the selection mechanism to be employed in implementing each new project initiative.

Staff Capabilities

While almost all OMRD projects are carried out by extramural performers, the quality and relevance of their work is dependent on adequate Office support. The Committee concludes that OMRD cannot operate at a high level of effectiveness in the future without significant improvement in the overall size and quality of its professional staff. In particular, OMRD needs staff with technical, scientific competence for effective R&D planning, project design, and preparation of materials that summarize and synthesize findings for use by policy and program officials as well as by the manpower research community. Action to

improve OMRD staff capabilities is required by both OMRD and the highest officials of the Department.

The Committee recommends that the Secretary of Labor:

Secure for OMRD within the next year additional professional staff. The additional staff should possess a range of demonstrated capabilities in a range of social science disciplines and fields pertinent to manpower study.

Direct the Assistant Secretary for Manpower to formulate within the next year a long-range personnel plan. This plan should guide future OMRD staff recruitment to enable the Office to avoid the recent problems experienced as a result of declining levels of internal capability and should provide greater incentives and opportunities than now exist to encourage OMRD professional staff to pursue education and training in the social and behavioral science disciplines and fields related to manpower study.

The Committee recommends that OMRD:

Establish a continuing OMRD fellowship program. This program should recruit up to four researchers and program administrators for two-year terms to perform major staff or research assignments.

Place greater reliance on non-staff capabilities. Such reliance should include the increased use of conventional mechanisms, such as consultants, external ad hoc advisory groups, and contractual arrangements with external organizations, in order to compensate for existing staff weaknesses and to complement staff strengths as appropriate in the future.

UTILIZATION

R&D utilization is a pervasive function; responsibility for it must be shared and efforts exerted at virtually all levels in the Department of Labor. However, the basis for all utilization activity must be a sound technical capability within OMRD for summarizing, synthesizing, and communicating R&D results.

OMRD Responsibilities

The utilization function, while well served in many instances by OMRD's utilization unit, has also been limited by that unit's minimal budget, uncertain access to potential users, and small number of personnel.

The Committee recommends that the technical capability for utilization be strengthened to enable OMRD to:

Conduct a series of research studies of the practices, processes, and techniques involved in effective utilization of social science R&D.

Conduct systematic and continuing surveys of knowledge interests among the actual and potential users of manpower R&D results within and outside the Department of Labor.

Promote, monitor, and assess well-designed demonstration projects to identify effective utilization mechanisms, especially those serving to facilitate the use of manpower R&D results by CETA Prime Sponsors.

Provide advice and guidance to the technical assistance and training staffs in the Manpower Administration concerning the effective use of R&D results.

Prepare (more frequently than at present) scientific and technical papers on the state of knowledge regarding policy and program issues for use at Departmental policy-making levels.

These efforts, however, along with the utilization unit's continuing management of report dissemination and other forms of promotional activity, can only begin to provide a sound foundation for enhanced utilization.

Departmental Responsibilities

A significant barrier to appropriate use of R&D results has been an uneven but generally low degree of interest and concern among many Department officials for incorporating new knowledge into decisions affecting manpower policies and programs. Because the potential users of R&D results have diverse needs, differing perceptions of manpower issues, and conflicting attitudes toward manpower study, there are no simple ways to improve that situation. However, analytic staffs scattered throughout the Department could play key roles as intermediaries in bridging some of the gaps existing between OMRD and government decision makers.

The Committee recommends that the Secretary, in cooperation with the Assistant Secretary for Policy, Evaluation, and Research and the Assistant Secretary for Manpower, take action to ensure that appropriate analytic staffs regularly and systematically examine R&D results for applicability to policy and program development.

Manpower R&D and CETA

Operations under CETA have vastly expanded the number of active participants in manpower policy formulation and execution, creating new challenges in many areas of Departmental responsibility, including R&D utilization. CETA Prime Sponsors are interested in operational information and experience to strengthen their

programming efforts. Some have initiated their own work on topics closely related to matters of continuing OMRD concern, particularly with respect to collecting and analyzing local labor force and labor market data and engaging in empirically based program evaluation (through both internal staff and outside contractors). Since most Prime Sponsors have had little prior experience with such work, they may have difficulty assessing its scientific quality and the validity of the resulting findings. Thus, OMRD's experience in manpower study could prove valuable to CETA officials and administrators at the state and local level.

The Committee recommends that the Assistant Secretary for Manpower, through OMRD:

Formulate and provide standards and guidelines for R&D proposals and performers. These guidelines would help local and state CETA personnel (if they wished to use them) to evaluate the scientific quality of proposed R&D projects and determine the competence of proposed project performers.

Continue joint OMRD-Prime Sponsor research and demonstration projects. These projects, in which OMRD provides scientific and technical assistance, are an important means of enhancing state and local R&D capability and interest.

Important opportunities also exist to begin building resilient connections between OMRD and Prime Sponsors to help achieve effective knowledge utilization in manpower programming.

The Committee recommends that OMRD:

Establish a system of continuing review and assessment of institutional grantees. The purpose of such review would be to ensure that recipients of institutional grants are conducting studies focused on regional, state, and local manpower concerns and are communicating relevant developments in manpower study to CETA officials.

Organize periodic workshops or conferences in DOL regions. These workshops would be conducted by OMRD staff: to discuss emerging R&D findings; to illustrate for Prime Sponsors effective procedures in the design, operation, and utilization of research and demonstration projects; and to learn from Prime Sponsors their R&D interests and requirements, as well as to determine further approaches for linking OMRD and local and state manpower R&D activities.

R&D RESOURCES AND BUDGETING

The complexity and breadth of manpower problems, the attendant difficulties in manpower study and analysis, and the recently expanded scope of manpower

policies, both substantively with respect to programs of public service employment and administratively with respect to CETA, mean that a properly designed and conducted manpower R&D program requires sizable resources. Yet at a time when a range of new and highly significant demands have arisen for knowledge to strengthen government decisions in manpower, the Department of Labor has reduced OMRD's operating budget by nearly 30 percent. Inflation has eroded the Office's purchasing power even further.

The Committee believes that present and projected budgetary levels for OMRD are not adequate to meet the knowledge requirements of manpower policy for the 1970s or for the expansion of manpower programs. Without sufficient resources, important opportunities for strengthening policies and programs and for improving manpower study will be lost. In addition, a substantial portion of past R&D investment will remain unproductive without resources to promote application of current knowledge and to pursue promising lines of inquiry that have been uncovered. Most visibly, the Department may not realize the large and direct benefits from the Parnes Study--data collected at an expense of over $15 million--because OMRD is not in a position, in terms of funds or staff resources, to formulate and commission an appropriate series of follow-up policy studies.

The Committee recognizes that allocating scarce resources among numerous national priorities is and must remain a political process. It is important, however, that this process for R&D be guided by an appreciation of opportunities for advancement in policy and science as well as by judgments regarding the prospective costs and risks attached to those opportunities. OMRD has been unique among federal R&D units in its support for studies taking a relatively broad view of labor force, labor market, and manpower policy problems. It is not likely that reductions in its budget will be counterbalanced by increased expenditures along these lines on the part of other R&D units or by private sources of support.

Thirteen years is not a long period of time in the life and development of an R&D office in a mission setting. OMRD has made major contributions in developing manpower study so that a more focused R&D program is both feasible and desirable. The pace of further progress and increases in the usefulness of future R&D efforts will depend in large measure on resource commitments.

Budget

The Committee has proposed an ambitious program of study and investments in scientific capabilities in light of current and future knowledge requirements in manpower. To enable OMRD to effectively pursue such a program, the Committee has recommended changes in R&D planning and performer selection and outlined ways to achieve needed improvements in staff capabilities. To enable the Department to realize greater direct benefit from all manpower R&D activities, the Committee has recommended steps to strengthen OMRD's role in utilization, to enhance utilization capacities within the Labor Department, and to encourage the use of R&D results by local and state officials under CETA.

With a budget remaining at the current level (and even without significant inflation over the next several years), it would be extraordinarily difficult to pursue the kind of systematic and properly supported R&D program that is needed in manpower. Even if the present OMRD budget were to be doubled or

tripled, that would provide the manpower R&D operation with little more purchasing power than it had during the mid-1960s. At the same time, the Committee is not in a position, indeed views it unwise, to specify an optimal amount for manpower R&D program expenditures in the future. That determination should be a function of the extent to which the ideas presented in this Report are accepted by the Department of Labor.

> *The Committee recommends that the Secretary of Labor initiate an extensive analysis of the long-range resource requirements for the manpower R&D program.* This analysis should include consideration of the specific lines of inquiry to be addressed by OMRD, of the support necessary to build and maintain appropriate scientific capabilities in manpower, and of establishing more effective R&D management and utilization.

Budgeting Process

Many of the activities that OMRD could undertake will require continuous attention over many years, particularly with respect to longitudinal research, extending scientific capabilities in manpower, and strengthening processes of R&D planning and utilization. Such efforts can all be adversely affected by the uncertainties of the annual budget-making cycle within a federal department. Since it is unrealistic to expect a fundamental change in the nature of that cycle, it is important for the Labor Department to adopt procedures that minimize those uncertainties for its manpower R&D program.

> *The Committee recommends that the Department of Labor conduct budget and program analyses every five years to determine long-range resource requirements for manpower R&D, possibly including independent review of OMRD.*

PART II

MANPOWER R&D IN A MISSION SETTING

Chapter 5

NATIONAL MANPOWER POLICY

Manpower did not exist as a separate policy concern until the post-World War II era, and it did not attain wide recognition as a subject of major government interest until the early 1960s. Until then, issues and problems of work and workers were considered part of economic, education, or (for the unemployed) welfare policies. As a new field, manpower policy has been particularly subject to differing and changing definitions of its boundaries by academicians, politicians, policy makers, and program operators. It is within this context that the manpower R&D program has functioned.

THE SCOPE OF FEDERAL MANPOWER POLICIES AND PROGRAMS

Manpower policy is characterized by a concern for people in relation to work. Manpower policies and programs include efforts to improve workers' ability to survive, adjust, and advance in an ever-changing labor market environment, and efforts to improve the labor market's ability to utilize an ever-changing array of individual capabilities. Manpower policy blends social and economic objectives: to provide opportunities for self-support and fulfillment through employment and to enhance economic performance through increased labor productivity and mobility. It shares several elements with other policies, especially those for education, fiscal and monetary management, and income maintenance, but it cannot be regarded as synonymous with any one of them.

At the time of its emergence as an identifiable area of government activity in the early 1960s, manpower policy was defined in relatively limited terms--as an instrument for reducing unemployment by assisting (through retraining) workers displaced because foreign trade had forced their employers out of business or because automation had eliminated their jobs. However, the manpower purview has expanded rapidly over the years, and by 1975 it also included: expanding public and private sector job opportunities, particularly for disadvantaged members of the labor force; increasing the number and productivity of workers in specific occupations to reduce unemployment and inflation; raising worker incomes; facilitating economic development in certain regions; reducing welfare rolls; re-employing returned veterans; combating job discrimination by encouraging equal employment opportunity; easing the transition from school to work; and strengthening job search and matching processes. The relative degree and kind of emphasis given to each aspect of manpower has changed in light of evolving political, social, and bureaucratic circumstances and perceptions, but

the central orientation of manpower policy has been toward four general topics: unemployment, underemployment, poverty among workers, and productivity.

Three broad types of programs are essential for implementing manpower policy: (a) programs directed to the supply of labor; (b) programs directed to the demand for labor; and (c) programs concerned with the interchange between the two labor market operations. Supply programs provide skill training and ancillary services, such as pre- and post-placement counseling, testing, living allowances, day care, and basic literacy education to prepare a jobless person for work or to upgrade a worker from one occupation to another. Demand programs focus on the generation of new jobs in the labor market, on the utilization of workers in the economy, and on individuals' access to existing jobs. Access includes discrimination and credentialism in hiring standards; monitoring changing job requirements to anticipate and define needs for worker adjustment and training; and job creation, which can be indirect, through subsidies to the private sector, or direct, through provision of special jobs in public agencies. Programs concerned with labor market operations help match workers and jobs, through collection of information from employers regarding current and future job vacancies, referral and placement services to job-seekers, and mobility assistance when an individual must relocate to find appropriate employment. The primary emphasis of manpower policy and programs has been overwhelmingly on the supply side.

Government programs are not the only ones focusing on labor supply, labor demand, and labor market operations. Private organizations and institutions offer training and other services related to labor force skill development. Unions, newspaper advertising, and private agencies play a large role in the labor exchange function. Business firms, unions, and professional associations have a significant effect on the demand for labor, on worker selection, and on employment standards. However, government regulation exerts substantial influence on private sector activities.

Furthermore, other government programs have substantial and explicit manpower content or direct impact on individuals or groups of workers. Fiscal and monetary policies help determine employment levels; the recent U.S. experience with a wage-price control program directly affected the demand for labor. Education policies and programs have a direct influence on skill development. Certain income redistribution programs, such as Aid to Families with Dependent Children, include work and training provisions that affect labor force behavior. Federal and state legislation and regulation with respect to labor relations, wage standards, and occupational health and safety affect both the access to jobs and the demand for labor. State and regional industrial development programs have a marked impact on the geographic distribution of employment. The entire equal employment opportunity enforcement apparatus influences access to jobs. In certain occupations, entry requirements are regulated by local, state, or other public or quasi-public bodies.

Finally, some government policies and programs have second-order effects for manpower development and utilization. These range from encouraging greater private investment in scientific and technological development, which has increased demand for skilled workers, to commodity price supports, which have both encouraged the introduction of new agricultural production techniques and contributed to selective displacement of the rural labor force.

MAJOR DEVELOPMENTS IN MANPOWER LEGISLATION

Many elements of what has come to be known as manpower policy were present prior to and during World War II. These included mobility efforts, under the Homestead Acts; educational programs, under the Northwest Ordinance of 1785, the Land Grant Colleges Act of 1862, and the Smith-Hughes (Vocational Education) Act of 1917; job matching programs, implemented on a temporary basis by the federal government during World War I and later revived and permanently established under the Wagner-Peyser Act of 1933; the unemployment insurance provisions of the Social Security Act of 1935; and the Serviceman's Readjustment Act (GI Bill) of 1944.

The Employment Act of 1946 signified the abandonment of pre-1930 views regarding the relation of government to employment and unemployment, giving explicit recognition to the federal role. Under its terms, the nation began to grapple with the complex problem of avoiding economic recession and depression accompanied by high levels of joblessness. It states:

> ...it is the continuing policy and responsibility of the Federal Government to use all practicable means consistent with its needs and obligations and other essential considerations of national policy...to foster and promote... conditions under which there will be afforded useful employment opportunities...for those able, willing, and seeking work, and to promote maximum employment, production, and purchasing power.

The Act is a unique law, defining specific policy goals without describing specific means for their implementation.

The first concrete steps toward a more active government involvement in manpower were taken during the late 1950s and early 1960s. The National Defense Education Act and legislation establishing the National Science Foundation both included provisions for increasing and improving manpower resources in highly technical occupations in which serious skill shortages were thought to exist. The Area Redevelopment Act of 1961, whose primary thrust was capital investment, included a small training component. However, raising labor force skill levels was not seen as a significant instrument for attracting new industry to depressed regions, the main concern of that legislation. In a similar fashion, the nominal program for retraining workers displaced as a result of foreign competition, contained in the Trade Act of 1962, was peripheral rather than central to the purposes of that Act.

In comparison to these tentative efforts, the Manpower Development and Training Act (MDTA) of 1962 called for extensive government intervention in labor markets. At that time, the nation was slowly recovering from a recession and the Kennedy Administration went beyond a public works approach to deal more directly with joblessness, by addressing perceived problems of unemployment among members of the labor force. The Act was designed to serve workers who had lost their jobs because of automation. Its rationale was that by enhancing workers' skills and mobility among occupations, some unemployment might be avoided and economic growth promoted without generating inflationary pressure on wages. The MDTA authorized testing, counseling, living allowances, and training for unemployed heads of households having at least three years employment experience and for whom a "reasonable expectation" of employment after training could be established. Programs of on-the-job training were to be

administered by the Department of Labor, and classroom (institutional) training by the Department of Health, Education, and Welfare (DHEW). The MDTA also included a very small special program for youth, featuring training and extremely low living allowances. MDTA expenditures of $275 million were authorized for a two-year period.

The first six months of MDTA activity was characterized by a failure to find large numbers of technologically displaced workers. At the same time, however, the civil rights movement was evolving from a campaign for legal and political rights in the South into a nationwide crusade for equality. Administratively at first, and then through legislation, the MDTA became the vehicle for a policy response to that movement. Lacking displaced worker clients, MDTA attention was re-directed toward youth and the disadvantaged.

MDTA amendments in 1963 enlarged the existing program for youth and added provisions for counseling, testing, and job placement, as well as increased living allowances. For other MDTA programs, the labor market experience requirement was reduced from three to two years and adult basic education was defined as a skill training activity. The emerging MDTA emphasis on social compensation for youth and the disadvantaged was paralleled by the Vocational Education Act of 1963, which extended the reach of that program to employed individuals needing skill upgrading and to those experiencing job advancement difficulties because of academic or socioeconomic handicaps.

Manpower research and demonstration projects contributed to these early legislative changes by separately studying the employment problems of the disadvantaged and by examining the operations of programs dealing with those problems. The most important of these efforts was a research project conducted in Virginia (22); also influential were internal analyses by the Department of Labor concerning the rejection of volunteers for military service (259). Demonstration activities at that time focused particularly on increasing the scope and effectiveness of programs for youth (see 247) and on concerns in the area of vocational education (see 244).

Three 1964 laws crystalized government manpower policy as a tool of social equity. The Civil Rights Act focused attention on discrimination in the labor market and created an apparatus for enforcing equal employment opportunity. The Economic Opportunity Act (EOA) mandated several manpower training and services activities--the Job Corps, the Neighborhood Youth Corps, the Work-Experience Program for unemployed adults receiving public assistance, and others--as elements in the war on poverty. The community action agency concept in the EOA was modeled in part from the manpower R&D experience, where indigenous organizations had been operating demonstration projects.* These programs broadened and complicated the administration of manpower policy by spreading responsibilities more widely across government, but also reinforced the policy emphasis on the unemployed and underemployed poor.

By the end of 1964, training programs under MDTA were operating at slightly more than $300 million annually. Training and related efforts under other

*Early Department of Labor support for demonstration efforts contributed to the development of such community-based organizations as the Opportunities Industralization Center (OIC) and SER (Service, Employment, Redevelopment).

legislative auspices brought national manpower expenditures close to $1 billion per year.

The expansion of manpower policies and programs to promote social equity was also given impetus by the tax cut of 1964, which resulted in a period of relatively sustained prosperity and low unemployment, serving to allay doubts (at least for a few years) about the effectiveness of fiscal and monetary policies in broad economic management. The consideration of manpower for addressing aggregate unemployment problems diminished, and its focus was shifted more explicitly than before toward special groups in the labor force.

In 1966, President Johnson announced that, for 18 months, 65 percent of MDTA training slots would be apportioned to disadvantaged applicants and 35 percent reserved for upgrading workers into occupations where labor shortages and "bottlenecks" were threatening to contribute to higher rates of inflation. However, the opportunity to test on a very limited scale the hypothesis that manpower training could help restrain wage (and thus price) increases by improving labor force skills and productivity during periods of low unemployment was undermined by economic events. Labor market "bottlenecks" developed at too fast a pace for upgrading to have a substantial effect. The concern with such bottlenecks did, however, lead to expanded R&D activity in upgrading (227, 31 215, 80, 38) and in identifying occupations that might experience shortages of skilled manpower (71, 253).

Manpower concerns became even more important for national social policy during the mid-1960s. The 1965 MDTA amendments, which gave the Act permanent legislative status, extended the period of time that living allowances could be provided to trainees, recognizing that effective skill training was often a lengthy process for the poorly educated. The 1966 MDTA amendments expanded training opportunities for workers over 45 years of age, further reduced the labor force experience requirement for program eligibility, authorized the use of program funds to provide medical examination and minor medical treatment for trainees, and established pilot programs for bonding ex-offender job-seekers and for promoting the geographic mobility of low-income workers. Also in 1965 and 1966, amendments to the Economic Opportunity Act created three new programs with major training components: subsidized public employment for older workers in rural areas (Operation Mainstream), training poverty-area residents for paraprofessional jobs in human service agencies (New Careers), and large-scale human resource development and capital investment expenditures for inner-city ghettos (Special Impact). Manpower R&D efforts or analyses contributed to several of these developments, especially in terms of highlighting the problems of older workers (246), generating data on ghetto unemployment and underemployment (255; 249, p. 74ff), and providing models for bonding (256) and paraprofessional training (107) programs.

By the end of 1966, annual appropriations for MDTA programs, the Neighborhood Youth Corps, and the three new EOA activities were $1 billion. Appropriations for equal employment opportunity enforcement, the Job Corps, an expanding U.S. Employment Service job matching effort, growing vocational education activities for adult workers, and vocational rehabilitation programs for the emotionally and physically handicapped brought the total national manpower policy commitment to more than $2 billion annually.

With manpower and related programs administered by at least six different federal agencies, attention turned increasingly to the coordination of service

delivery in local communities. The R&D effort reflected that concern in its emphasis on operations of the U.S. Employment Service (see 140 for a summary and assessment of several such activities, primarily demonstration projects);* on the establishment of multi-faceted Skill Training Centers, through E&D projects that offered training opportunities in a variety of occupations (projects in Chicago, Cleveland, New Haven, Los Angeles, and elsewhere) and, later, through operationally oriented research studies (see, for example, 192); and on the development of the Concentrated Employment Program (CEP) to rationalize the flow of manpower clients and services in local areas. R&D contributions to CEP included staff training assistance, the development of work-sample techniques for assessing occupational interest of program clients (through the Jewish Employment and Vocational Service in Philadelphia), and evaluation (see, for example, 62).

Before that time, however, several additional manpower programs were established under Department of Labor (DOL) auspices. The Social Security Act was amended in 1967 to transfer administrative responsibility for the Work Experience Program from the Office of Economic Opportunity (OEO) to DOL and DHEW, renaming it the Work Incentive Program (WIN) and authorizing substantial increases in appropriations to achieve massive reductions in the nation's welfare rolls.** Amendments to the MDTA in 1968 gave DOL additional responsibilities for developing and promoting the use of better quality labor market information in local manpower programming.

Manpower research had already highlighted the importance of information and information exchange in the job-seeking process (see 230). Also in 1968, manpower policy directly addressed the demand side of the employment equation through the JOBS Program, a cooperative effort involving DOL and the National Alliance of Businessmen (NAB) to provide 500,000 new jobs on a "hire now, train later" basis within three years for the hard-core unemployed. While the creation of the JOBS program was essentially political, motivated in part by continuing urban ghetto riots, the effort was modeled after a partially completed manpower demonstration project.***

A new set of economic conditions developed in 1969 and 1970--rising inflation and unemployment, labelled "stagflation." The Nixon Administration's response in terms of manpower was tempered by a cautious view of active economic and social policies and by political and ideological commitments to limit federal spending for social programs. In response to growing unemployment and underemployment problems, emphasis was first placed on fiscal and monetary management and then on a relatively comprehensive incomes (wage-price control) policy. While federal manpower expenditures reached $3 billion annually by 1970, it took intensive Congressional pressure, as well as a continuing deterioration in the economy, to maintain that level for the next several years.

*In at least one case, research that provided negative findings about Employment Service operations led to the creation of an alternative program mechanism (152).

**The increases were never appropriated in full.

***An effort conducted by the YMCA and several other social service agencies in Chicago, the JOBS NOW project (Job Opportunities Through Better Skills).

In this context, three significant manpower issues occupied executive and legislative attention between 1969 and 1974. The first was income maintenance. Virtually any option discussed under the "welfare reform" label would have given precise recognition of the role of manpower activities in income maintenance policy. Guaranteed income, negative income tax, or wage subsidy proposals provided for sharply targeted delivery of training and related services to the potentially employable among the jobless and to low-income workers who might benefit by skill upgrading. Although none of these proposals became law, the controversies surrounding them highlighted (but did not resolve) public concerns at the employment-income nexus. Manpower R&D program contributions to the welfare-work problem served largely to challenge prevailing beliefs about the number of employable persons receiving public assistance (see, for example, 132) and about the willingness of welfare recipients to reject unattractive jobs (see 86).

The second issue, the role of government as the "employer of last resort," generated heated debate between Congress and the Administration, finally resulting in the Emergency Employment Act in 1971. The Act's Public Employment Program (PEP), even though it contained provisions requiring transition of participants into regular (non-subsidized) jobs, was the first application since the New Deal of special job creation as a counter-cyclical tool during periods of relatively high unemployment. It represented a major innovation in manpower policy development by addressing a critical deficiency--the lack of jobs attractive to trainees. The government would not only seek to influence, but would more directly supplement labor market processes to ensure skill development and appropriate employment within the labor force, particularly among the disadvantaged. In two years of operation, PEP provided jobs for 404,000 unemployed individuals at a cost of approximately $2.3 billion. As a result of this program, annual federal manpower expenditures approached $4 billion by 1973.

The third major issue for manpower emerged under the rubric of the "New Federalism." Beginning in 1969, the Administration proposed legislation to decategorize almost 20 of the separate manpower training programs initiated during the 1960s* and to decentralize immediate management responsibility. Prior efforts to coordinate local manpower related activities, including those undertaken or examined through the manpower R&D program (see, for example, 191), provided strong justification for decategorization, but decentralization was essentially an article of faith and philosophy. The Administration asserted that local governments were better able to define needs, to design treatments, and to control administrative costs than was the federal government.

In 1970, the Congress passed legislation similar to that proposed by the Administration, but including provisions for a permanent public employment program; it was vetoed by the President. While a temporary public employment program was later approved separately (the Emergency Employment Act), an impasse remained between the White House and Congress over specifications for a decategorized and decentralized system for manpower training and service delivery--one of the few partisan disputes over manpower policy. At one point, the Administration threatened to bypass Congress and implement its program by

*Most of them administered by the Department of Labor.

executive action, but agreement was finally reached. At the end of 1973, the 11-year-old Manpower Development and Training Act was replaced by the Comprehensive Employment and Training Act (CETA).

CETA gave state and local governments (or their designees), either alone or in combination, the mandate as Prime Sponsors to operate skill training and support programs and a permanent public service employment program (replacing PEP). Within a broadly defined range of possibilities, Prime Sponsors could determine an appropriate mix of these programs.* CETA required an annual Prime Sponsor planning process, including citizen participation, and established minimum standards for local program administration and evaluation. Each state was given planning and coordination functions and responsibility to operate as the Prime Sponsor for low-population counties. Federal appropriations to Prime Sponsors were established by formula, taking into account population size, unemployment rates, and incidence of poverty. The U.S. Department of Labor was directed to maintain national programs for such groups as native Americans, veterans, and migrant workers, and to manage the Job Corps. The Department was also given general responsibility for assessing, guiding, and strengthening the performance of the entire CETA enterprise.

In late 1974, while the Act was still in its implementation stage, a new CETA title providing for a large-scale, temporary public employment program was added by the Congress in response to record post-war unemployment.** Initial appropriations were $875 million, increasing government manpower expenditures to an annual level of more than $5 billion.

MANPOWER POLICY IN 1975 AND BEYOND

Initial experiences under CETA point to the difficult problem of reconciling decentralized decision making with: Congressional oversight and budgeting, with requirements for inter- and intra-governmental coordination, and with national social and economic needs. At the same time, recession has raised serious questions about the role and effectiveness of manpower relative to alternative government policies to influence the labor market. These two sets of concerns illustrate the crossroads reached in national manpower policy.

Since 1962, one fundamental trend in manpower has been increased fragmentation of program operations. MDTA administration was first divided between DHEW and DOL. Additional federal departments became involved in training and other manpower activities during the 1960s. CETA divided authority even further,

*However, several activities relevant to skill training and employment (among them the DOL/HEW Work Incentive Program, HEW's vocational education and rehabilitation efforts, and operations of the U.S. Employment Service), as well as the entire policy area of workplace regulation (by DOL and other departments and agencies) remains outside the CETA framework.

**This title was included as part of the Emergency Jobs and Unemployment Assistance Act, which also extended and expanded unemployment compensation coverage and established a temporary capital investment/economic development program as a means of indirect job creation.

among 400-plus individual Prime Sponsors. The opportunity to match programs with local needs has been enhanced, but it is uncertain how the Department of Labor can function as the primary agent for federal manpower policy as long as program control is spread among different levels of state and local governments and responsibility for other aspects of manpower policy is spread across various departments. For the manpower R&D program, which has given continual attention to strengthening manpower operations, the new dispersion of authority under CETA poses three special problems: (a) how to identify appropriate points of national influence over local decisions; (b) how to monitor, assess, and respond to growing variation in local manpower programming; and (c) how to communicate R&D project results effectively to an expanded community of manpower practitioners.

A second fundamental trend in manpower policy development since 1962 has been a shifting focus between economic objectives, such as job creation and the training of highly skilled workers, and concern for unemployment and underemployment among the disadvantaged. Manpower policy has incorporated a large number of partial responses to deep-rooted social and economic problems, but there has been little consensus regarding the extent to which manpower can and should emphasize social or economic goals or both. Without such consensus, the relationship of manpower to other public interests, such as education, growth and stability in the economy, and reducing poverty, has been ambiguous. Without greater clarity in that relationship, the potential for effective manpower policy and programs may be greatly reduced.

Underlying the shifts in policy orientation, there has been uncertainty about the nature and seriousness of manpower problems and the applicability of various program mixes to different social and economic conditions. Politically, the most persistent challenge has been to maximize limited budget resources for competing needs among various worker groups. That challenge has encouraged a highly compartmentalized view of the labor force in manpower policy. Although R&D has helped to design, modify, and assess certain manpower programs and has questioned some of the assumptions upon which manpower policies have been based, it has not played a central role in reformulating policies and programs promoting both adequate skill development across the entire labor force and efficient use of labor in the economy. One reason for this is that there are several unresolved matters of methodology and perception: (a) insufficient measures of experience, motivation, and competence among workers, of their potential for occupational advancement, and of job content; and (b) difficulties in distinguishing and explaining the existence and effects of variables (such as patterns of institutional behavior or of information exchange) that are not subject to accurate quantification.

While such issues are likely to be important in coming years, the directions of future manpower policy will be influenced more directly by other factors, including changes in the composition of the nation's labor force, adjustments in the structure of jobs in the labor market, and possible dislocations in the course of economic growth. Although demographic, occupational, and economic forecasts should be viewed with considerable caution, and problem scenarios with even greater skepticism, they can help define a range of manpower interests for the next quarter century.

Labor Force and Occupational Change*

Assuming a continuation of the present downward trend in average family size, the nation's potential labor supply (persons between the ages of 16 and 24) could still increase by almost 50 percent between 1975 and 2000. In this context, the key features of labor force growth (those working or actively seeking employment) are likely to include: a slower rate of expansion than was experienced during the past 10 years; significant adjustments in worker age distribution as the large post-World War II birth cohort moves through its productive years, with smaller cohorts entering the work world in the 1980s and 1990s; and a marked rise in average educational attainment among workers as the number of employed individuals with college and post-graduate training grows at a faster pace than the overall labor force through at least the mid-1980s. Furthermore, the proportion of the working age population actually in the labor force is expected to increase slightly through 1990, with a continuing rise in women's labor force participation offsetting a gradual decline among men.

The occupational outlook is more speculative, but there are several likely trends. A general reduction in the rate of aggregate employment growth is projected through the 1980s, extending to nearly all occupations. Expansion in the government and service sectors, the major growth areas in the economy during the past decade, should moderate. New employment opportunities in manufacturing, wholesale and retail trade, and construction are also expected to decline. The vast majority of job openings during the next decade will probably result from retirement and other replacement needs rather than from demands for goods and services. The distribution of employed workers will likely be characterized by a continued growth in white-collar occupations and by a continued decline in blue-collar jobs.** Worker productivity should continue to climb at an average annual rate of approximately three percent. This trend in output promises some improvement in living standards (disposable personal income per capita) through 1985, although a reduced rate of labor force growth after 1980 could slow the pace of that improvement substantially.

Such changes in labor force composition and in occupational structure point to several possible features of future manpower policy:

- a partial shift toward greater concern with employment-generating problems and programs;
- a continuing emphasis upon young (16 to 19 years) entrants into the labor force, particularly minorities;
- a new concern for work experience problems among the expanded supply of younger (20 to 34 years) adult workers, as a function of their generally higher levels of educational attainment (and higher expectations for

*The subject of future labor force and occupational trends is covered extensively in a paper prepared for the Committee: Denis F. Johnston, *The U.S. Labor Force in a Changing Economy--Implications for Manpower Policy and Research*, April 1974. Johnston's analysis is based in part on U.S. Bureau of Census, *Current Population Reports*, Series P-25.

**Among other groups, the proportion of service workers should grow slightly, while private household and farm workers should represent relatively smaller shares of the labor force in 1985 than at present.

work challenge and satisfaction), on the one hand, and an accompanying increase in the relative labor market disability of the poorly educated within this cadre, on the other;

- more attention to effective utilization of the skills and talents of college-educated women in the face of heightened competition for jobs between highly educated men and women;
- a greater interest in linked manpower and family low-income problems, involving non-whites particularly, that are in part the consequences of age, sex, and socioeconomic factors (larger cohorts of youth, larger proportions of female-headed households, and lower average levels of educational attainment and income status among non-whites compared to whites);
- a renewed emphasis on the apparently deteriorating terms of inflation-unemployment trade-offs, especially as technological change in production continues to impose new and more stringent requirements for worker skill development and occupational mobility that could contribute to serious labor shortages in certain sectors of the economy; and
- a more explicit recognition that continuing growth in the labor force and in worker productivity, even at reduced rates, will generate higher levels of output and consumption that may impose new requirements for environmental management and for energy consumption.

This outlook suggests modifications in some areas (especially in finding ways of putting highly educated and skilled people to work at significant tasks) and the persistence of several current manpower problems (for example, unemployment among the disadvantaged), but not major disjuncture or crisis.

Anticipating Other Issues

In attempting to identify other possible directions for future manpower policy and programs, it is important to recognize that qualitative changes in society, in government, and in the economy--which are likely to proceed without further incentive or policy impetus--may require responses by the Department of Labor.

One apparent trend involves societal demands for an expanded range of personal and familial options in apportioning time and effort among different kinds of activity. Life styles have already shifted visibly. There have been changes in the conventional progression from education to work to retirement and they are likely to continue. Along with the breakdown in traditional sex roles relating to work, such changes portend pressures for job restructuring and for new fringe benefit arrangements. Significant population redistribution, especially accelerated movement toward rural areas, could also affect work choices. While the impact of these potential changes is uncertain, they touch upon fundamental views in society of work and its value, a particularly elusive matter for public policies, for programs, and for R&D.

Federal involvement in human development and economic management can be expected to continue, as can the insistence on greater policy and program effectiveness. With strong resistance to budget expansion at all government levels and with initial steps already taken toward decentralization of programs, there will be major problems of communication and cooperation in guiding manpower decisions with respect to other social and economic policies and increasingly layered systems of policy administration.

The most severe manpower crises, however, could develop because of shortages or artificially inflated prices of certain raw materials. Direct attempts by government to allay the effects of resulting employment and economic growth problems will be particularly difficult, since they place manpower objectives in possible conflict with natural resource, energy, and international policy goals. While the development of manpower policy has always taken place within a complex economic and social milieu, there is no precedent for dealing with the kind of interdependent world economy that may influence the future U.S. labor market.

Chapter 6

MANPOWER R&D PROGRAMS

This chapter explores the character of the Department of Labor's manpower R&D program. Changes and trends with respect to modes of inquiry employed, performers engaged, and subject emphases in the overall R&D effort are highlighted and related to lines of manpower policy development and to changes in R&D program administration and management. Unlike the general assessment of OMRD's contributions in Chapter 3, this presentation is mainly descriptive and highly detailed, although several analytic conclusions are summarized at the end.

This is not an all-inclusive discussion. Some activities are emphasized because of their relatively greater importance to the overall program; accurate information on a few activities proved difficult to obtain; and intramural studies--primarily short-term policy studies by R&D staff--are not included. Nor is this a conclusive examination; it is merely one way among many to describe a large R&D program.

Sampling and Analysis

The Committee collected data on program expenditures, methods, performers, and content for seven fiscal years--1963, 1966, and 1969-1973. The Committee also reviewed reports from a number of significant OMRD-supported studies and commissioned more detailed assessments by its staff and by several researchers (see Appendix). The sample years emphasize more recent experience, but still convey some sense of earlier efforts when research and E&D were administered separately. Fiscal years 1963, 1966, and 1969 coincide, respectively, with the origins of manpower R&D activity within the Department of Labor, with a period of great expansion and proliferation of manpower training programs generally, and with a time of transition between the Johnson and Nixon Administrations and their differing concepts of national manpower policy. The 954 separate projects initiated during the seven years included in the sample represent about one-half of the nearly 2000 projects supported by OMRD and its predecessor offices between 1962 and 1975. Expenditures of $143 million for

these projects represent nearly 60 percent of the total manpower R&D program budget since 1962.*

This account first describes the types of programs carried out under the R&D rubric and briefly examines how the mix of programs has changed since 1962. Then, for each broad program type, three characteristics are examined:

- R&D methods employed;
- performers and performing organizations; and
- program content.

TYPES OF R&D PROGRAMS

OMRD and its predecessor offices operated more than 17 different R&D programs. Some were instituted by legislation, some at the Department's explicit initiative, and some evolved from OMRD's interest and investment in sets of related projects. Table 1 shows the distribution of these programs and their costs for the seven sample years.** In considering this large and diverse structure, the Committee found it useful to distinguish between three different kinds of programs: General Programs, Research Training Programs, and Special Programs.

General Programs

General Programs include single project efforts with specified objectives and limited (two- to three-year) time frames for performance. These projects focused chiefly on manpower policy and program issues of interest to the Department of Labor. Some projects were one-time investigations, while others were parts of strategic attempts to deal with an area of manpower study. Overall, the nature and content of General Programs varied substantially from year to year.

*Approximately 24 projects initiated during the sample years are not included in this analysis: four projects for which no final report was ever submitted by the performer; two projects (costing a total of $209,000) that were supported through both research and E&D program funds (and therefore could not be classified under one or the other category); and about 18 mobility demonstration projects that were apparently completed but for which project reports and accurate financial records could not be obtained. According to Manpower Administration memoranda, and an outside contractor's evaluative study (211), the overall mobility demonstration effort involved projects in 28 states and total expenditure of nearly $5 million.

**With the exception of several activities that were re-funded annually for four or more consecutive years (Institutional Grants, the Parnes Study, and the Experimental Manpower Laboratory projects), OMRD's total outlay for the full term of a project was credited to the fiscal year during which that project was initiated. This procedure was dictated by the manner in which records for R&D projects have been kept in the Manpower Administration. Accurate data on annual per-project expenditures are not readily accessible for the entire 1962-73 period.

TABLE 1 OMRD Expenditures by Program
(figures in parentheses are number of projects)

	1963	1966	1969	1970	1971	1972	1973	Total
Longitudinal Study of Labor Force Behavior (Ohio State University)	0	$2,065,333 (2)	$1,270,500 (2)	$1,411,000 (2)	$1,471,000 (20)	$2,387,500 (4)	$2,561,146 (2)	$11,166,479 (14)
Social Security Act Research* (WIN Program)	0	0	2,626,945 (12)	1,362,968 (10)	619,652 (4)	1,608,782 (9)	2,183,677 (9)	8,402,024 (44)
MDTA Research Contracts*	$615,336 (17)	1,523,224 (26)	769,897 (14)	882,325 (14)	1,323,843 (9)	459,367 (8)	1,845,158 (10)	7,419,150 (98)
Institutional Grants	0	515,907 (7)	611,977 (7)	500,513 (7)	359,084 (12)	900,000 (12)	900,000 (12)	3,787,481 (57)
Job Bank Research*	0	0	0	1,453,507 (4)	307,313 (3)	573,849 (4)	0	2,334,669 (11)
Doctoral Dissertation Grants	0	390,000 (33)	405,000 (40)	520,000 (49)	390,000 (37)	310,000 (31)	303,426 (30)	2,318,426 (220)
Conservation of Human Resources Project (Columbia University)	N.A. (1)	912,541 (1)	0	0	479,602 (1)	0	897,979 (1)	2,290,122 (4)
Economic Opportunity Act*	0	0	283,352 (3)	329,000 (3)	399,549 (2)	385,000 (3)	0	1,396,901 (11)
Post-Doctoral Grants	0	327,514 (31)	96,873 (11)	191,628 (12)	203,912 (11)	235,219 (14)	68,977 (4)	1,124,123 (83)
National Manpower Policy Task Force	0	346,380 (1)	0	0	525,665 (1)	0	0	872,045 (2)
Inflation-Unemployment Study (Urban Institute)	0	0	440,000 (1)	0	0	341,134 (1)	0	781,134 (2)
Automation and Technological Change Research*	N.A. (11)	0	0	0	0	0	0	N.A. (11)
MDTA R&D Contracts and and Grants*	4,954,000 (21)	19,778,001 (105)	8,907,006 (24)	14,459,960 (35)	11,107,452 (52)	8,056,058 (53)	6,178,777 (41)	73,441,254 (331)
Experimental Manpower Laboratories	0	302,758 (1)	2,774,864 (6)	2,398,461 (4)	2,018,681 (3)	2,543,119 (4)	1,729,000 (3)	11,766,883 (21)
Economic Opportunity Act R&D*	0	0	6,510,611 (5)	355,637 (3)	605,365 (3)	701,356 (7)	928,220 (6)	9,101,189 (24)
Mobility Demonstration Program*	0	3,228,756 (9)	N.A. (2)	0	0	0	0	3,228,756 (11)
Offender Demonstration Programs*	0	0	0	0	166,000 (1)	484,686 (3)	0	650,686 (4)
Combination	0	2,508,014 (4)	180,000 (1)	0	552,850 (1)	0	0	3,240,864 (6)
TOTAL								$143,322,186

*Established by legislation.

There were numerous General Programs: MDTA E&D Contracts and Grants, MDTA Research Contracts, Social Security Act Research (WIN Program), Economic Opportunity Act E&D, Economic Opportunity Act Research, Mobility Demonstration Program, Job Bank (Job Information and Matching) Research, Offender Demonstration Program, and Research on Automation and Technological Change. Some General Programs included projects addressed to very specific policy or operational concerns, such as Job Banks, while others involved projects covering a wide spectrum of subjects, such as all Manpower Administration activities under MDTA. General Program support was given to research studies, demonstration and development activities, pilot projects, and to experimental efforts. Available funds were used flexibly: research studies were sometimes supported with E&D Program funds, and demonstration, development, pilot, or experimentation efforts were sometimes supported with General Research Program funds.

Research Training Programs

There have been three Research Training Programs: doctoral dissertation grants, post-doctoral grants, and institutional grants. The doctoral and post-doctoral efforts, which began in 1965, have been administered jointly as the Small Grants Program. Research training activities focused primarily on developing, strengthening, and expanding the capabilities of manpower researchers and, more recently, on the relationship of those researchers to manpower program administration. Nonetheless, some of the work carried out through the Institutional and Small Grants Programs (for example, studies of occupational licensure and of the dual labor market theory) contributed substantially to scientific understanding of manpower problems.

Dissertation grants provided one- or two-year support of up to $15,000 to attract graduate students to manpower study. Since 1965, dissertation awards were made to 234 students. Of these, 143 had completed their degrees by mid-1972 and almost all of them had joined college and university faculties, primarily in economics.* Some had also served in various capacities with federal and state government agencies after obtaining their degrees.

Post-doctoral support of up to $30,000 per award was provided to over 100 established manpower researchers. Post-doctoral grant activity included high-risk exploratory efforts, feasibility studies that eventually led to large-scale General Program projects, and a number of special tasks such as synthesizing R&D findings in a subject area.

Through its Institutional Grants Program, OMRD provided long-term (four- or five-year) funding for essentially self-directed teaching and research efforts under which 32 colleges and universities have received support. Each awards cycle took a slightly different form. Between 1966 and 1970, projects at seven institutions having only marginal capability (initially) in manpower study were funded for $75,000-$100,000 per year. The second round of grants, budgeted for $75,000 annually from 1970 through 1974, financed projects of research and researcher training in 12 universities already demonstrating advanced capability and commitment in manpower study. In both rounds, the goal,

*More recent data regarding doctoral dissertation completions and recipient employment are not available.

in OMRD's words, was to increase "the number of schools engaged in continuing research on manpower problems and the number of research specialists concentrating on manpower problems."

Third-round recipients, selected in 1974, included colleges and universities with varying degrees of established expertise in manpower. Ten were funded at $100,000 yearly, and three schools with substantial minority group representation in the student body were each funded at $150,000 yearly. Project purposes for this cycle were broadened in light of the decentralization aim of CETA: (a) to teach undergraduate and graduate students about manpower programs, with an eye toward attracting them into the local administration of CETA activities; (b) to improve the skills of current CETA administrators at the local, state, and regional levels; (c) to strengthen the linkages between program administrators and the university-based manpower research community; and (d) to conduct studies relevant to local, state, and regional manpower concerns.

Special Programs

Special Programs have entailed continuous, long-term, and relatively large-scale funding commitments. The projects included in this category primarily represent institutional support for directed study or manpower program design and assessment: the Longitudinal Study of Labor Force Behavior, the Experimental Manpower Laboratories Program, the Columbia University Conservation of Human Resources Project, the National Manpower Policy Task Force, and the Urban Institute Inflation-Unemployment Study.

The National Longitudinal Study of Labor Force Behavior (the Parnes Study) has been conducted jointly by the Census Bureau and researchers at Ohio State University. Economic, social, and psychological data have been collected continuously since 1965 from the same four groups of workers: female labor force entrants aged 14-24, male labor force entrants aged 14-24, females aged 30-44, and males aged 45-59.* These data have facilitated study of individuals' employment experiences in greater depth and detail than ever before possible. The Parnes Study, which represents OMRD's largest single investment to date, is scheduled for completion in fiscal 1976.

The Experimental Manpower Laboratories Program provided support for six projects between 1966 and 1975. Each Lab's project was intended as a continuing capability for conducting scientifically sound, program-oriented research in an operational setting. In addition, each project had a particular topical focus relevant for manpower programming in the mid-1960s and early 1970s:

- Pre- and post-placement job support, e.g., job coaching, to improve job retention among disadvantaged workers (Colorado State University);
- Basic education and incentive programs for prisoners to improve post-release employment behavior and development of individualized instructional materials and procedures for their use (Rehabilitation Research Foundation, Draper Correctional Center, Elmore, Alabama);
- Strengthening local agency procedures and coordination in rendering manpower training and services (University of Michigan-Wayne State University);

*These ranges refer to the workers' age at the beginning of the study.

- Manpower training and services to increase the employability of disadvantaged youth (Mobilization for Youth, New York City);
- Integrated statewide planning and programming for manpower and vocational education (North Carolina Manpower Development Corporation);
- High-level skill training for the disadvantaged in an industrial environment, conducted by company personnel and with company equipment (Oak Ridge Associated Universities, Union Carbide, and the Atomic Energy Commission, Oak Ridge, Tennessee).

The progress and achievements of these projects were carefully reviewed by an independent panel in 1972-73 and recommendations were made for strengthening their structure and management (3). In 1973-74, funding for several Labs was phased out in anticipation of a new round of similar projects, but fiscal 1975 budget reductions made it impossible to support a cycle of new Labs. Funding for the remaining Labs projects was terminated at the end of fiscal 1975.*

The Columbia University Conservation of Human Resources Project was initiated in 1963 to conduct interdisciplinary research related to major manpower policy issues. Within the broad areas of human resource development and manpower utilization, project staff had substantial freedom to select problems for investigation. Most recently, studies focused on the dynamics of local labor market operation, a high priority subject because of CETA.

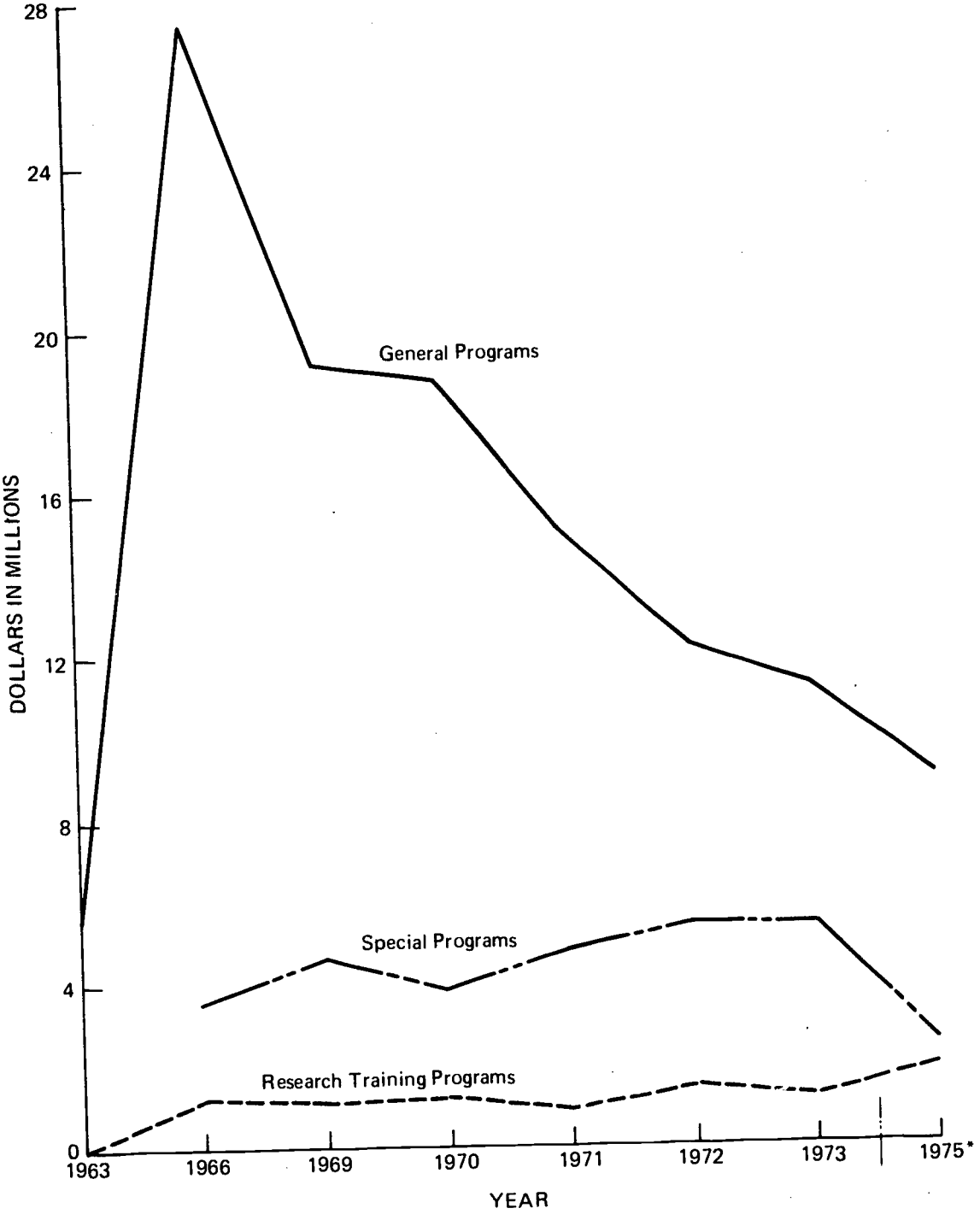
The National Manpower Policy Task Force (NMPTF), supported jointly by OMRD and the Ford Foundation since 1966, has operated a different policy research capability. While maintaining a small staff and commissioning studies by outside researchers, its primary function has been to provide a forum in which leading manpower researchers could address policy issues being debated in the executive and legislative branches of government. The Task Force has also served informally as an advisory body to OMRD on matters of R&D strategy and the design of especially complex or costly projects.

The Inflation-Unemployment Study, conducted by Urban Institute researchers between 1968 and 1974, attempted to study and to empirically model labor market processes--the movement of individuals between unemployment and employment, and the effects of general economic conditions and of major labor market institutions, such as the Employment Service, on these flows. The objective was to clarify the relationships between macroeconomic (fiscal and monetary) policies and manpower activity in order to design manpower policies that would effectively contribute to the overall performance of the economy. This study was funded jointly by OMRD, the National Science Foundation, and the Ford Foundation. OMRD support was withdrawn in mid-1974 because of budgetary constraints; this effectively ended the effort since the other sponsors were unable to increase their contributions.

A Changing Program Mix

Expenditure and Project data for General Programs, Research Training Programs, and Special Programs are shown in Figure 1. Expenditures for Research Training

*Many of the organizations that operated Laboratory projects have nevertheless remained active in manpower, providing advice and undertaking further studies related to manpower programming.



*Estimated.

FIGURE 1 OMRD Expenditures by Type of Program

Programs and Special Programs remained relatively stable from 1962 to 1973, while General Program expenditures declined significantly. OMRD moved gradually toward conducting a greater portion of its work through various forms of institutional support. A $5 million budget reduction in fiscal 1975 has accelerated this trend, while also causing the termination of two large-scale Special Program efforts.

The decline in relative importance of General Program activities can be attributed to two factors. First, the rate of manpower policy and program change slowed substantially after 1968, accompanied by reduced demands for developing and testing new treatment or service delivery methods and waning interest in the identification of new manpower problems for policy attention. Second, support by the Department of Labor for social science R&D has dropped precipitously during recent years.

The relatively stable budgets (measured in current dollars) of the Research Training Program and the Special Program reflect OMRD's strong concern for strengthening both scientific capabilities and the state of knowledge despite a declining total budget. However, the overall result of these R&D budget changes has been a reduction in the Office's flexibility to respond rapidly to new challenges posed by economic recession and the implementation of CETA.

GENERAL PROGRAMS

R&D Methods

Table 2 shows the distribution of General Program efforts by R&D method employed. This attempts to identify the particular knowledge-generating approach applied in a project, whether it was funded under a research program or an E&D program (since research was sometimes supported with E&D funds and E&D activities supported with research funds).

Although demonstration projects dominated the overall General Program effort for the seven years studied, demonstration expenditures waned and there was a major redirection toward research and experimentation after 1970. The greater emphasis placed on research after fiscal 1970 reflects both the shift in manpower policy and a growing OMRD concern for identifying and measuring accurately the problems of a given labor force segment before testing possible treatment modes. It also reflects a more consistent flow from research to demonstration, development, and experimentation as a result of the merger of OMRD's predecessor offices. Within research, there was also a shift in methodological emphasis. Projects involving survey and random sampling techniques, with heavy reliance on mathematical analysis, in contrast to descriptive or case study approaches, represented an estimated 15 percent of fiscal 1966 expenditures and approximately 60 percent of fiscal 1973 expenditures.

Relatively higher investment in evaluative activities beginning in fiscal 1970 was an attempt to correct a significant weakness in prior demonstration efforts. In the earlier years, demonstration project staff (usually not social scientists) were asked both to create and administer new programs and to assess their impact. The evaluation was often not well executed, and after the creation of OMRD in 1970 it was customary to support university-based or social scientists to conduct independent evaluations of demonstration projects. These changes also paralleled the development in the mid- and late-1960s of more

TABLE 2 OMRD General Program Expenditures by R&D Method - dollars in thousands
(figures in parentheses are number of projects)

	1963	1966	1969	1970	1971	1972	1973	Total
Demonstration	$ 4,727 (16)	$19,526 (93)	$11,188 (16)	$ 9,537 (16)	$ 4,011 (15)	$ 3,586 (15)	$ 1,097 (5)	$53,673 (176)
Development	224 (4)	3,760 (13)	3,145 (14)	3,263 (21)	5,018 (16)	2,537 (17)	918 (6)	18,865 (91)
Research	257 (26)	940 (21)	1,453 (16)	1,382 (18)	2,820 (27)	3,809 (30)	5,373 (36)	16,033 (174)
Evaluation	358 (1)	1,097 (10)	1,984 (12)	1,145 (9)	1,261 (11)	1,385 (15)	801 (6)	8,032 (64)
Combination	0	1,651 (2)	1,491 (2)	3,517 (5)	32 (2)	83 (3)	0	6,774 (14)
Experimentation	0	0	0	0	1,090 (1)	84 (1)	1,616 (2)	2,790 (4)
Other	3 (2)	63 (5)	17 (1)	0	850 (3)	785 (6)	1,331 (11)	3,049 (28)

elaborate techniques for evaluative study and a growing federal concern for accurate assessment of social program results.

OMRD began to employ structured experimental approaches late in comparison to other federal R&D agencies. It supported only a few experiments between 1970 and 1973, in youth counseling techniques, reducing criminal offender recidivism, and voucher systems for administering manpower training programs. These efforts were conducted on a relatively small scale.*

These post-1970 changes resulted in a decline in average expenditure for General E&D Program projects and a substantial increase in the average expenditure for General Research Program projects. In fiscal 1966, the average E&D project cost approximately $200,000 compared with about $150,000 in fiscal 1973. During the same period, the average cost of a research project rose from about $75,000 to nearly $200,000. Therefore, the per-project General Program commitments remained essentially the same in current dollar terms.

Performers and Performing Organizations

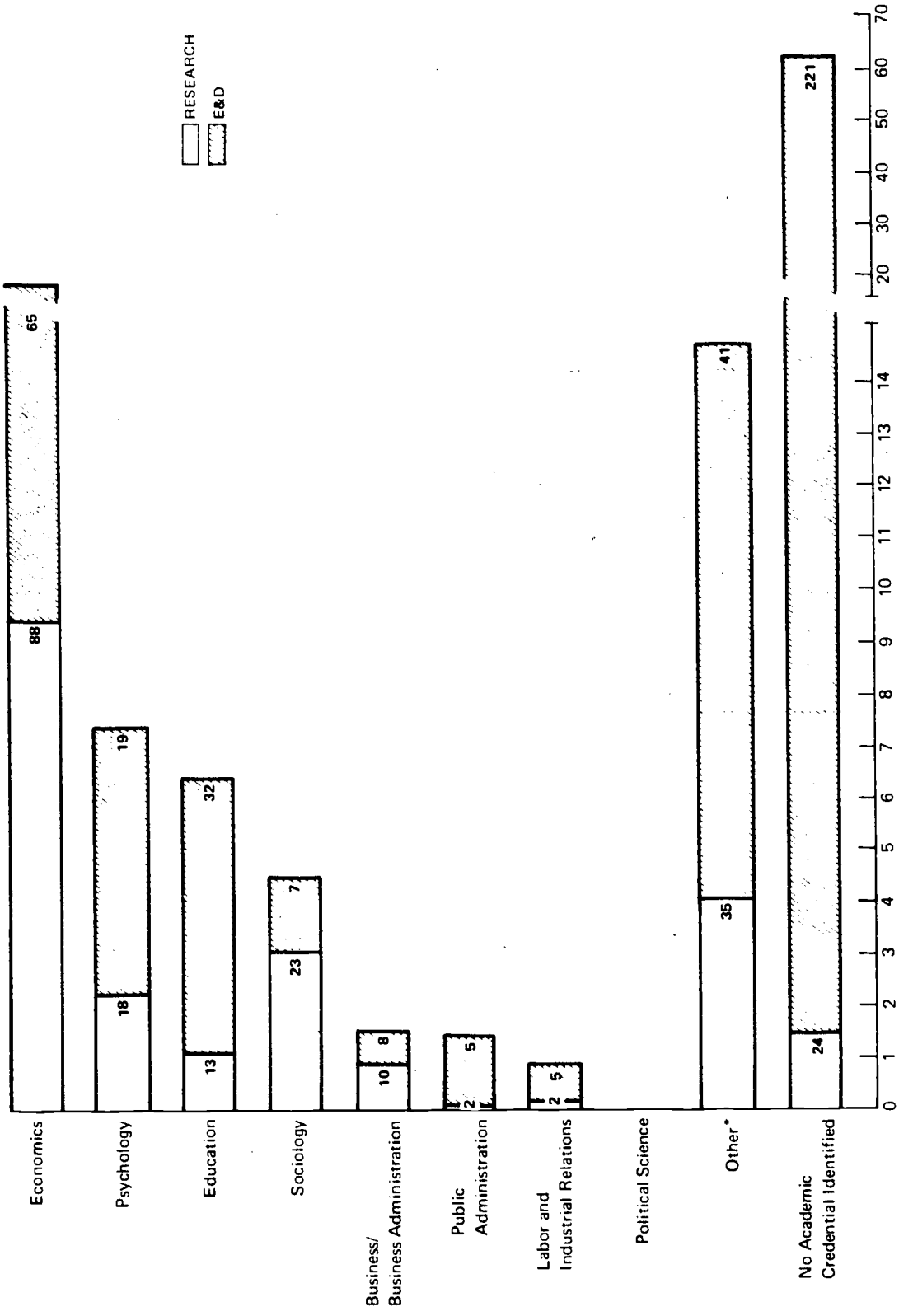
Figure 2 presents data on the discipline or field of the principal investigators associated with OMRD General Program projects.** Performers having no identifiable higher-level academic credentials were usually involved in the General E&D Program. A year-by-year survey shows that such performers were far more numerous prior to 1970 than subsequently.

Economists conducted a greater proportion of General Research Program projects than did performers from any other academic discipline. This was the case for every year covered by the data. Researchers in social work, sociology, psychology, and education were active in OMRD activities, but not to the same extent nor with the same year-to-year consistency as were economists. For areas of major OMRD emphasis, such as studies focusing on issues of labor supply, a more diverse group of social scientists was involved than for areas that received less emphasis.

As might be expected, there was a significant difference in the institutional and organizational affiliations of research and E&D performers. For General Program research projects, performers were located in university departments (30%); university-based research centers (25%); private non-profit policy research organizations (18%); and federal government agencies (15%).

*However, in 1974, OMRD launched a major experimental effort to design and assess program procedures to enhance the employability and employment of individuals with particularly severe labor market disabilities, including youth, female heads of households, ex-offenders, and ex-addicts. This "supported work" experiment grew out of an earlier OMRD project (261, 76) and will involve an extensive effort over three years, in 10 to 12 cities across the nation, with funding provided by OMRD, three other federal agencies, and the Ford Foundation.

**By limiting this examination to principal investigators, the analysis touches only part of the OMRD performer community. Large-scale, long-term activities often involve sizable staffs and substantial staff turnover. It proved impossible to identify all these individuals and to trace project personnel changes over time. Information about principal investigators should nevertheless indicate OMRD performer choices.



*The majority of investigators in this category were associated with schools of social work.

FIGURE 2 Principal Investigators by Discipline or Field
(figures inside bars are number of projects up to three categories per project)

In comparison, General Program E&D projects were conducted by performers in local social action agencies (35%); private sector consulting firms (15%); private non-profit, non-university policy research organizations (14%); university-based research centers (10%); and university departments, federal agencies, and state agencies (each at 7-8%). This dispersion of OMRD funds suggests that in an area of study as broad as manpower, a full range of R&D competencies will seldom be found in a single setting.

The proportion of General Program R&D activities carried out through local social action agencies declined from 50 percent in 1966 to less than one percent in 1973. Work done through university departments increased from three percent in 1966 to nearly 30 percent in 1973. These changes resulted from the shifting balance between research and E&D funding as well as from the increased participation of social scientists in all aspects of OMRD activity after 1970.

Program Content

The most striking feature of past General Program efforts is enormous diversity, which can be attributed to two factors. First, because of its operationally oriented setting, OMRD has responded to rapid and sometimes fundamental shifts in the directions taken by manpower policies and programs since 1962. Second, because its mission involved areas of study that were not initially well developed, OMRD explored a large number of relatively uncharted subjects and issues, unable to determine in advance whether they would be productive. Thus, the Office often pursued study on a trial-and-error basis, addressing "targets of opportunity" in attempts both to gain new knowledge and to apply existing knowledge and study techniques to policy problems as they arose.

Topics

Table 3 shows major support for R&D concerning several broad topics: skill development and training; labor market behavior, information, and services; labor force behavior, mobility and migration; poverty, discrimination, and barriers to employment; and manpower policy and planning. Table 3 also shows substantial year-to-year changes in the relative emphasis given these topics. The most striking trend, declining support in the skill development and training category, can be attributed to the overall reduction in General E&D Program expenditures after 1970.

Figure 3 separates General Research and E&D Program efforts by topic for the seven years covered by the Committee's data. General Research Program expenditures were more concentrated on labor force behavior and manpower policy and planning than were General E&D Program expenditures, while E&D projects focused more on skill development training and labor markets than did research projects.

Figure 4, employing a second set of topical categories, gives another picture of coverage in General Program activities. General Program projects had a preponderant concern for matters of labor supply, in broad terms and in terms of the manpower problems experienced by special segments of the labor force. Attention was also given to labor market operations. E&D Programs concentrated on these topics more than did Research Programs. Small

TABLE 3 General Program Support by Topic dollars in thousands
(figures in parentheses are number of projects up to three categories per project)

	1963	1966	1969	1970	1971	1972	1973	Total
Skill Development and Training	$5,195 (24)	$13,116 (56)	$13,424 (25)	$7,045 (21)	$6,711 (25)	$4,468 (24)	$2,068 (13)	$52,027 (188)
Labor Market Behavior, Information, and Services	4,210 (14)	12,624 (43)	5,287 (19)	8,538 (25)	4,622 (22)	3,495 (27)	3,601 (26)	42,376 (176)
Labor Force Behavior, Mobility, and Migration	634 (17)	13,734 (66)	4,997 (17)	7,224 (19)	1,832 (12)	1,975 (11)	3,035 (16)	33,431 (158)
Poverty, Discrimination, and Barriers to Employment	2,792 (7)	6,422 (28)	5,311 (19)	4,460 (15)	5,198 (15)	3,950 (14)	3,346 (9)	31,479 (110)
Manpower Policy and Planning	187 (15)	4,765 (13)	2,834 (13)	4,215 (23)	6,463 (32)	3,624 (35)	3,426 (27)	25,515 (158)
Industry and Occupational Studies	N.A. (3)	1,379 (6)	3,270 (12)	2,066 (16)	3,307 (21)	1,511 (8)	717 (11)	12,251 (77)
R&D Planning and Utilization	3 (3)	677 (10)	82 (4)	2,547 (7)	1,384 (8)	2,053 (27)	1,052 (8)	7,799 (67)
Automation and Technological Change	177 (7)	110 (2)	0	0	492 (1)	0	155 (1)	934 (11)
Other	0	N.A. (1)	48 (1)	71 (1)	0	0	0	119 (3)
Combination	0	0	0	0	0	3 (1)	0	3 (1)

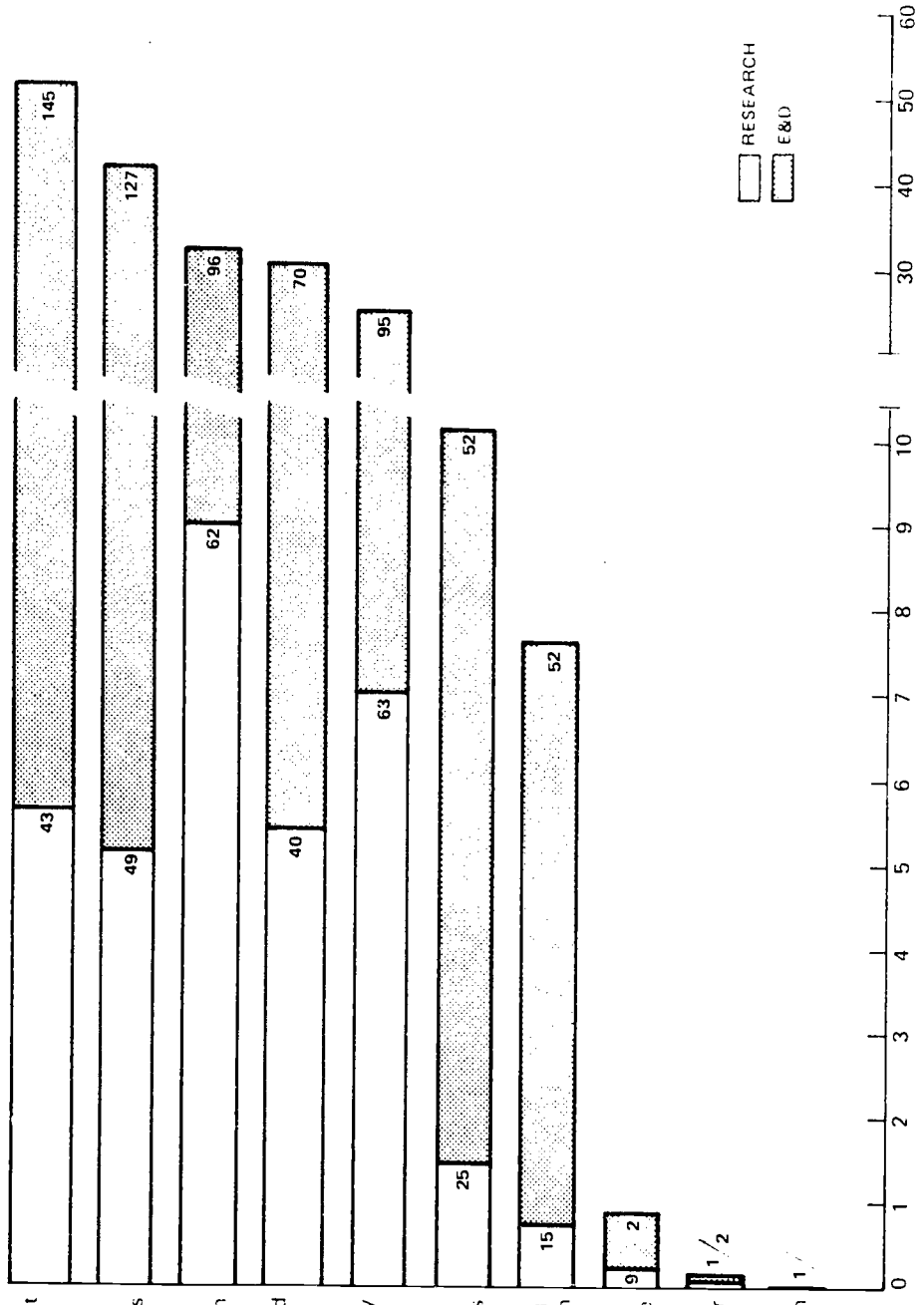


FIGURE 3 General Programs by Topic 1
(figures inside bars are number of projects up to three categories per project)

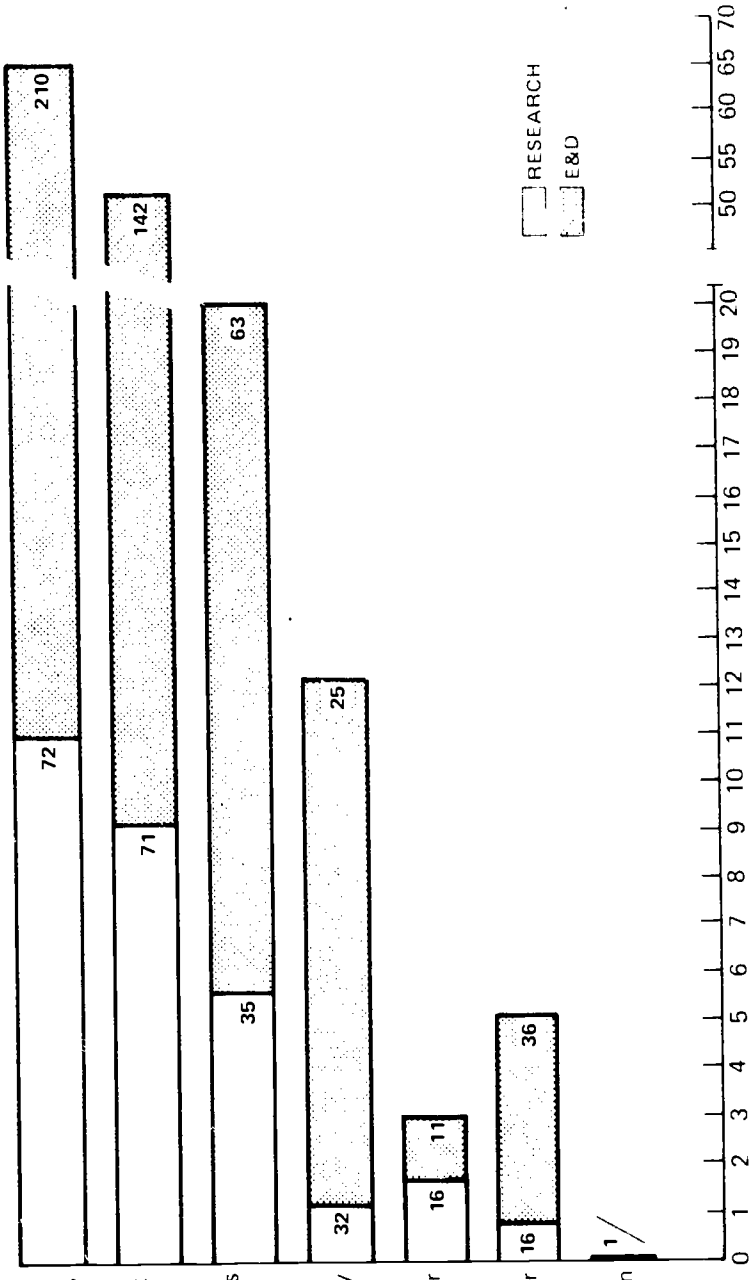


FIGURE 4 General Programs by Topic II
(figures inside bars are number of projects up to three categories per project)

expenditures for projects examining the demand for labor are apparent for both research and E&D.

Relationship to DOL Manpower Programs

A large share of General Program expenditures involved topics related directly to manpower training and service delivery, as well as methods (demonstration projects) designed to reflect problems normally found in operating environments. Figure 5 shows R&D expenditures in terms of specific DOL training and service delivery programs.

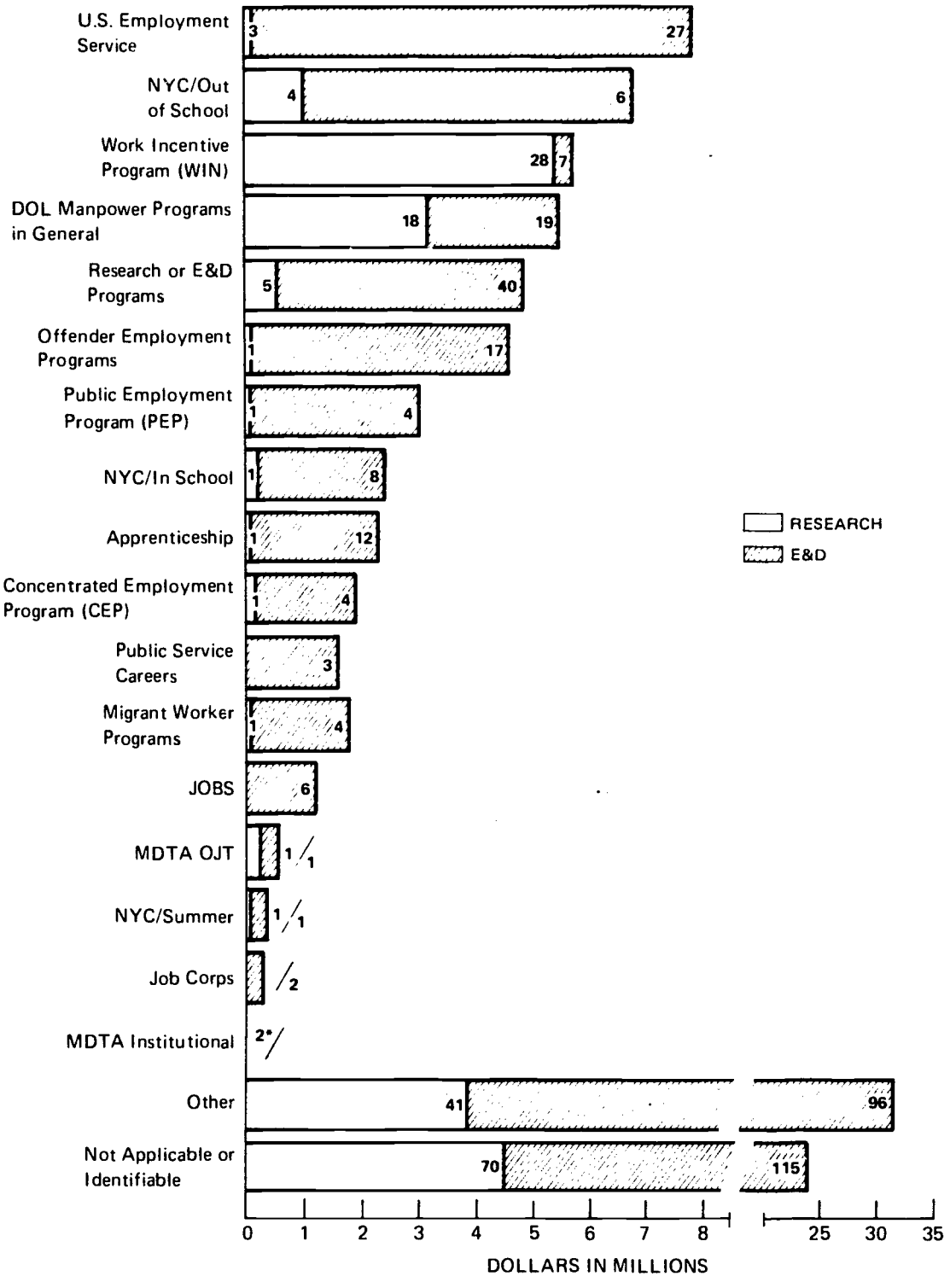
General Research Programs were concentrated on relatively few DOL activities: Neighborhood Youth Corps (NYC) programs, the Work Incentive Program (WIN), and general operating problems for all DOL manpower training efforts. General E&D Programs gave relatively more attention to NYC and the U.S. Employment Service. The patterns were not necessarily conscious strategy on OMRD's part. Work related to the WIN program was mandated by Congress to be carried out with research funds; efforts to strengthen the Employment Service have normally been considered by the Department in operational (E&D) rather than research terms.

About 30 percent of OMRD General Program expenditures were program-oriented although not focused on specific DOL program functions. One explanation of this striking proportion is that OMRD has followed its broad mandate to study all aspects of manpower and manpower programming, not just those under the immediate control of DOL. Much work under the "Other" category, for example, dealt with educational institutions as integral service delivery agents in manpower development. Another large segment of "Other" expenditures reflects the emphasis on model-building and program invention that characterized manpower R&D during the formative years of manpower policy in the 1960s. Since most manpower R&D was intended as high-risk and exploratory, many such efforts were specifically designed not to overlap established training programs; only a small fragment was ever translated directly into permanent Departmental operations.

Figure 6 illustrates somewhat differently the rapidly shifting priorities for General Program efforts. Only the four largest categories from the previous figure are covered, but the pattern of year-to-year change in these is common to the others. Significantly, there is no apparent connection between the relative levels of General Program R&D expenditures related to different DOL programs and the budgets for or number of participants involved in those training or service activities.

Labor Force Focus

Many General Programs dealt with labor supply, but this emphasis was not evenly distributed across the entire labor force. Figure 7 presents data regarding the focus of OMRD General Programs on age-defined labor force groups. Again, there were major shifts in the levels of year-to-year expenditure within categories, but specific subgroups consistently received far more attention than general groups in the labor force. Over time, there was a decreasing General Program focus on youth, while striking inattention to older workers persisted. (Disaggregating these data in terms of Research and E&D Programs shows that



*Cost of projects not available.

FIGURE 5 Relationship of General Program Expenditures to DOL Manpower Programs (figures inside bars are number of projects)

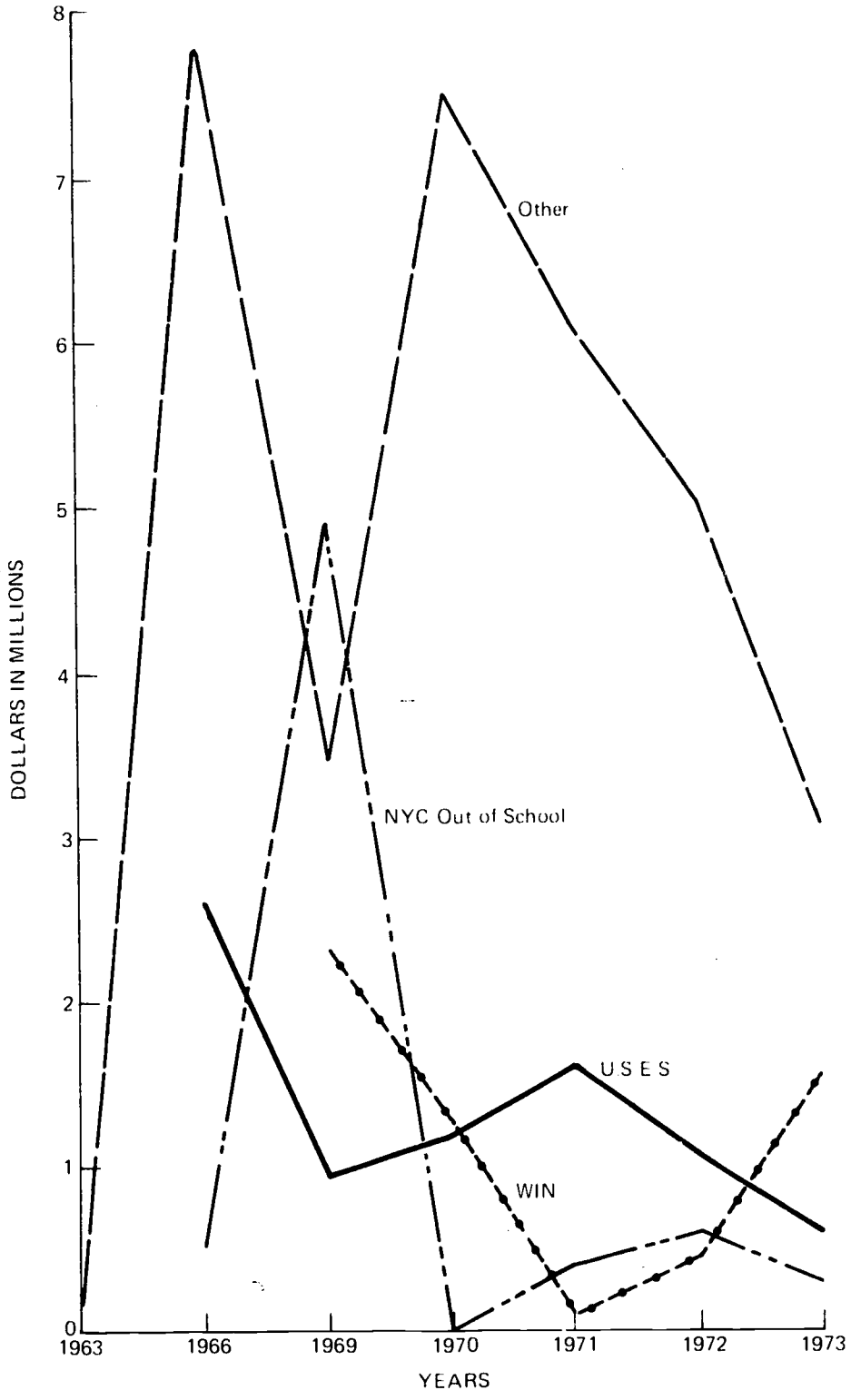
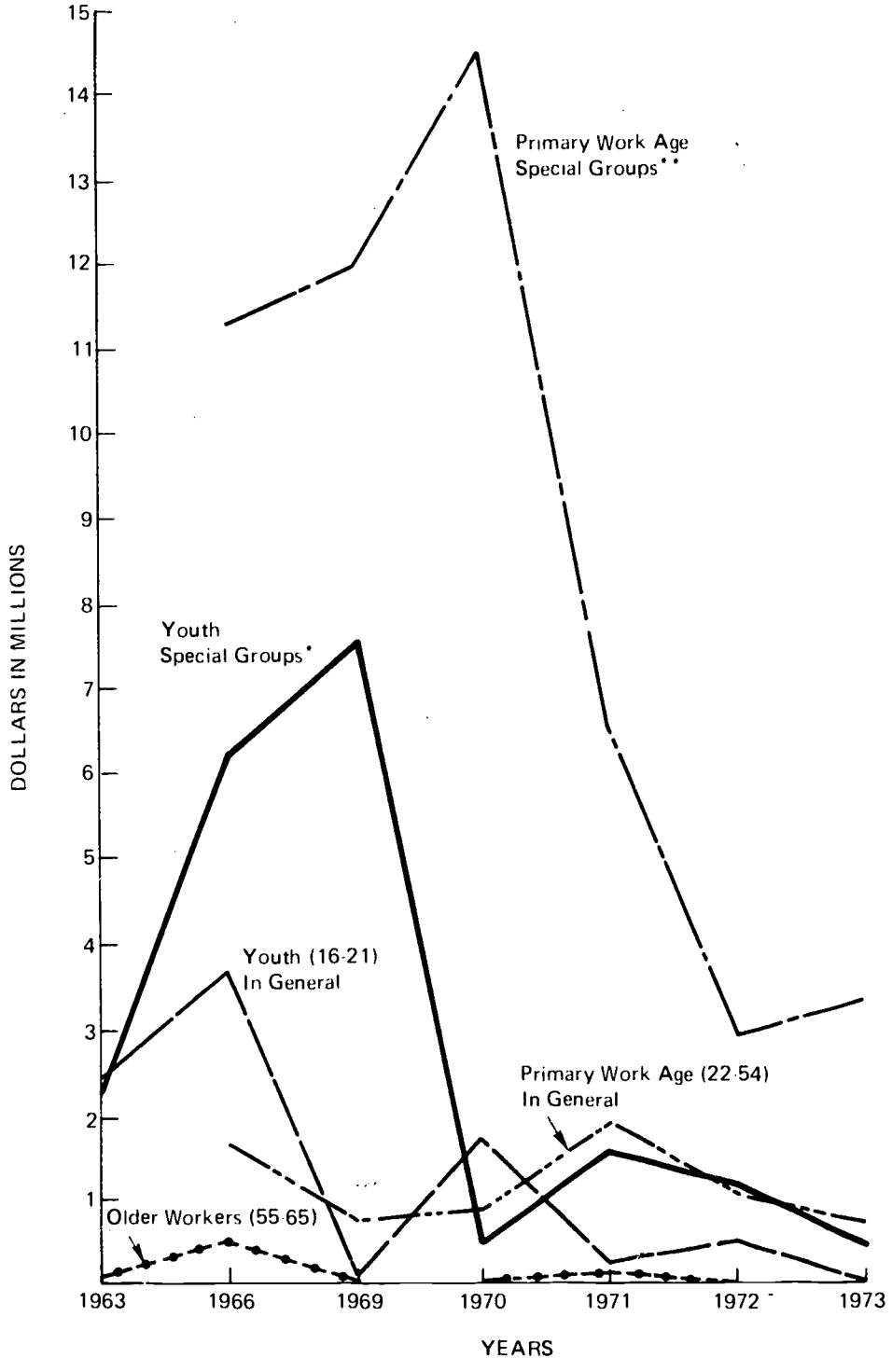


FIGURE 6 Relationship of General Program Expenditures to Selected DOL Manpower Programs



*e.g., female youth, minority youth, youth in school.

**e.g., primary work age females, primary work age minorities, primary work age unemployed workers

FIGURE 7 General Programs by Labor Force Group and Age

research expenditures have been more evenly distributed among age categories in the labor force than have E&D expenditures.)

Table 4 employs another set of categories for examining the labor force distribution of OMRD General Program efforts. It incorporates ethnic, occupational, income, and other characteristics often associated with problematic labor force experience to provide details regarding the large "Special Group" category shown in Figure 7.

This R&D focus again paralleled the compartmentalized approach of manpower policy to labor force problems. Overall, data on General Program expenditures for special groups show concentration on narrow bands of the labor force--youth, ethnic minorities, and criminal offenders--with especially severe employment handicaps. Ethnic minorities and welfare recipients received by far the greatest attention, while veterans received the least. Beginning in fiscal 1970, there was a small but growing concern for the labor force problems of women and white-collar workers, and emphasis on marginal groups in the labor force--addicts and alcoholics, criminal offenders and ex-offenders--also increased.

Disaggregating these data shows that E&D expenditures and projects were more widely distributed among various subgroups than research expenditures and projects. In both research and E&D, however, there was greater concern for unemployed workers as a broad class than for particular categories of the unemployed.

Labor Market Study

Another major theme in OMRD General Programs has been the study of labor markets. Table 5 presents data regarding the distribution of expenditures and projects among various lines of inquiry into labor market operations. Job placement (the hiring process) and occupational labor markets received the greatest attention. Labor market studies focused primarily on workers, jobs, and market processes in the construction and health industries, sectors of the economy that received much manpower policy and program attention. Levels of expenditure in all categories varied greatly from year to year.

Separating Research from E&D Program activities shows a stronger E&D emphasis on job placement and occupational labor markets and relatively more research attention to labor market measurement, information and information systems, and a small but recently growing concern for individuals' job search behavior. The E&D foci can be explained by manpower policy and program interest in placing trainees in jobs. Research emphases can be attributed to the Job Banks Program as well as to ongoing interest among manpower researchers in describing and distinguishing different types of local labor markets. For both General Research and E&D Programs there was relatively little expenditure for studies of labor market theory.

RESEARCH TRAINING PROGRAMS

R&D Methods

By definition, Research Training Programs involved the application of research methods. Data indicate substantial amounts of theoretical, case study, and

TABLE 4 OMRD General Program Support by Selected Target Group Characteristics dollars in thousands
(figures in parentheses are number of projects up to two categories per project)

	1963	1966	1969	1970	1971	1972	1973	Total
Ethnic Minority	$1,778 (12)	$12,494 (50)	$8,385 (24)	$7,227 (22)	$3,548 (17)	$1,432 (12)	$ 805 (6)	$35,669 (143)
Welfare Recipients	0	45 (1)	2,570 (11)	3,217 (8)	92 (1)	1,535 (12)	2,351 (11)	9,810 (44)
Unemployed								
In General	N.A. (5)	1,670 (4)	703 (3)	231 (2)	1,655 (3)	1,023 (7)	545 (5)	5,827 (29)
Blue Collar	0	1,018 (5)	N.A. (1)	0	280 (1)	0	0	1,298 (7)
White Collar	0	140 (1)	0	0	1,044 (5)	8 (1)	607 (2)	1,799 (9)
Criminal Offenders & Ex-Offenders	0	694 (5)	847 (2)	643 (2)	1,817 (4)	1,146 (6)	436 (3)	5,583 (22)
Addicts & Alcoholics	0	0	0	541 (1)	921 (5)	1,697 (2)	1,321 (1)	4,480 (9)
Handicapped	162 (2)	2,434 (15)	0	22 (2)	310 (3)	0	300 (1)	3,228 (23)
Women	0	95 (3)	0	210 (2)	306 (2)	187 (2)	729 (3)	1,527 (12)
Veterans	0	0	0	0	372 (2)	51 (1)	229 (1)	652 (4)

TABLE 5 OMRD General Program Support for R&D Relating to Labor Market Operations dollars in thousands
(figures in parentheses are number of projects)

	1963	1966	1969	1970	1971	1972	1973	Total
Job Placement (Hiring Process)	$ 609 (8)	$8,094 (32)	$1,166 (7)	$1,948 (10)	$3,233 (12)	$4,412 (17)	$1,245 (5)	$20,707 (91)
Occupational Labor Markets	N.A. (2)	330 (6)	2,932 (7)	5,043 (12)	1,998 (12)	997 (9)	1,802 (7)	13,102 (55)
Geographic Mobility	N.A. (4)	5,378 (11)	1,387 (3)	589 (2)	650 (1)	170 (4)	98 (1)	8,272 (26)
Occupational Mobility	N.A. (2)	0	3,149 (7)	3,753 (4)	0	0	341 (2)	7,243 (15)
Labor Market Measurement	438 (7)	54 (4)	30 (2)	405 (5)	1,621 (7)	1,185 (5)	1,597 (9)	5,330 (39)
Labor Market Information and Information Systems	0	112 (1)	56 (1)	1,667 (6)	643 (6)	1,465 (9)	402 (2)	4,345 (25)
Internal and Segmented Labor Markets	N.A. (1)	619 (6)	472 (5)	451 (5)	1,513 (11)	0	726 (6)	3,781 (34)
Job Search	0	0	0	0	155 (1)	163 (2)	220 (1)	538 (4)
Labor Market Theory	N.A. (1)	64 (2)	0	0	166 (2)	0	72 (1)	302 (6)
Combination	3,980 (10)	3,260 (13)	2,435 (9)	2,586 (5)	656 (5)	213 (4)	800 (7)	13,930 (53)
Not Applicable or Identifiable	542 (14)	9,126 (69)	7,651 (20)	2,402 (20)	4,447 (18)	3,664 (37)	3,833 (25)	31,665 (203)

survey-based studies undertaken through the Small Grants Program. While data on methods were not collected for the Institutional Grants Program, another study suggests that its research could be similarly characterized (141).

The size of Small Grants Program awards, as well as their research-defined purposes, effectively precluded major focus on demonstration, development, or experimentation activities. Of the 220 doctoral dissertation projects initiated during the seven years in this analysis, 191 projects ($2,018,000) involved empirical research, 24 projects ($250,000) were evaluative, and five ($50,000) focused on program development. About 40 percent of these projects (by expenditure) had a theoretical orientation, and the remainder were divided almost equally between case study and survey-based approaches. Very little work focused on development of new methodological approaches. There were few changes over time in this distribution for doctoral dissertation projects.

The 83 post-doctoral projects showed a similar pattern of emphasis: 69 projects ($956,000) were research oriented, eight ($107,000) focused on program development, four ($48,000) were evaluative, and two ($13,000) were related to demonstration activities. About 30 percent (by expenditure) was theoretical in character, 40 percent involved case study, and about ten percent emphasized the development of new scientific techniques. Again, there were no significant changes over time in methods employed in post-doctoral projects.

A Committee review of reports issued under the Institutional Grants Program indicates that only a few of the first- and second-round recipients were involved intensively in demonstration, development, or experimentation activities. When such involvement did occur, it tended to be intermittent. In the face of CETA and given the absence of a sustained program orientation in the past, the third-round projects were designed to encourage linkages between institutional grantees and manpower practitioners.

Performers and Performing Organizations

Most doctoral dissertation projects in the Small Grants Program were conducted in a university setting. All but a dozen efforts (totaling approximately $125,000 in expenditures) proceeded under the auspices of a single academic department. Figure 8 shows the distribution of doctoral awards by discipline. Economists clearly dominated the dissertation program, just as they did General Programs.

For the post-doctoral component of the Small Grants Program, 90 percent of the awards (by expenditure) went to performers in academic settings--55 percent in university departments and 35 percent in university research centers. The remaining ten percent went to performers affiliated with private, non-profit, non-university policy research organizations. Figure 9 shows that, similar to the experience in the other R&D programs, post-doctoral grant recipients were mainly economists.

The Committee was unable to collect comparable data on performers for the Institutional Grants Program. However, according to OMRD's own summary of institutional grant activities between 1966 and 1973, 17 of the 19 first- and second-round projects were housed in already existing university-based manpower research centers or involved the creation of such centers (250). Those 17 centers were either independent of the university's departmental structure or associated with more than one graduate school or department. Each of the two

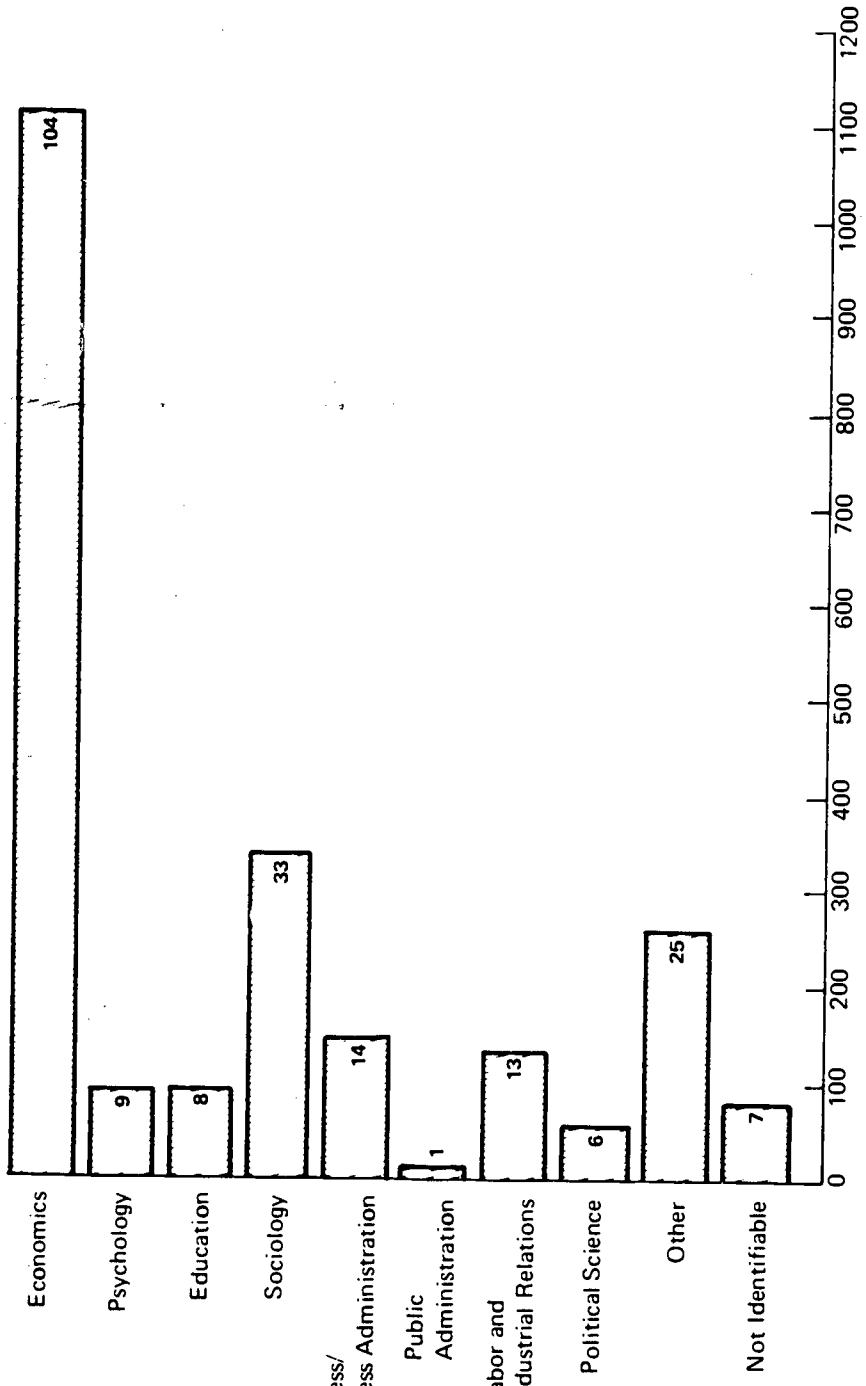


FIGURE 8 Doctoral Dissertation Grant Recipients by Discipline or Field
(figures inside bars are number of projects)

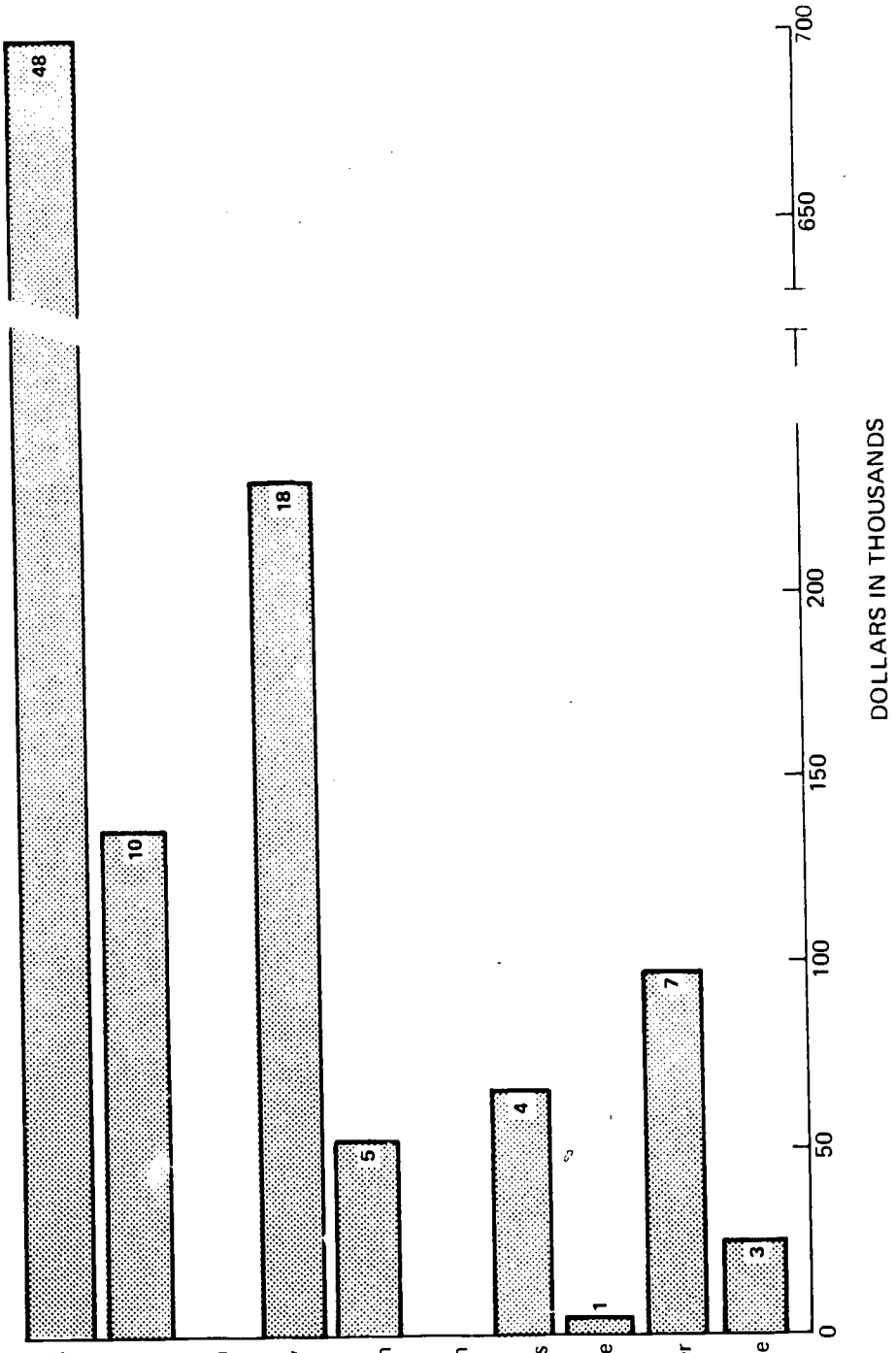


FIGURE 9 Post-Doctoral Grant Recipients by Discipline or Field
(figures inside bars are number of projects - up to three categories per project)

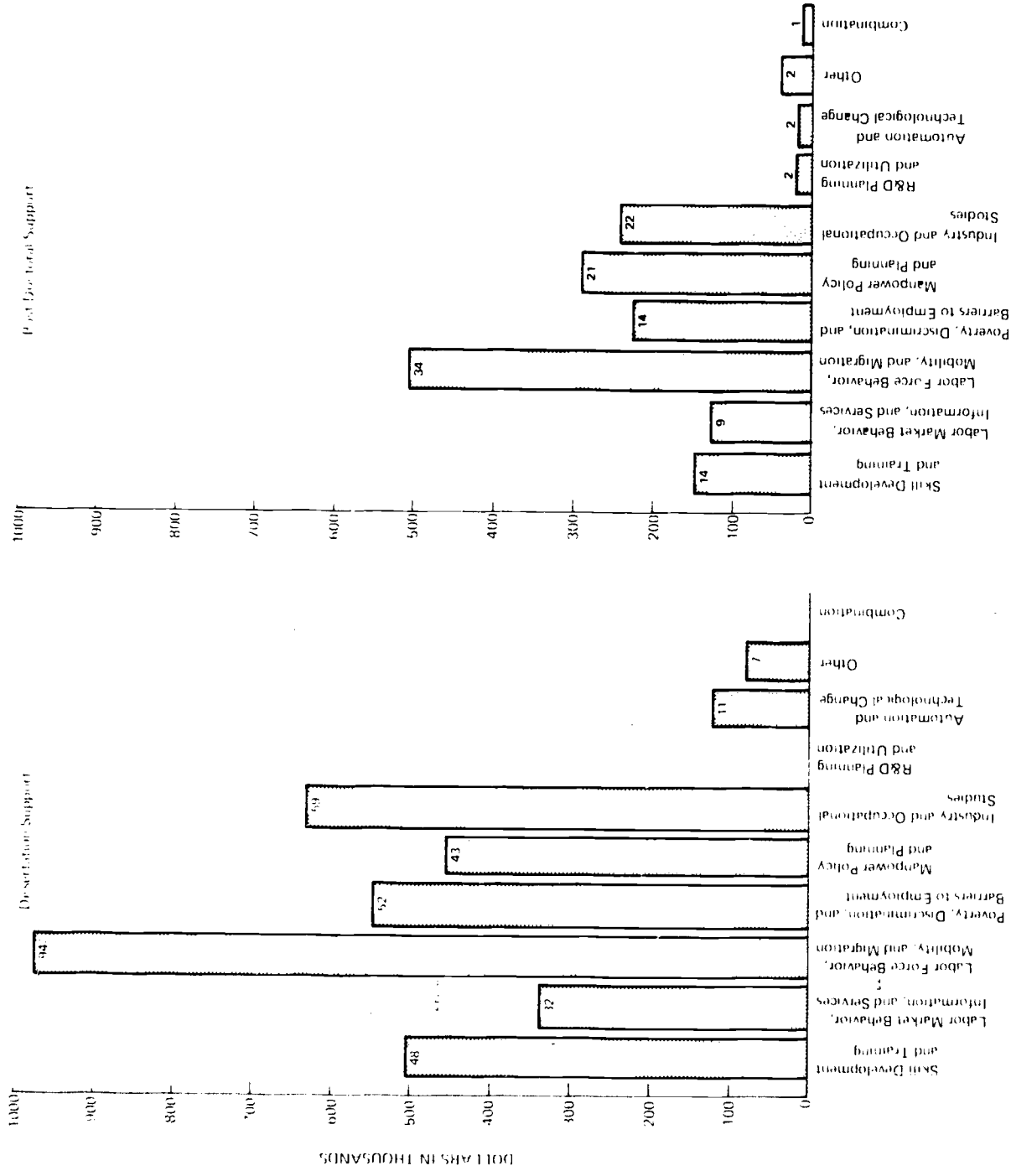


FIGURE 10 Small Grants by Topic 1
(figures inside bars are number of projects up to three categories per project)

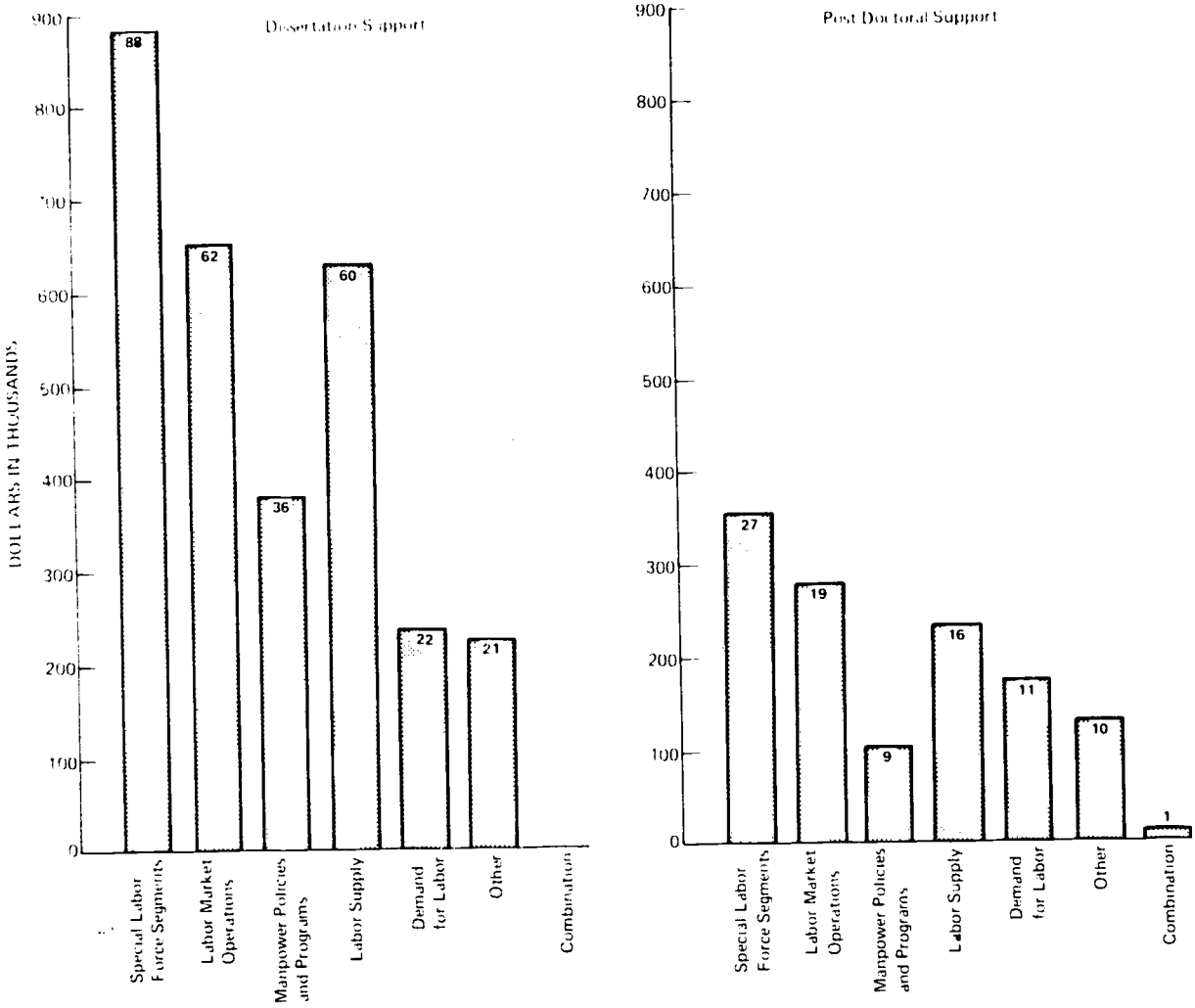


FIGURE 11 Small Grants by Topic II
(figures inside bars are number of projects up to three categories per project)

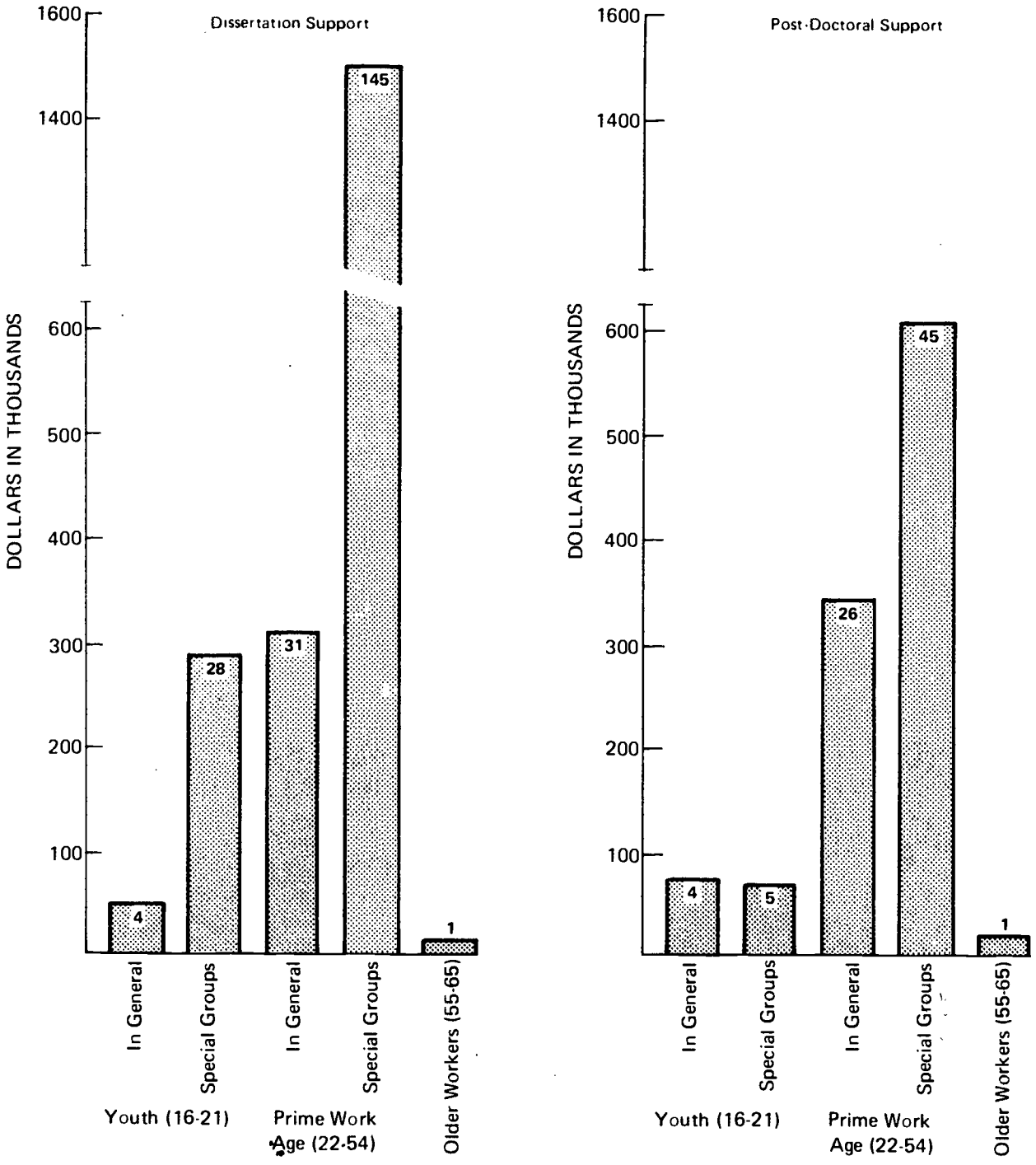


FIGURE 12 Small Grants by Labor Force Group and Age
(figures inside bars are number of projects–up to two categories per project)

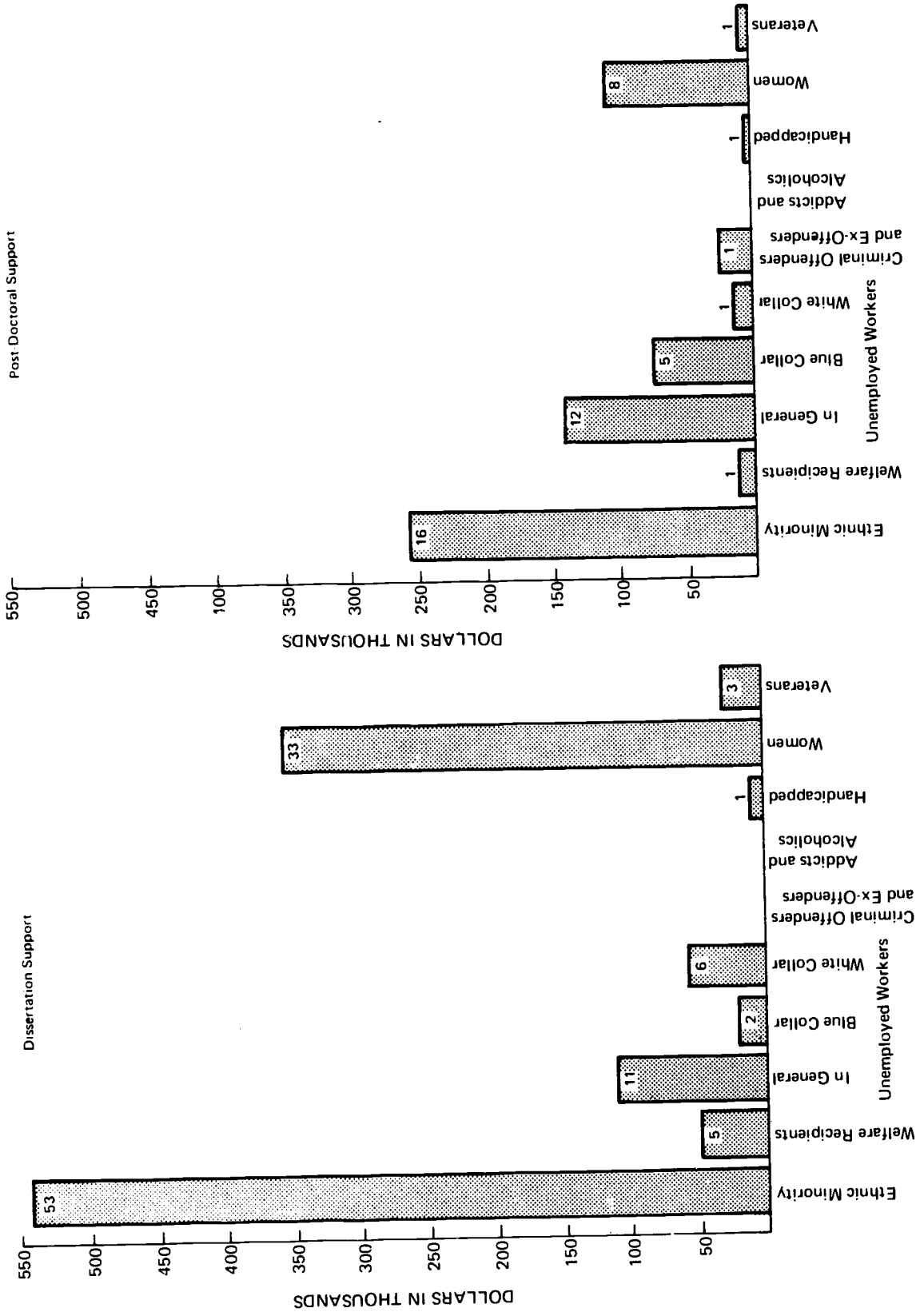


FIGURE 13 Small Grants by Selected Labor Force Characteristics
(figures inside bars are number of projects—up to two categories per project)

remaining projects was located in a single university department. OMRD also reported that for three of the 19 projects, all of the faculty engaged permanently in research and training activities were economists. In the other 16 projects, economists were involved to varying degrees, along with sociologists, psychologists, and education and social work specialists.

Program Content

Although the Institutional and Small Grants Programs' chief purpose has been to improve the number and quality of manpower researchers and research capabilities, a brief description of the program content is important for several reasons. First, since these programs are essentially self-directed, the lines of inquiry pursued provide one view of prevailing interests within the manpower research community. Second, the nature of the studies undertaken mirrors the specialized researcher competencies that OMRD helped to develop over the years.

The work of institutional grant recipients was insufficiently documented to allow data collection along the lines employed in this chapter. However, the Committee's review of available institutional grantee studies revealed as wide a coverage of subjects as in the General Program. The following discussion is limited to doctoral dissertation and post-doctoral awards made through the Small Grants Program.

Topics

Figures 10 and 11, which examine small grants for the seven-year sample in terms of the two topical schemes presented earlier, show a wider distribution of interests than was the case for General Programs. The attention given to skill development and training, labor supply, and labor market operations was still pronounced, but in comparison to General Programs, more emphasis was placed on issues concerning the demand for labor.

Labor Force Focus

Figures 12 and 13 highlight the distribution of small grants by labor force segment. Dissertation activities paralleled closely the General Program emphasis on youth and other special groups. However, relatively more attention was given to the manpower problems of women and white-collar workers. Post-doctoral activities concentrated more heavily on broadly defined target groups in terms of age categories than was the case for either dissertation grants or General Programs. Post-doctoral studies also showed a greater concern for women than did General Programs.

Labor Market Study

Figure 14 shows the distribution of small grants expenditures and projects related to labor market study. Labor market theory, geographic and occupational mobility, and internal and segmented labor markets received somewhat

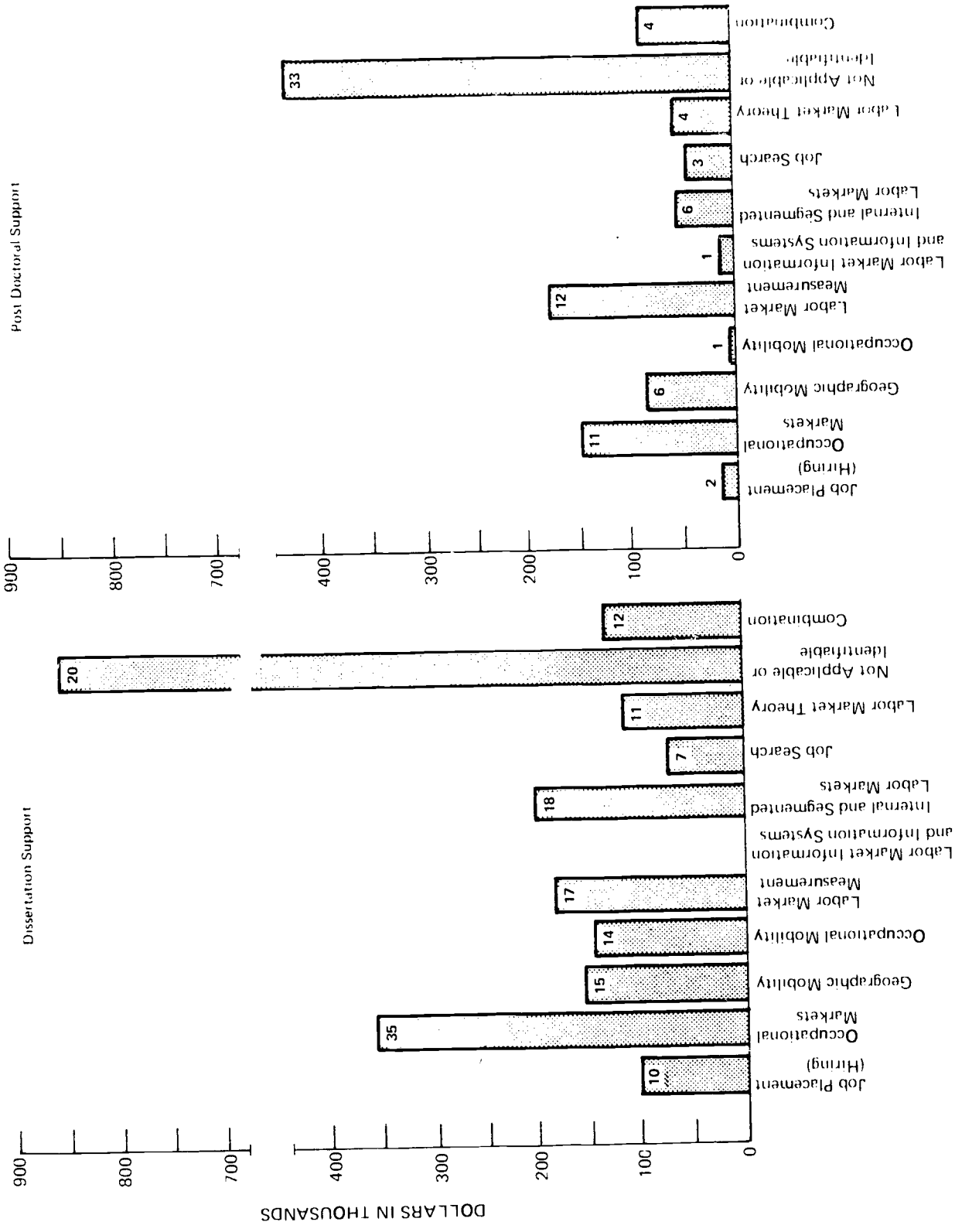


FIGURE 14 Small Grants by Area of Labor Market Study
(figures inside bars are number of projects)

greater emphasis in the dissertation program than in the General Programs. Post-doctoral studies had a stronger focus than did General Programs on occupational labor markets, labor market measurement, and labor market theory. Both dissertation and post-doctoral projects covered labor market subjects more broadly than their General Program counterparts.

SPECIAL PROGRAMS

R&D Methods

Figure 15 shows Special Program expenditures by R&D method. Overall, Special Programs were characterized by substantial expenditures for research, conducted through the Parnes and Inflation-Unemployment Studies, and on development, conducted through several of the Experimental Manpower Laboratory projects. As noted, the Parnes Study has been a large-scale longitudinal data collection and analysis activity, while the Inflation-Unemployment Study has been an exercise in labor market modeling and simulation having major implications for the development of new techniques and theories in manpower study.

The large "Combination" category in Figure 15 reflects efforts undertaken by several of the Labs to integrate demonstration and evaluation approaches in operational environments. The almost-zero "Demonstration" category stands in marked contrast to that category of General Programs (see Table 2). When Special Program activities dealt directly with questions of design for manpower training and services, it was usually done in a more tightly controlled manner than that of demonstration projects. Finally, the substantial "Other" category in Figure 15 mirrors both data collection costs for the Parnes Study and some of the work of the National Manpower Policy Task Force.

Performers and Performing Organizations

Data regarding principal investigators for Special Program projects are presented in Figure 16. Again, economists received the most support, with lower levels of support for educators, psychologists, and sociologists corresponding to the General Program experience. The "Other" cateogry reflects substantial participation by social work researchers. The "Not Identifiable" category includes data collection activities under the Parnes Study and also reflects the involvement of non-credentialled local program operators in several Labs.

Special Program activities were located in a variety of institutional settings: about 40 percent (by expenditure) in university research centers, including Parnes Study research efforts, several Lab projects, and the Conservation of Human Resources project; 35 percent in the federal government's Census Bureau (Parnes Study data collection); 17 percent, including several other Lab projects, in local social service delivery agencies; and the remaining eight percent, including the NMPTF and the Inflation-Unemployment Study, in non-profit, non-university policy research organizations.

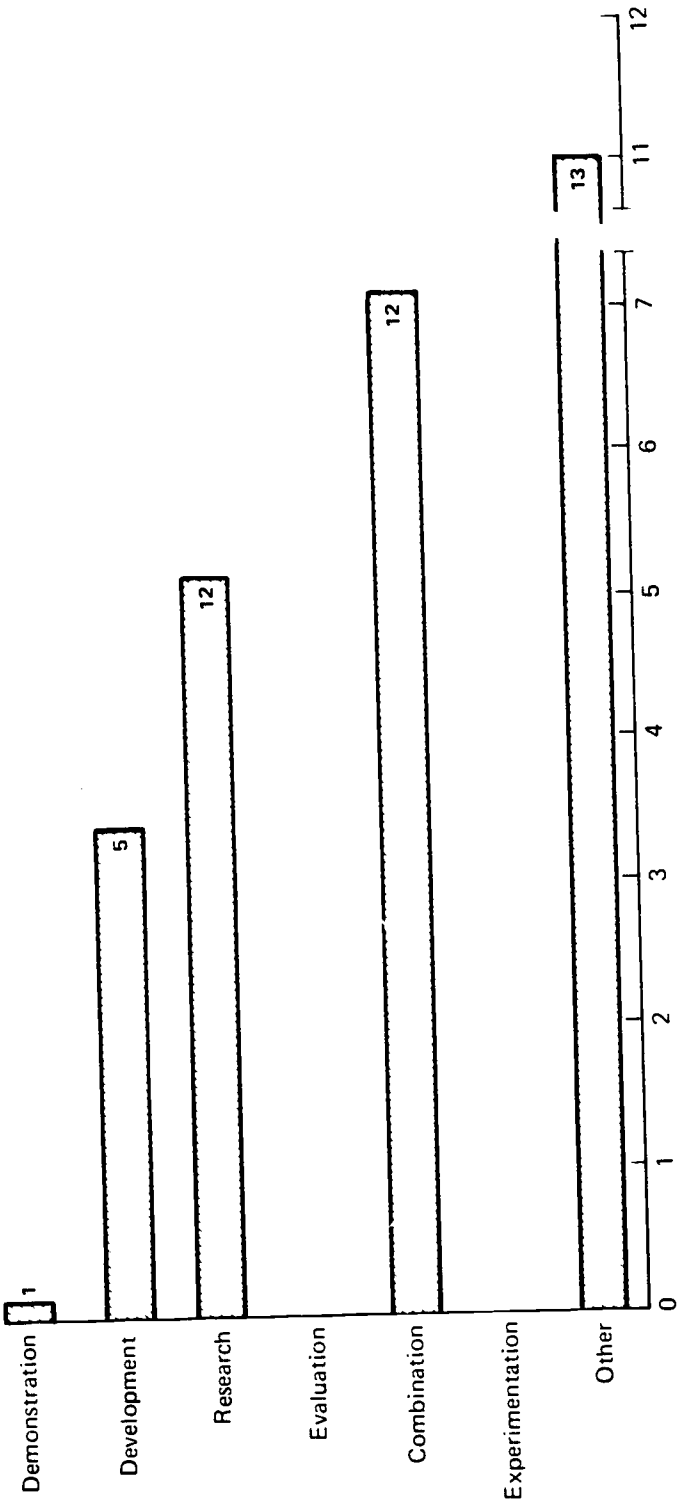


FIGURE 15 Special Programs by R&D Method
(figures inside bars are number of projects)

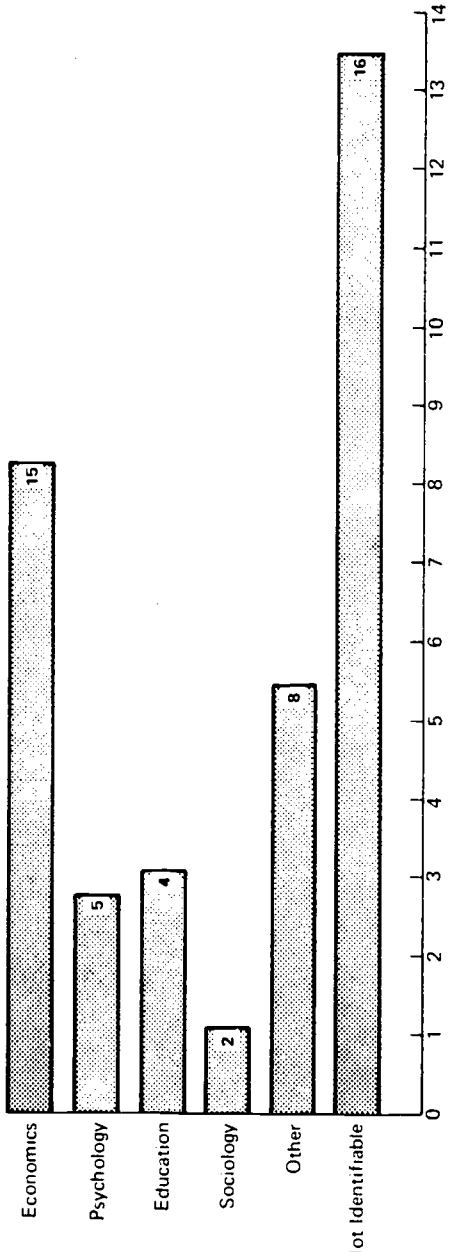


FIGURE 16 Special Program Expenditures by Principal Investigators' Discipline or Field
(figures inside bars are number of projects up to three categories per project)

Program Content

Special Programs involve sustained funding for manpower research or research-related activities; all Special Program projects lasted at least six years during the 1963-1973 period. The Parnes and Inflation-Unemployment Studies have provided research on fundamental scientific questions in the manpower field. The Experimental Laboratories were sources of innovative approaches to manpower programming. The Conservation of Human Resources Project and the National Manpower Policy Task Force provided independent research and advice regarding manpower policy development.

Topics

Figures 17 and 18 show the topical distribution for Special Program expenditures and projects. Given the long-term nature of these projects, there was little year-to-year change in the content of the projects. These data show a significant focus on problems of labor supply: labor force behavior, mobility, and migration; poverty, discrimination, and barriers to employment; labor supply generally; and special labor force segments. A programmatic emphasis (skill development and training) is also apparent. The data show concern for the study of manpower policies and programs and for R&D planning and utilization. Finally, as was the case for General Programs, there was relatively little activity on subjects related to the demand for labor.

Labor Force Focus

With the exception of most of the Lab projects, which reflected a heavy emphasis on the manpower problems of youth, ethnic minorities, the poor, and criminal offenders, Special Program activities took a broad approach to labor force study. The Parnes Study sampled four large population segments: male and female labor force entrants, females of primary work age, and males approaching retirement. The three other Special Programs also examined manpower problems in an overall labor force context.

Labor Market Study

Figure 19 presents data on aspects of labor market study addressed by the Special Programs. The emphasis on labor market theory is striking in comparison to other OMRD programs and reflects, at least in part, the Inflation-Unemployment Study. The Parnes Study accounts for the large "Labor Market Measurement" category. However, the empirical data generated by the Parnes Study and their analysis have also contributed to increased understanding of labor mobility, job search, and theoretical problems in manpower. The large "Combination" category reflects some Lab efforts, as well as the broad activities of the Conservation of Human Resources project and the NMPTF.

Special Program activities filled apparent gaps in several areas of other OMRD programs: labor market theory; manpower policy and manpower R&D planning and utilization; research-intensive demonstration and development efforts; and

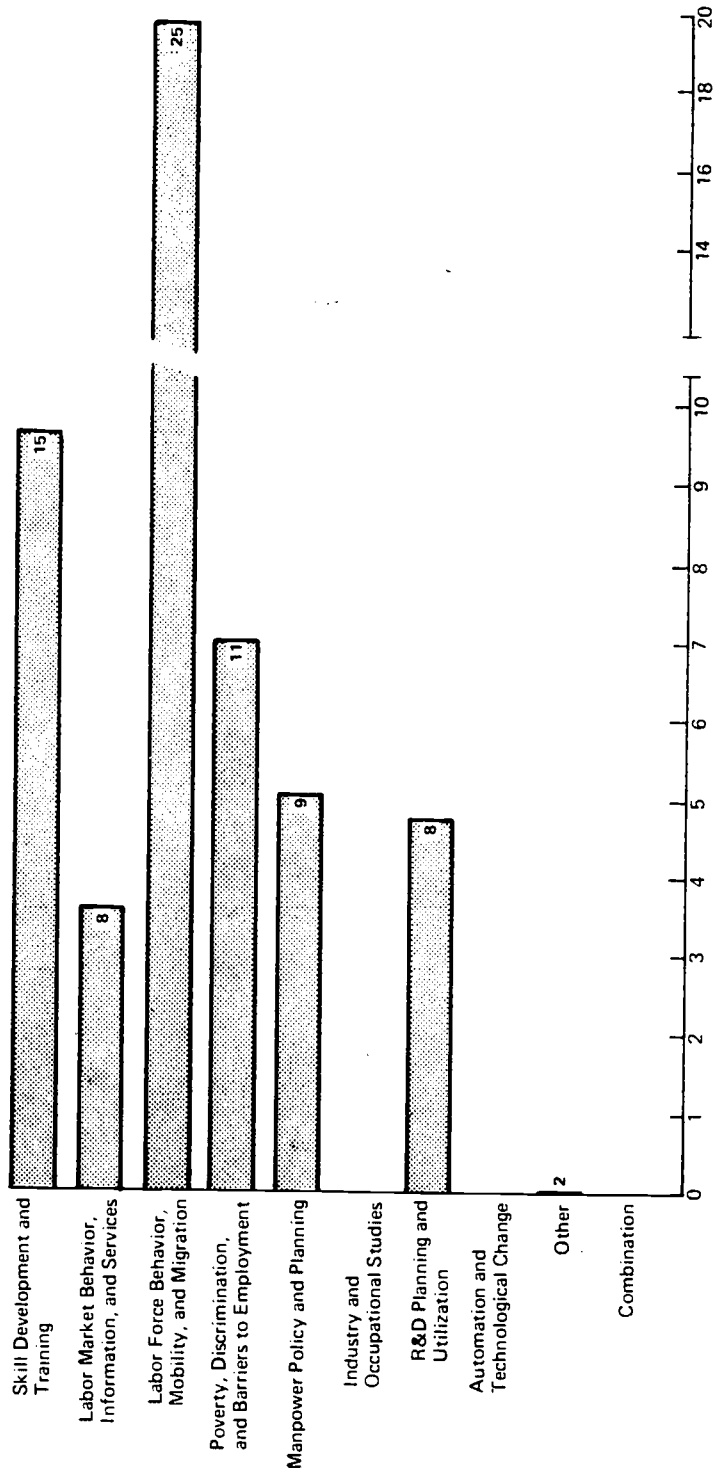


FIGURE 17 Special Programs by Topic–I
(figures inside bars are number of projects–up to three categories per project)

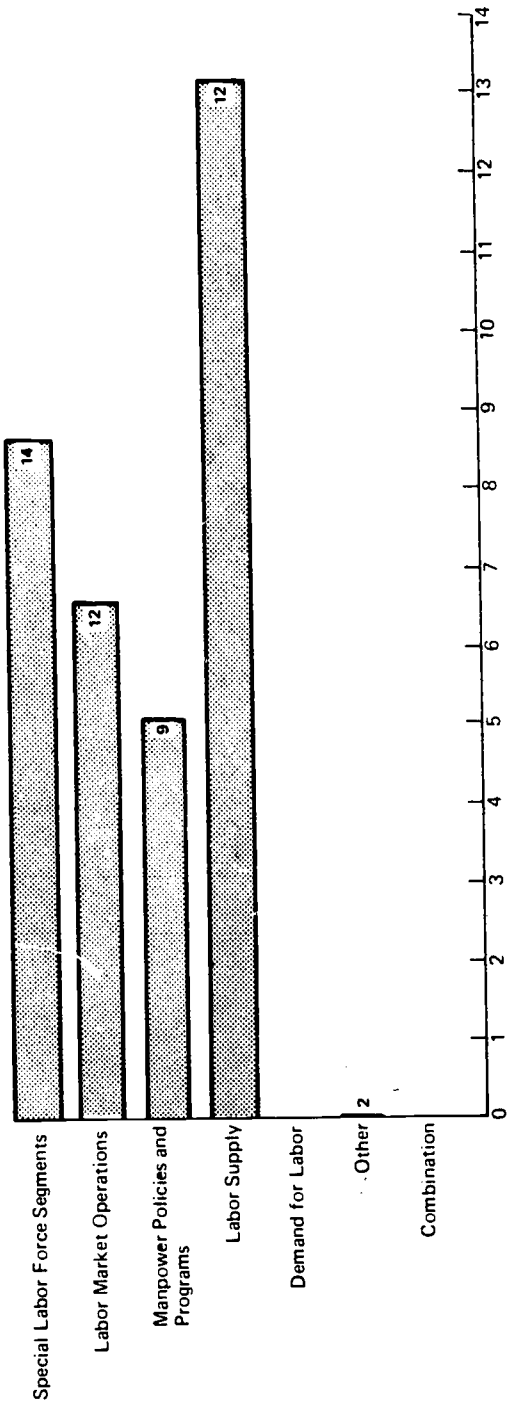


FIGURE 18 Special Programs by Topic – II
(figures inside bars are number of projects – up to three categories per project)

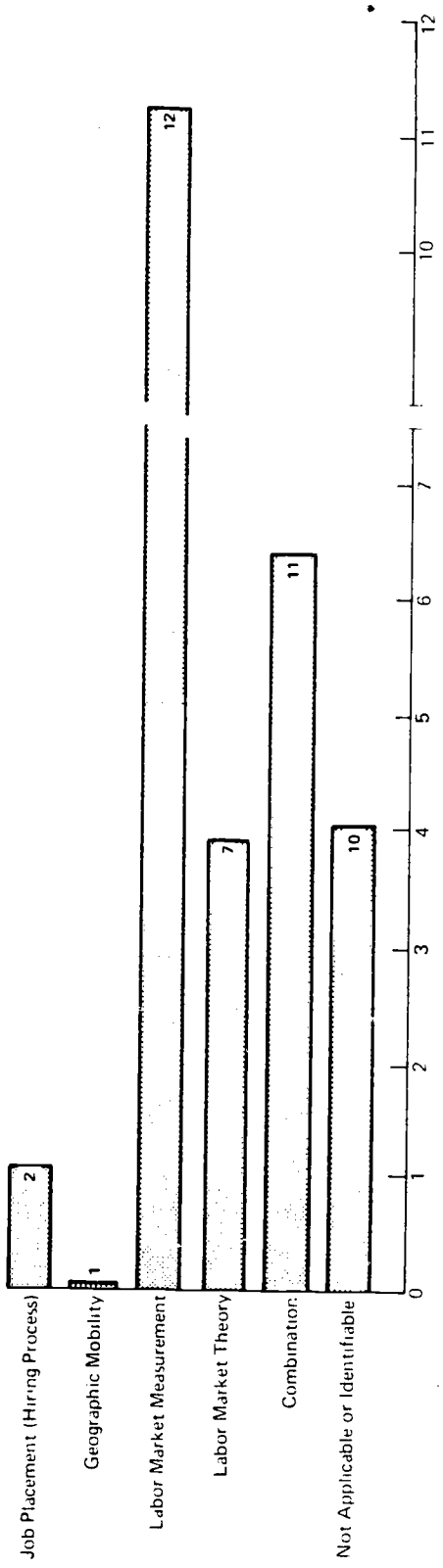


FIGURE 19 Special Programs by Area of Labor Market Study
(figures inside bars are number of projects)

broadly focused labor force and labor market study. At the same time, Special Program activities were redundant with other OMRD efforts in emphasizing manpower program operations and issues of labor supply and shared a lack of attention to demand problems.

SUMMARY

Viewing the manpower R&D program in its entirety, there are significant patterns of focus and dispersion--concentration for some characteristics and wide diversity for others. A degree of diversity was maintained throughout in the methods employed in OMRD projects. Even though there was a fundamental shift from demonstration activities toward empirical research and experimentation after 1970, the program continued to rely on a variety of study techniques.

With respect to performers, and in the context of a movement toward greater involvement by social scientists that accompanied declining commitments to E&D, economics was clearly the preferred discipline. OMRD did not ignore researchers in other disciplines (although it has sometimes found them difficult to recruit and orient to manpower study), but economists have dominated. This was true even for subjects for which the skills and perspectives of other social scientists would be particularly relevant, such as the exploration of information flows within markets and of the motivations underlying institutional practices that encourage or discourage worker performance.

With respect to R&D content, the contrast in productivity between areas of concentration and areas of diversity is striking. Matters that the Committee identified as OMRD's most significant contributions--enhanced data and analysis of labor force behavior, the development of new information and theories to explain aspects of labor market operations, generation of new programs for serving the disadvantaged, and advanced techniques for evaluative research--can be associated with major program emphases since 1962. Focused and sustained inquiry has been productive not solely for its findings, but also for illuminating the intricacies of the processes involved in labor market and labor force relationships.

Such an observation does not imply that all future OMRD activities ought to be limited to a select few topics; that would be unrealistic in light of the Office's extensive mission, its institutional location in government, the variable character of manpower policies, and the ever-present possibility that a seemingly peripheral project concerned with an unexplored and unlikely topic will have results of substantial consequence. The link between past accomplishments and areas of past emphasis does suggest a need to balance study that is directed by immediate policy and program interests within the Department of Labor with a more clearly defined focus on a set of long-term knowledge objectives.

Sustained study on specific topics is also likely to lend constructive order to the diversity that is necessary in other facets of the manpower R&D program. Past concentration on particular topics has provided a frame of reference for applying both a wide variety of methods and the differing perspectives of a broad range of social science disciplines. There have been significant instances of cross-fertilization between research and demonstration activities concerned with solving the employment problems of the disadvantaged, for example, with respect to apprenticeship programs and in developing new

procedures for measuring occupational interests and aptitudes. Similarly, psychologists, sociologists, and others have contributed to analysis, observation, and theory regarding labor market operations by highlighting new lines of productive inquiry, such as job search, and by identifying some of the many institutional factors that help explain market deficiencies, such as in the areas of occupational licensing and labor exchange. Those considerations are one reason the Committee has urged both wider orientation of OMRD's Small Grants Program and consideration of a national center to provide a strong focal point for social science involvement in manpower policy study.

Chapter 7

THE OFFICE OF MANPOWER RESEARCH AND DEVELOPMENT

This chapter discusses the evolution of the Office of Manpower Research and Development (OMRD) and considers its capacity to administer and manage the manpower R&D program. While broad directions and emphases in R&D program content have been determined primarily by the course of manpower policy development, specific R&D plans and results were also influenced by:

- the budgets for OMRD and its predecessor offices,
- the legislative mandate for these offices,
- the character of interaction with other units in the Department, and
- the Offices' organization and staff capabilities.

OMRD has been responsible for conducting the manpower R&D program since 1970. From 1962 through 1969, responsibility for R&D was divided: the Office of Manpower Research (OMR) administered research projects and the Office of Special Manpower Programs (OSMP) administered demonstration, development, experimental, and pilot (E&D) projects. This review of the evolution of OMR, OSMP, and OMRD reveals (a) an expanding and increasingly complex mission, (b) growing uncertainty over the R&D role in DOL, and (c) declining levels of staff capability within the R&D offices themselves. This review is a story of the day-to-day and the long-term difficulties associated with conducting social R&D in a mission-oriented government department.

BUDGET*

In understanding the evolution of OMRD and its activities, it is helpful to consider manpower R&D program expenditures in a broad context.

Within the Department of Labor

The Department of Labor's annual appropriations request has never included a line item for OMRD or its predecessor offices. Rather, the manpower R&D effort,

*This discussion of OMRD's program budget does not include separate funds made available for OMRD staff salaries and administrative (S&E) expenditures. In fiscal 1975, the S&E allocation was approximately $1.1 million--a little less than $25,000 for every professional on the OMRD staff.

like most R&D within the Labor Department, has been funded as a "residual" activity: funds for manpower R&D, along with funds for program evaluation, policy planning, staff training, and technical assistance, have been incorporated into a "Program Support" category for the Department's Manpower Administration (MA). Responsibility for these activities is scattered among several MA units.

Between 1962 and mid-1975, the Department of Labor invested approximately $250 million on nearly 2000 projects through its manpower R&D program,* or about one percent of the $25-$30 billion spent for all federal manpower policies and programs during these years.

Through 1974, the manpower R&D budget was relatively constant in current dollar terms, which means that it declined enormously, not growing as manpower program expenditures grew and not keeping pace with inflation. After a brief start-up period in 1962 and 1963, the budget rose quickly to an annual level of just over $25 million in the mid-1960s (about 2.2 percent of DOL's training program expenditures under MDTA during that period). In the late 1960s and early 1970s, the manpower R&D budget remained about $20 million annually, but beginning in 1972, $1 million of each year's manpower R&D budget was transferred to DOL's International Labor Affairs Bureau to support its separate research program.

Beginning in 1975, an additional $5 million was cut from the OMRD budget to support a new research effort, conducted by DOL's Employment Standards Administration (ESA), on the effects of minimum wage legislation.** These two mortgaging actions effectively reduced OMRD's program budget to $14.7 million for fiscal 1975. OMRD's budget will be even smaller in fiscal 1976, approximately $13.2 million.*** Nevertheless, OMRD operates the largest R&D program within DOL, accounting for almost 50 percent of the Department's total R&D funding commitment; however, its budget amounts to less than 0.5 percent of current manpower training program expenditures by DOL.

---

*Operating agencies and bureaus in the MA have also conducted or supported R&D-type activities on an irregular basis independent of the manpower R&D program. Those activities have generally been closely related to program management concerns. For example, the Unemployment Insurance Service has engaged in actuarial study and the U.S. Employment Service has conducted program demonstrations in the area of job matching and has been concerned with the development and validation of aptitude tests. In fiscal 1974, expenditures for such non-OMRD R&D activities were approximately $7.5 million, with funds obtained chiefly from unapportioned program accounts and not from the "Program Support" appropriation.

**This was done by the Department despite the fact that the Congress expressed willingness to appropriate separate funds for the ESA research program.

***This reduction resulted from another set of mortgaging actions: funds to support a day care center for DOL employees and funds to support research activities undertaken by the National Commission on Manpower Policy.

Across the Federal Government*

A reasonable estimate of current annual federal support for R&D in manpower is $100 million.** The major sponsor of manpower R&D is the Department of Defense (DOD), with 1975 expenditures of about $70 million.*** The Department of Health, Education, and Welfare supports manpower-related R&D programs smaller than those in DOD and DOL in connection with its responsibilities for vocational education and social services and its concern for the supply of qualified manpower in education and health occupations. Other departments and agencies that conduct manpower R&D on a relatively sustained basis include the National Science Foundation, the Office of Economic Opportunity, the Veterans Administration, and the Departments of Agriculture, Transportation, Commerce, and Housing and Urban Development. In comparison to other agencies, where most work has tended toward very limited exploration of manpower aspects of operational issues, OMRD work has covered a broad range of labor force segments and matters of unemployment and productivity, both theoretically and in an applied fashion.

LEGISLATIVE AUTHORITY

The legal foundations for the manpower R&D program have grown along with expanding national manpower policy concerns. The inclusion of R&D activities under the 1962 Manpower Development and Training Act (MDTA) was a unique feature in social legislation at that time. For the Department of Labor, creation of the MDTA R&D program expanded the relatively narrow labor force and labor market analyses historically pursued by the Bureau of Labor Statistics and the Bureau of Employment Security. The manpower R&D program mission grew with subsequent legislation. In 1973, the Comprehensive Employment and Training Act (CETA) integrated virtually all prior authorizations.

Title I of the MDTA called for research arranged through contracts and grants to advance the legislative objectives initially expressed in that Act. The mandate for research was therefore first limited (according to the OMR interpretation):

- to develop and apply the information and methods needed to deal with unemployment problems and other mal-utilizations of manpower resources;

*There is also some funding for manpower R&D from non-federal sources. Private foundation support appears to be $5-$7 million annually, with most of the money coming from the Ford Foundation. (This estimate is based on a review by Committee staff of R&D project abstracts submitted to the Smithsonian Scientific Information Exchange during 1972-73.) Business, industry, and unions also conduct manpower R&D studies, but there are no reliable estimates of their cost. Nor are there data available on state and local government R&D manpower expenditures or on college and university commitments to research in manpower.

**Estimate based on review of R&D project abstracts collected by the Smithsonian Scientific Information Exchange for fiscal 1972 and fiscal 1973.

***This is approximately one percent of what that agency spends on its education and manpower training programs.

- to accomplish technological progress while avoiding or minimizing individual hardship and widespread unemployment; and
- to raise the skill levels of the nation's work force, to increase productivity, and to provide the manpower resources needed for advancing technology.

As the primary emphasis of MDTA shifted away from a predominant concern for technologically displaced workers, the research authorization expanded to include explicit focus on all disadvantaged members of the labor force.

The MDTA originally referred only to research; there was no specific mention of demonstration, development, experimental, or pilot projects. Rather, the Congressional report accompanying the legislation suggested that the Secretary of Labor use a portion of the discretionary (Title II) funds at his disposal to conduct such projects. The Department adopted the contract and grant procedures authorized for research for these Title II activities, which enabled the Department to commission projects quite independent of established federal, state, and local agencies. Both top policy makers and OSMP staff considered this necessary to encourage and test innovative approaches to manpower programming.

Between 1964 and 1968, there were six legislative additions to DOL's manpower R&D mandate. The Economic Opportunity Act of 1964 authorized R&D projects relating to the Neighborhood Youth Corps and later, the Job Corps and other activities. The 1965 MDTA amendments gave E&D activities an explicit legislative base in Title I, as

> ...a program...for...improving techniques and demonstrating the effectiveness of specialized methods in meeting the manpower, employment, and training problems of worker groups such as the long-term unemployed, disadvantaged youth, displaced older workers, the handicapped, members of minority groups, and other similar groups.

The 1965 amendments also authorized two special demonstrations, for mobility assistance for the unemployed and for bonding ex-offenders in the labor force.* The 1966 MDTA amendments removed a local matching contribution requirement for E&D projects, making such efforts a wholly federal undertaking. The 1967 amendments to the Social Security Act authorized manpower research activities focused on the Work Incentive Program. The 1968 MDTA amendments specified research projects to aid the U.S. Employment Service in implementing a nationwide system of job matching and information. There were no other legislative actions directly affecting the manpower R&D program until late 1973 when CETA combined most of the statutory provisions for manpower R&D that had accrued over the previous years.

The activities of the Office of Manpower Research and Development are now governed by provisions of two laws:

*The special authorizations for mobility assistance and bonding demonstrations expired in 1970. The Department did not seek renewal, expecting that manpower legislation then pending in Congress would incorporate those efforts as a permanent part of MDTA. It did, but the bill sent to the President was vetoed in a dispute over public employment. Regular R&D funds have been used for subsequent work to further develop mobility and bonding programs.

- Title IV of the Social Security Act (SSA) as amended in 1967; and
- Title III of the Comprehensive Employment and Training Act (CETA) of 1973.

Title IV of SSA calls for operationally oriented studies aimed at improving the effectiveness of the Work Incentive Program. Title III of CETA directs the Secretary of Labor to:

> ...establish a comprehensive program of manpower research utilizing the methods, techniques, and knowledge of the behavioral and social sciences...as will aid in the solution of the Nation's manpower problems. This program will include but not be limited to, studies [contributing to the] formulation of manpower policy; development or improvement of manpower programs; increased knowledge about labor market processes; reduction of unemployment and its relationships to price stability; promotion of more effective manpower development, training, and utilization; improved national, regional, and local means of measuring future labor demands and supply, enhancement of job opportunities; skill training to qualify employees for positions of greater skill, responsibility, and remuneration; meeting of manpower shortages; easing of the transition from school to work, from one job to another, and from work to retirement; opportunities and services for older persons who desire to enter or re-enter the labor force; and for improvements of opportunities for employment and advancement through the reduction of discrimination and disadvantage arising from poverty, ignorance, or prejudice.

and, to:

> ...establish a program of experimental, developmental, demonstration, and pilot projects...for the purpose of improving techniques and demonstrating the effectiveness of specialized methods in meeting...manpower, employment, and training problems....

This mandate does not limit OMRD's work to any particular discipline or direct the Office to focus exclusively on any particular program or problem.* Similar to prior authorizations, it places the main burden of determining priorities directly on the shoulders of R&D staff and DOL policy officials.

LOCATION AND INTERACTIONS

Both the development of an organizational location for the manpower R&D program and its changing interactions with other Departmental units followed the evolution of national manpower policy. A complex structure for managing that policy grew around OMR and OSMP. OMRD currently exists below multiple layers of a highly vertical and compartmentalized Department, with uncertain access to

*The Act does, however, prohibit "...employment programs experimenting with subsidized wages in the private sector, or with (minimum) rates less than those established by the Fair Labor Standards Act of 1938...." (Section 311(b)).

policy echelons and program operations. The usefulness of informal exchange regarding R&D has remained heavily dependent on changing attitudes and personalities within the Department. Systematic linkages have not developed to help relate R&D plans and findings to policies and programs.

Within the Manpower Administration

Rather than permit old-line bureaus in DOL to implement the MDTA on an independent basis, a new organization, the Office of Manpower, Automation, and Training (OMAT) was created in 1962. OMAT became a coordinating and channeling mechanism for distributing MDTA funds and for carrying out research and E&D projects. In 1963, the Manpower Administration was organized to house OMAT, the Bureau of Employment Security (including the U.S. Employment Service), the Bureau of Apprenticeship Training, and, beginning in 1964, the national office of the Neighborhood Youth Corps Program.

The OMAT staff responsible for research and E&D activities was relatively autonomous during those early years. By 1965, this staff was working in OMR and OSMP; these offices, an Office of Policy Planning, and an Office of Manpower Program Evaluation were organized as the Office of Manpower Policy, Evaluation and Research (OMPER), to constitute a special "thinking" capability for the Manpower Administration. Later renamed OPER (Office of Policy, Evaluation, and Research), its basic functions have been to provide information for: strengthening manpower legislation, anticipating future manpower problems, and improving the design and implementation of DOL manpower policies, programs, and regulations; assessing the performance of DOL manpower programs and making their operations more effective; and determining an appropriate DOL role in advancing the state of scientific knowledge in manpower. OPER's primary audience is the Assistant Secretary for Manpower, the one top-level DOL official directly responsible to the Secretary for recommendations about manpower policies.

Historically, the constituent parts of OPER have been linked only through the OPER Director. Each OPER unit plans and implements its program with relative independence. Cooperative action has usually been limited to matters of mutual administrative interest and to formulating joint strategies for the use of R&D, program evaluation, or policy analysis results.

As national manpower service and training activities increased and diversified, the Manpower Administration came to include additional bureaus, agencies, and offices. Currently, OPER is one of seven major line and staff units in the MA national office, as shown in Figure 20. OMRD is linked formally to other Manpower Administration offices, and through them to the regional, state, and local administration of manpower and related programs, by the head of OPER.

During the early and mid-1960s, when the shape of the Manpower Administration was changing rapidly, formal communication channels varied and R&D managers exercised initiative in promoting interaction. As the entire organization settled slowly into its present mold, links between OMRD and each MA unit developed at a different pace, level of intensity, and degree of formality. As personnel in policy and administrative positions have changed, so have relationships; there were periods of close cooperation as well as periods of intense disagreement over the manpower R&D mission and its execution.

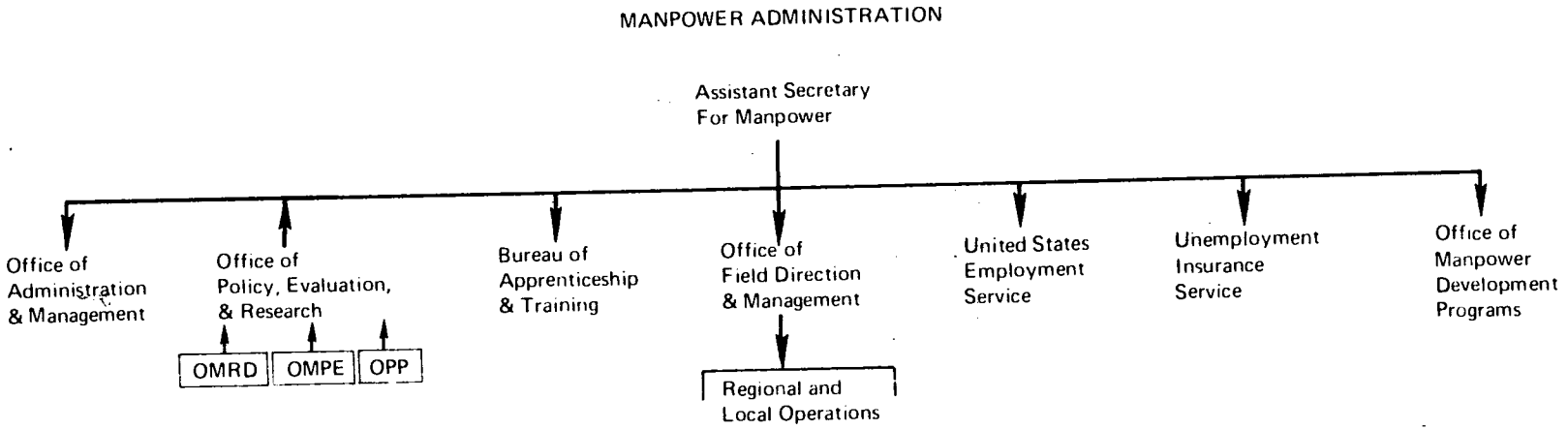


FIGURE 20 Manpower Administration National Office

Within the Department of Labor

Connections between the manpower R&D program and top policy executives in the Department have evolved somewhat differently than those in the Manpower Administration. Again, during the early and mid-1960s, the system was relatively undefined. An Assistant Secretary for Policy Planning, with a small staff working out of the Secretary's office, was responsible for maintaining two-way R&D communications. This position was officially abolished in 1965, but the function was carried on by the Secretary's policy planning staff. While this channel was not highly structured, it worked effectively through 1968. The policy planning staff had easy access to and the confidence of the Secretary and Undersecretary. The staff generally had long tenure and a strong interest in understanding the manpower R&D program and in applying the results of its activities.

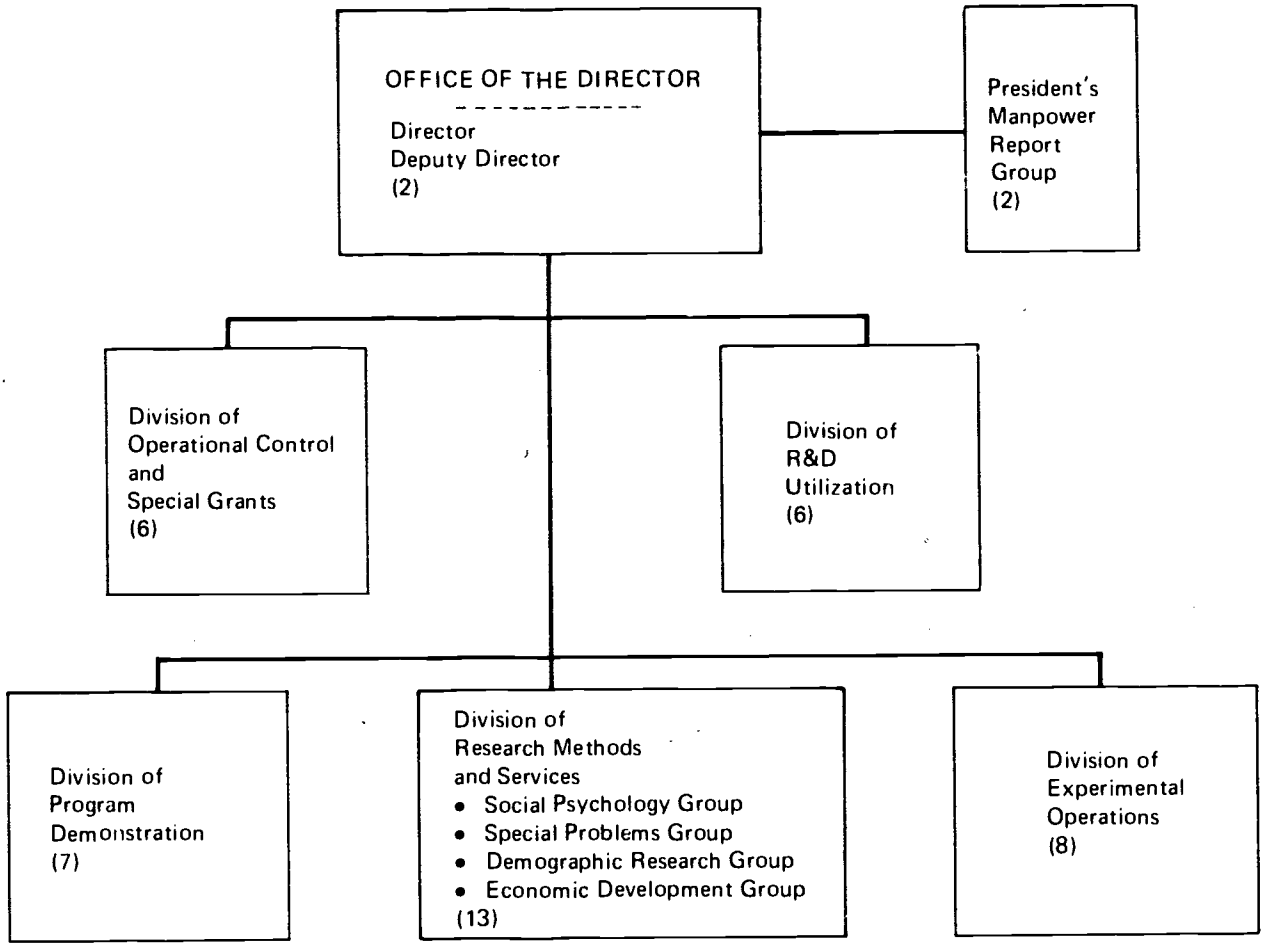
The Office of the Assistant Secretary for Policy, Evaluation, and Research (ASPER) was established in 1969 to serve both as an analytic and budget review capability for the Secretary and Undersecretary and as a mechanism for coordinating research, development, evaluation, and policy planning activities throughout the Department. The ASPER overview extends to all DOL units; ASPER is responsible for communicating the results of all studies to the upper policy levels of the Department and for communicating the concerns of policy makers for R&D, evaluation, and policy development to appropriate levels below.

These ASPER functions, however, have not received very intensive or regular attention. Most ASPER activity and staff time have been devoted primarily to short-term analysis in response to pressing policy and program issues. In addition, four different Assistant Secretaries have headed the office since 1969, and the position remained unfilled during all of 1973. Each Assistant Secretary had a different degree of interest in ASPER's role as the coordinator of and communicator for R&D within the Department, and each had a different degree of access to the Secretary and Undersecretary. Insufficient staffing, rapid turnover in leadership, and resulting changes in style of operation have prevented ASPER from developing fully.

Without dependable lines of communication between OMRD and the Department's top policy echelons, there has been considerable uncertainty regarding the boundaries of ASPER oversight. There has been tension and debate over procedures for selecting R&D projects and project performers in light of changing knowledge requirements and about mechanisms for informing policy makers of significant R&D findings on a regular basis. While such problems are not unusual for a government R&D operation, they have had a negative impact on the quality, usefulness, and use of manpower R&D results.

STRUCTURE

As shown in Figure 21, the Office of Manpower Research and Development includes six units in addition to the Director's office. Three Divisions--Program Demonstration, Research Methods and Services, and Experimental Operations--have substantive responsibilities in project design, performer selection, and assessing R&D results, as well as administrative responsibility for monitoring contracts and grants. The Utilization Division has both substantive and administrative responsibilities: implementing and monitoring projects that involve



Note: Numbers of professional staff in each unit, as of January 1975, are shown in parentheses. Since that date, there have been further reductions (from transfer and retirement). All are career civil servants.

FIGURE 21 Structure of the Office of Manpower Research and Development

concentrated efforts to promote the use of findings; translating R&D results into forms usable by policy makers and other audiences; and managing dissemination of project reports. The Operational Control and Special Grants Division is more administrative, focusing on in-house tracking and control of contract and grant funds. It also assists the peer review panels that help determine award recipients for the Small and Institutional Grants Programs. The Report Group manages the analysis and preparation of materials for the annual *Manpower Report of the President*, coordinating plans for content and serving in an editorial capacity for chapters and sections written by staff in other MA and DOL units and by extramural researchers. During slack periods, the Reports Group staff assists the Utilization Division in producing summaries and abstracts of manpower R&D findings.

The Director's Office is the center of planning, decision making, and communication. It allocates project responsibilities among the five OMRD divisions. The Director's Office also manages all relations with other MA and DOL units, as well as with most outside agents--Congress, the Office of Management and Budget (OMB), researchers, and research organizations.

Prior to 1970, OMR was composed of a Director's Office, the Manpower Report Group, a Special Grants Division, and the Division of Research Methods and Services. OSMP included its own Director's Office, along with Utilization, Program Demonstration, and Experimental Operations Divisions. The 1970 merger combined these units. The OMR Director became Director of OMRD, while the OSMP Director became Deputy Director.

The 1970 merger of OMR and OSMP was made partly to reduce a growing overlap in the interests and activities of separate research and E&D programs. There was also concern that research efforts be more aware than in previous years of operational issues and that E&D efforts employ more sophisticated research methods. Another justification was management efficiency--the conventional wisdom of the Department held that combining offices would allow necessary functions to continue with a smaller staff. This rationale became strong belief in the face of growing White House pressure to reduce the size of the federal establishment.

The manpower R&D program has been unusual among federal social R&D operations for having undergone few major changes in administrative structure since 1962. That fact, along with considerable stability in OMR, OSMP, and OMRD leadership, helps explain the sustained attention given several areas of substantive concern in the face of pressures within the MA to continually re-adjust R&D program objectives.

STAFF

Most OMR personnel were drawn initially from the Bureau of Labor Statistics; they had solid research competencies in economics, statistics, sociology, psychology, and other disciplines and fields essential to manpower study. OSMP personnel came primarily from program operations and administration, although a few had skills in social science research methodology. Turnover in OMR was not particularly high between 1962 and 1970, and there was substantial freedom to recruit new staff to replace those who left. In OSMP, turnover was somewhat higher, but replacement was generally easier because of a larger pool of innovative program operators than of individuals available with high-level social

research skills. OSMP professional staff, numbering 22 at its peak in 1969, was always much smaller than that of OMR. In 1970, when the units were combined, OSMP had 20 professional staff members and OMR had 46.

The organizational structure of OMRD at first allowed the two formerly separate staffs to continue independent operations--OMR staff under the Research Methods and Services and the Special Grants Divisions; OSMP staff under the Demonstration and Experimental Operations Divisions. By the time cooperative relationships were forged on matters of project design, performer selection, monitoring, and utilization, OMRD had begun to lose competent personnel. Twenty-five professional staff members retired or transferred between 1970 and mid-1975; a large proportion of these were highly skilled and qualified social science researchers. Because of Departmental hiring restriction, rigid OMB staffing guidelines, and Civil Service Commission regulations, the Office has been unable to hire skilled researchers to replace those individuals.

In addition to the constraints imposed by staff ceilings and hiring procedures, the decline in OMRD's internal capability has been accelerated further by perceptual problems within the Department. To a certain degree, the Office's personnel came to be considered interchangeable by many Department officials, regardless of their very different backgrounds and competencies. These officials could not understand why the responsibilities of a retiring professional who had worked with OMR, a demographer for example, could not simply be assumed by a professional who had been associated with OSMP, an expert in training program issues.

The early 1975 professional staff of 44 included few individuals with formal academic credentials: four with doctorates (one of whom is the Director), approximately 12 with Masters' degrees, and a very small number who have done original empirical social science research. As a result, the staff has a minimal capacity for keeping abreast of developments in the disciplines related to manpower study. The majority of OMRD personnel have had direct experience with the operation of social programs, but their expertise tends to be outdated. Because of a highly restricted travel budget, there has been scant opportunity for these individuals to remain in contact with the program world during their OMRD tenure.

The professional staff as a whole is relatively old; modal age is in the 50-60 range. A significant number of the staff are quite close to or beyond minimum Civil Service retirement age. The grade structure is correspondingly high, with concentration at the GS-13/14 levels.

Given the small staff size, project assignments tend to be made with little regard to divisional distinctions. Virtually all staff have major administrative functions to perform, leaving little time for substantive duties. The professionals more qualified with respect to program expertise and social science skills carry a disproportionate burden of responsibility in all phases of Office operations.

Before 1970, staff associated with the manpower R&D program had often been able to assume stimulative roles in developing new lines of inquiry, relating project findings directly to the manpower research community, and working to develop new programs. OMR personnel also carried out a moderate volume of intramural research and analysis, enabling them to track developments in manpower study and to maintain their own skills. This provided the Office with an appropriate basis to support R&D program planning, project development, performer selection, project monitoring, and communication of R&D findings.

After 1970, however, less time and capability were available to conduct such research and analysis. By 1974, the agency no longer had the expertise or flexibility to permit even a small number of its professional staff to work regularly at identifying the knowledge requirements and opportunities associated with new policy and program issues. The reduction in overall R&D staff capacity has contributed to the Department's present inability to derive maximum benefit from its R&D expenditures.

Chapter 8

OMRD OPERATIONS

This chapter examines OMRD operations, focusing on procedures for planning, performer selection, project monitoring, and dissemination.* Dissemination, which is the communication of project findings by OMRD, is distinguished from utilization, which is the use of those findings by policy makers, program operators, or other members of the manpower community outside of OMRD. Because utilization is dependent on non-OMRD actions and perceptions and because it raises broad questions about all R&D programs, it is treated separately in the next chapter.

Procedures for manpower R&D program planning, project development, performer selection, monitoring, and dissemination have remained basically the same over the years. But the capacity of OMRD staff to carry out those tasks has diminished, and the staff has also been given less and less access to the information and contacts needed to do a good job. While there have been intermittent attempts, especially through new reporting and approval procedures, to forge closer relationships between R&D activities and Departmental concerns for policy and program development, only minimal attention has been given to the substantive dimensions of R&D management. Neither the divergent administrative and performer requirements for different kinds of R&D nor their inherently different payoffs in relation to specific policy issues have been explicitly considered.

Several additional factors have contributed to what appears to be a gradual reduction in DOL R&D management effectiveness, as well as to the confusion

*A comparison of OMRD operational procedures with those of other federal R&D offices, undertaken by the Committee, revealed few, if any, norms for managing social science R&D in government. Each office has adapted somewhat differently to the requirements of planning, implementation, and dissemination based on its personnel resources and administrative demands. There are no standards by which one procedure can be judged superior to any other. Instead, the relevant questions are how well particular operational modes enable an office: (a) to identify policy-defined knowledge objectives; (b) to identify and engage performers capable of realizing those objectives; (c) to communicate results to consumer audiences; and (d) to make maximum use of staff resources. The problems experienced by OMRD in all of these areas appear to be common to many R&D operations.

over how to correct the situation. There have been direct and indirect Congressional pressures on government agencies to adopt certain administrative procedures for R&D, particularly with respect to performer selection, that may not be appropriate in every case. Few DOL officials have had a sound appreciation of the difficult managerial requirements for R&D. OMRD has not been in a position, either in terms of having regular access to executive echelons or in terms of a sufficiently large and skilled staff, to enhance that appreciation.

PLANNING

Effective R&D planning includes: (a) specification of current policy objectives and possible future policy problems; (b) understanding of the state of knowledge and of the methods for clarifying those objectives and problems; and (c) assessment of the possible benefits, costs, and problems attached to the pursuit of alternative lines of inquiry.

OMRD planning addresses both the priorities of Department of Labor programs and the interests of manpower researchers--in fact, it makes an effort to integrate their divergent perspectives in its activities. Thus, there has been formal and informal planning for R&D in limited but potentially significant areas of scientific or policy concern (such as job satisfaction), in relation to a particular programmatic function (such as labor exchange under the Employment Service), and to guide further study or development revealed by completed projects (such as in the areas of apprenticeship training and job search). These plans have involved the identification of ideas for particular R&D projects that are subsequently ordered in importance and feasibility to provide a sense of overall strategy.

The annual budget cycle tends to be a focal point for OMRD planning efforts. Early in a fiscal year, the OMRD Director's Office prepares a general plan, following instructions issued by the Secretary for the entire Department, that usually defines major areas of concern (subjects that tend to change markedly from year to year). OMRD's general plan, presented as a set of issues to be covered during the upcoming year, is reviewed by the head of OPER, by other Manpower Administration officials, and then by the Department (through ASPER). After the general plan has been approved, OMRD, usually in consultation with other Departmental units, develops basic project specifications to be incorporated into a working plan for the R&D program. Significantly, the R&D working plan is scheduled for completion last among all DOL activities prior to overall budget submission to OMD; ostensibly, this is to encourage maximum responsiveness to emerging policy and program issues. In most years, 60-65 percent of the activities included in the working plan are continuations of existing projects.

The Director's Office is the focal point for generating, collecting, and developing ideas for new projects. Staff members prepare descriptions of all projects, whether continuing or new, that might be included in the working plan. National and regional office DOL officials are formally and informally solicited for suggestions. Informal liaison is maintained with leading manpower researchers and with research and professional organizations to identify opportunities for project initiatives. OMRD also receives 400-500 unsolicited proposals each year; in the past, about five percent of these have been incorporated into the R&D plan. When an issue is completely new to OMRD or new directions in an

ongoing line of inquiry appear necessary, the Director's Office often consults groups such as the NMPTF or a specially convened panel of scholars and practitioners to help identify projects to support. OMRD is normally very sensitive to political developments in Congress and the executive branch, attempting to anticipate policy interests before they develop fully.

The annual funding cycle imposes tight time constraints on planning, especially for new projects. Although both scientific feasibility and the possibility of gaining insight about manpower are considered, final decisions regarding the OMRD working plan are heavily influenced by short-term perceptions of R&D requirements for the Manpower Administration. There have been several attempts to develop long-term plans for R&D--by groups of manpower researchers, through strategy papers for particular subjects prepared by OMRD staff, and, most recently, in the preparation of four-year R&D plans requested by ASPER--but they have seldom had lasting effect. This has been due to project-specific foci that proved inappropriate when manpower policies changed; the inherent difficulty of defining a manageable agenda for manpower study; lack of agreement among manpower researchers regarding knowledge needs; and lack of support, among top-level Department officials, for R&D requiring substantial time and money.

Over the years, OMRD and its predecessor offices have been expected to provide the bases for R&D planning and resource allocation decisions: information regarding policy objectives and problems, potential R&D contributions to those objectives and problems, and R&D project costs and risks. Several formal mechanisms have been used to assist R&D program managers and staff in generating such information and to encourage cooperative interchange on R&D planning within the Manpower Administration. Some of these mechanisms have become increasingly important to OMRD as its staff capability declined.

Upon passage of the MDTA in 1962, the Secretary established a National Manpower Advisory Committee, which in turn organized a Subcommittee on Research, Development, and Evaluation. The Subcommittee, whose members were appointed by the Secretary and represented business, unions and the social sciences, was a source of ideas and advice to the Secretary, the Assistant Secretary for Manpower, the head of OPER, and to the manpower R&D program with respect to R&D policies, programs, project design, and use of findings. On occasion, the Subcommittee became a forum where R&D staff discussed with Manpower Administration and Department executives knowledge requirements for policy development, scientific understanding of manpower issues, and alternative R&D expenditure strategies. Annual OMRD plans were reviewed formally by the Subcommittee before submission to the Department for final approval.

However, with only minimal staff resources of its own, meeting at three- and four-month intervals, and dependent upon agency personnel to frame problems for its consideration, the Subcommittee performed with varying degrees of effectiveness. A good sounding board on well-defined and limited issues, such as project design, it was less able to view overall R&D needs and ways of addressing them effectively. An attempt was made in late 1973 to expand and strengthen the Subcommittee, but the passage of CETA terminated its mandate. The Secretary denied a 1974 request to establish a similar advisory body.*

*The National Manpower Advisory Commission established by CETA could conceivably play a role similar to that of the MDTA National Manpower Advisory Committee with respect to R&D activities. The Commission, however, is Presidentially appointed and its relationships with DOL, as well as with OMRD, have not yet been fully defined.

In 1963, the Manpower Administration created an internal body, the Coordinating Committee for Manpower Research (CCMR), to provide information regarding R&D activities and results and to facilitate communication among its executives and OMR/OSMP staffs concerning R&D requirements. The CCMR, however, had no staff of its own and was dependent upon information provided by OMR and OSMP. Manpower Administration officials participated irregularly. The CCMR did strengthen manpower R&D interchange within the agency, but it faded out of existence in mid-1968.

Additional sources of information for planning have come from within OMRD and its predecessor offices. One such source, quite obviously, has been staff members, to the extent of their ability to understand and interact directly with the worlds of social science research and manpower programming. However, overall staff competence declined in the 1970s and funds for travel (to such events as professional association meetings and to visit operating manpower programs) and opportunities for training in new methods of empirical analysis were drastically reduced.

Planning information has also come from the R&D work of other federal agencies. Preparation of the annual *Manpower Report of the President* has enabled the Office to track some of that work on a continuing basis.* Between 1967 and 1970, an Interagency Committee on Manpower Research (chaired by the Department of Labor) sponsored a government-wide effort to inventory manpower R&D activities. Since 1970, however, direct opportunity for OMRD to assess its efforts in a wider federal context has been limited to occasional participation in interagency task force operations focused on R&D for specific, and often transient, policy issues. Increasingly, the Office has come to rely on the manpower research community for information regarding government involvement in the field. In addition, the Office has commissioned state-of-the-art reviews on particular subjects. In both cases, the scope and quality of information obtained has depended on the perspectives of the individuals consulted. The Office has drawn primarily on a limited number of well-established manpower researchers.

A third approach by OMRD to securing planning information and exchange has involved informal access to policy and program officials. During the early and mid-1960s, there was substantial opportunity to establish relationships in Congress, in the upper echelons of the Department, and in the world of manpower programming. While many of those relationships have endured, a larger and highly formalized organizational structure within DOL has forced the Office to deal through intermediaries. Contact with regional, state, and local field operations in particular have become more and more filtered through the Office's R&D contractors and grantees or through other units of the Manpower Administration.

*The annual *Manpower Report* has been a significant document for other reasons: its wide distribution affords OMRD opportunity to contribute directly to manpower policy discussions; chapters of the report often summarize or reference the results of OMRD-supported projects (as well as those of other federal R&D units).

IMPLEMENTATION: PERFORMER SELECTION AND PROJECT MONITORING

Almost all activities of OMRD and its predecessor offices have involved projects conducted by outside performers, particularly during recent years when fewer skilled staff were available to carry out intramural work. A predominantly extramural mode of operation was chosen by OMR and OSMP in the belief that this method would permit a wider variety of R&D activities within a limited budget than if most work were done intramurally. Such a strategy makes sense initially for a new field of study, even though it imposes unique requirements on staff and administration for effective implementation.

Performer Selection

Effective management of performer selection procedures (including provisions for proposal solicitation and project design) requires: (a) an ability to state problems in researchable terms; (b) an understanding of the opportunities and limitations of applying different scientific methods to different problems; and (c) an accurate sense of the differing capabilities of performers possibly qualified to undertake specific projects.

OMRD currently employs three different methods of performer selection. Each method involves a different approach for generating new ideas or lines of study and for designing projects, with certain methods requiring a greater level of R&D staff involvement than others.

Peer review is one method of selection. OMRD convenes panels of researchers and practitioners to consider Institutional and Small Grants Program proposals. The Small Grants Panel is now composed of five manpower researchers; it has met four times a year since its creation in 1965.* For the Institutional Grants Program, the peer review approach was used officially for the first time in 1974 when a group composed of five academics and two manpower practitioners considered proposals for one grant cycle.** During that cycle, institutional grant proposals were also formally reviewed by DOL Regional Office staff.

For both programs, panel members assess proposals according to an established set of criteria. The existence of the programs and the selection procedure for choosing grant recipients are widely known on college and university campuses. The use of a peer review mechanism for evaluating proposal content and proposer capability--when the actual size of the grants is not at issue--has wide precedent in federal R&D procurement and has been used effectively by OMRD. Its one drawback, especially for doctoral and post-doctoral awards, is the possibility that Panel members may give greater consideration and weight to proposals clearly in the mainstream of a field (with respect to methodological, disciplinary, and subject focus) than to unusual approaches.

---

*Panel membership has changed continually over the past decade, with individuals serving renewable one-year terms.

**First- and second-round institutional grant proposals were reviewed informally by leading manpower researchers and practitioners to assist OMR in its selection of recipients.

A great majority of OMRD projects are currently implemented through another method--sole source procurement. During fiscal 1975, about 70 percent of the Office's new project performers, excluding those in the Small Grants Programs, were on a sole source basis. Federal regulations allow sole source procurement in situations where special capabilities are required; it affords an R&D office great flexibility in negotiating with the performer on substantive and cost issues before making a funding decision. A researcher, research organization, or other group is requested by OMRD to develop and submit a proposal for a planned activity. The extent to which OMRD has clearly defined the project will vary tremendously, as will the manner in which the resulting proposal is handled. OMRD usually has referred more expensive and technically complex proposals to external reviews; comments have been sought from other DOL personnel regarding a proposal's relevance to their concerns and from other government and university researchers for their evaluation of the technical feasibility and design of the proposed work. The process of external review, however, has often been very informal and varies according to the nature of the proposal involved. Beginning in 1974, research proposals developed through this procedure (but not those for demonstration, development, or experimentation activities) have been formally submitted for review by ASPER to ensure that the noncompetitive sole source approach has been properly used and that the anticipated project design is scientifically sound.

Unlike some R&D agencies, OMRD encourages the submission of unsolicited proposals. Because the Office does not publish an annual program plan, the topical coverage of proposals received tends to be extremely wide. The Office Director reviews each proposal for relevance to present and prospective activities. If a proposal seems appropriate and involves an expenditure of less than $30,000, it may be referred to the Small Grants Review Panel for further consideration under the Post-Doctoral Program. More costly proposals are referred to a professional staff member for additional review, again possibly involving comments from outside parties. Actual funding decisions for unsolicited proposals involve sole source procurement.

A third method of performer selection is the request for proposal (RFP), a process involving: (a) the rigid specification of project operations and objectives by OMRD staff; (b) a multi-level approval within MA of this specification; (c) formal advertisement in the *Commerce Business Daily*; (d) submission of competitive proposals by a fixed deadline; and (e) formal assessment of these proposals by a panel of Department personnel usually chaired by an OMRD staff member. The RFP panel makes recommendations to the OMRD Director, who has final funding authority. In contrast with sole source procedures, there is little room for proposal development and refinement after submission.*

Historically, sole source procurement has been the preferred selection method in DOL manpower R&D. This method served several purposes during the initial stages of the program. For research in an undeveloped field, where

*Regardless of selection method, once OMRD and a proposer agree on the substantive and financial details of a new project, final negotiation is carried out by a special OPER unit for contract and grant execution. This OPER unit also handles time extensions and budgetary supplements for continuing projects at the direction of OMRD.

neither staff nor researchers could realistically define appropriate subjects or modes of investigation, it permitted close cooperation in matters of project design, helped minimize start-up time for the overall program, and enabled program managers to learn about the relative competencies of performers on a low-risk basis. For E&D activities, sole source procedures ensured both rapid start-up and the degree of independence from established bureaus thought necessary for innovative programming. In both situations, the initial supply of qualified performers was small, and sole source procurement facilitated strategic investments in the development of disciplinary and organizational resources upon which OMR, OSMP, and then OMRD could later rely.

Ad hoc external review of proposals dates from the earliest days of the research program, and extensive cooperation with extramural performers in project design continued through the 1960s. During the late 1960s, OMR began to employ RFPs for a small percentage of its projects. These were primarily survey-based investigations for which objectives could be specified accurately without great commitment of staff time and for which the supply of competent performers was relatively large.

On the other hand, OSMP stayed almost exclusively with the sole source approach. External review by researchers or practitioners outside government, even on an irregular basis, was less common. OSMP maintained that the involvement of local agencies or program operators in E&D work required special sensitivity to factors such as local political support and unusual demographic or labor market characteristics that could not be compared through competitive procedures or by casual readers.

For both research and E&D, more extensive use of RFPs has been a relatively recent phenomenon, one accompanied by substantial debate within the Department. De-emphasizing sole source procurement has been in part an effort to blunt possible Congressional criticism, which has already been directed to sole source practices in other federal R&D offices, and in part an effort by Department executives to exercise greater control over OMRD funding decisions. Such considerations have tended to obscure the actual merits and limitations of each method from the standpoint of R&D office operations.

The main advantage of sole source procurement is the flexibility it allows R&D managers and staff. When there is no large group of available performers obviously well qualified to carry out a planned project, OMRD can explore alternatives with give-and-take between office staff and performers in developing a suitable proposal. When staff members are not specialists in a subject area, OMRD can solicit appropriate outside consultation and informal proposal review. The weaknesses of the sole source approach are that it may not allow extensive competition among potential performers for project funding (forcing R&D managers to pay special attention to proposal cost estimates) and that it may permit favoritism by the R&D office.

The RFP method, by contrast, ensures a degree of open competition, which may be especially important for a Department with major responsibility for enforcing equal employment provisions under federal contract compliance regulations. However, unless a large number of equally skilled performers are available to conduct a given project, this advantage is substantially reduced. The RFP method can effectively exclude some performers, chiefly university-based

social scientists, from selection consideration.* For activities involving relatively unexplored topics or methods, the RFP process provides little opportunity for OMRD-performer discussion to strengthen project design.

While the RFP process necessitates a clearer definition of how a study can best be done, it prevents OMRD from augmenting staff capacities (or those of the RFP review panel) in project development and proposal evaluation. It can also involve legal disputes when, for example, the low-bid proposal for a project is rejected on qualitative grounds. Moreover, although RFP selection procedures are tightly structured in comparison to sole source procedures, they too can be manipulated to favor particular proposers or scientific approaches.

Project Monitoring

Substantive monitoring of projects, another major aspect of R&D implementation, requires: sound understanding of the results sought and the scientific methods used and direct contact with the performers to ensure progress toward intended objectives.

The transition from performer selection to project monitoring begins when the OMRD Director assigns project officer responsibility to a staff member. In certain situations, two staff members will be assigned to monitor a large-scale and complex project. Several OMRD project officers maintain assignments in areas of personal specialization, while others are allotted projects across a broad array of topical concerns. (Because of declining staff size, the project officer monitoring an activity may not have been the staff member who coordinated the project development, proposal review, performer selection, negotiation, and approval process.)

Actual monitoring procedures vary by individual project officer, as well as by the type, relative importance, and expense of the activity involved.** More project officer time is spent on administrative details--such as budget modification, approving expenditures, and writing project justifications for annual plans--than on tracking the substantive progress of assigned projects. Because of severe constraints on OMRD's administrative budget, staff site visits to projects beyond easy commuting distance from Washington, D.C., are now rare. (This was not the case during the 1960s.) Performers infrequently visit OMRD to discuss their work. Quarterly reports submitted by all performers and telephone trouble-shooting therefore provide the basis for OMRD monitoring.

---

*This sometimes occurs because universities are not able to process R&D proposals by faculty members with sufficient speed to meet RFP deadlines. Also, if the R&D office consults formally with an outside party for advice on project specifications to be included in an RFP--normally the most expert advice the office can find--that party would not technically be eligible to compete for the project being considered. If that consultation is informal, and the highly qualified advisor does compete for the project, a primary RFP objective (to ensure fair competition) is effectively circumvented.

**E&D projects generally receive greater attention than research projects, as do the more significant and expensive efforts (projects that sometimes attract intense Departmental and Congressional interest) in both research and E&D.

For some projects, monitoring is supplemented in one of several ways. OMRD may insist that a highly technical, complex, or costly project establish an independent advisory group. Representatives of other bureaus or agencies with a direct interest in a project may be invited to participate in OMRD monitoring. This may be done informally or it may involve a specially constituted interagency advisory body. Most of these procedures became necessary in the 1970s because of reduced OMRD staff size, competence, and mobility, and they are imperfect substitutes for adequate staff attention. Because of the Office's present limitations, a draft final report sometimes provides the Office's first real inkling of a project's actual results.

DISSEMINATION OF R&D FINDINGS

Communication between OMRD and potential R&D consumers is a necessary precondition for promoting the use of R&D findings. While there are many other important dimensions in utilization--complex processes that involve the actions and attitudes of numerous officials and organizations (examined in the final chapter of this report)--dissemination is a clear responsibility of OMRD. Significantly, OMRD was among the first government social R&D units to establish a special Utilization Division for dissemination.*

Effective dissemination requires: (a) putting potentially useful information into usable forms, (b) identifying appropriate potential users, and (c) developing appropriate means of delivery. The manpower R&D program has adopted several approaches to these tasks.

Dissemination begins when a new project is funded. A brief summary of the objectives of every new project (in addition to updated summaries for continuing and recently completed efforts) appears in OMRD's annual *Projects Book*. This publication is widely distributed in DOL, to other federal agencies, to manpower program administrators at all levels, and to a wide range of research organizations and university-based manpower researchers.

Each active OMRD project is assigned a Utilization Division "buddy," as well as a project officer. The buddy is responsible for tracking tentative project findings to alert OMRD management of potentially useful results. Once a project is near completion, the buddy assists the project officer in getting a suitable project report prepared by the performer, in having this report reviewed by OMRD staff (and, occasionally, outside readers), and in formulating plans to disseminate and promote the use of the results. However, since the Utilization Division has dwindled markedly in size--from eight professionals in 1970 to four in mid-1975--and since many of the remaining personnel also monitor projects, only a select few projects currently receive full buddy attention. Instead, most of the utilization burden now falls upon project officers and the project performers.

OMRD efforts to disseminate project results include those generally employed by federal R&D offices: transmission of the report to the National Technical Information Service, assistance in arranging commercial publication and having results published or reported in professional and lay journals and

*In 1965, under OSMP.

newsletters, mailings to interested individuals and organizations, preparation of brief abstracts for Manpower Administration or DOL policy makers and administrators, and production of materials for presentation through various other media such as film. The Utilization Division does, in some cases, arrange for the special publication of a summary of project methods and findings in technical and popular monographs. In fiscal 1975, there were 12 such monographs, two written by OMRD professional staff and ten by outside performers under special contract or grant.

OMRD's approaches for promoting the actual use of project results vary even more than dissemination techniques. An individually tailored strategy is developed for projects given substantial utilization attention. The nature of that strategy will be determined by the potential uses of the findings and by the character and location of "consumers" able to implement the findings. Techniques can include specially arranged briefings for policy makers, conferences of manpower researchers and practitioners, the development of new materials for use in local manpower programs, and OMRD staff involvement in intra- and inter-Departmental discussions of policy and program formulation or modification.

OMRD also attempts to involve potential R&D consumers in proposal definition and project monitoring (particularly for E&D activities) and has pioneered the development of an intermediary or clearinghouse strategy for dissemination and utilization under certain circumstances. For instance, the American Bar Association is currently under contract with OMRD to communicate to state officials the results of several completed projects regarding ex-offender employment restrictions and to encourage state legislators to modify criminal statutes to permit the creation of pre-trial intervention programs.

While OMRD has given considerable attention to its dissemination and utilization responsibilities, the effective exercise of those functions requires substantial staff resources and direct access to potential R&D consumers. OMRD's reliance on intermediaries is an explicit recognition of its limited numbers of personnel and of the major organizational, institutional, and perceptual barriers that separate them from user communities.

Chapter 9

UTILIZATION--THE UNCERTAIN CONNECTION

This chapter examines the use of social science R&D by government, summarizes interview data on the attitudinal and organizational restraints on OMRD efforts to promote application of R&D project results, and analyzes apparent obstacles to and opportunities for enhanced knowledge utilization by the Department of Labor.

The complexity of evaluating utilization of social R&D is due in part to the difficulty of identifying the patterns of causality that explain "success" and "failure" in the application of scientific results. Utilization involves multiple layers of interpretation and action: determining whether or not project results are usable, determining whether or not they should be used, determining how that use can best be promoted, and stimulating actual use. Even in the private sector, where firms have extensive control over communications and internal decision making, and in certain government agencies where elaborate systems have been designed to ensure rapid assimilation of new knowledge, effective utilization remains unpredictable, just as likely to occur in an unplanned fashion as in a planned one and more often than not on an irregular basis.

In its examination of the impact of OMRD programs, the Committee found that a great deal of usable knowledge was not being used, either within the Department of Labor and other federal agencies or in state and local manpower programming. This can be attributed to many factors: differing time frames of the decision making and the knowledge-generating processes; the disparate attitudes and interests of R&D consumers and producers with respect to social science inquiry; different expectations for science and scientific results; the effectiveness of communicating findings to different user groups; the somewhat artificial distinctions made organizationally within the Department between R&D, program evaluation, and technical assistance; and the unmeasurable variables of leadership and personality. The interplay of all these factors, rather than any single variable, determines the actual level of R&D utilization. Thus, a better understanding of the utilization function generally and in the specific setting of the Department of Labor is essential to improve OMRD's productivity.

UTILIZATION OF SOCIAL SCIENCE R&D

R&D utilization in the social sciences is not analogous to a production line process, in which the need for a new product is identified, efforts are made to develop that product, and the product is produced and marketed. Determining

whether social science R&D results are usable is difficult because intellectual rather than physical commodities are assessed. Determining whether results should be used is difficult because the outcome of their application is less certain than, for example, that of engineering products. Social science R&D may clarify the assumptions that guide policy considerations and may provide data about alternatives, but it does not necessarily define solutions. Finally, determining how to promote the use of social science R&D results is difficult because there is rarely a closed system of interaction in which knowledge users are joined tightly with producers in an effective network for R&D planning, execution, application, and feedback. Rather, there are numerous clients for new knowledge, tenuously connected to the R&D operation, with varying expectations for R&D results and sometimes with only marginal standing within their own organizations to direct change.

Actual use of R&D results can have different time frames, can occur on many levels, and can take a variety of forms. Some ideas are put to use long before they are ever reported formally, while others require years of promotion before they are incorporated in policy or programs. Effective utilization may mean influencing those who initiate or set the parameters for policy decisions or it may mean influencing those who interpret, implement, and administer policies. R&D can change intellectual perceptions, develop new analytic tools to explore issues, or provide specific results relevant to specific decisions or operating patterns. Because of these many possibilities, R&D utilization in the social sciences is contingent on knowing what policy makers and administrators are thinking. This requires a tremendously different approach from a highly focused attempt to sell a tangible model or technique to program managers. Utilization is a plural activity, affected not only by demands for different kinds of information, but also by the wide range of processes and contacts necessary for communicating that information effectively and by the receptivity of potential users.

ATTITUDES TOWARD THE MANPOWER R&D PROGRAM

The Committee's study of the use of OMRD findings was conducted primarily through an extensive series of unstructured interviews.* These interviews

*OMRD's efforts, status, and performance were discussed with a wide range of individuals: people intimately involved in the formulation of manpower and related policies, manpower program administrators at the local, state, and federal levels, OMRD contractors and grantees, and members of the academic community with no current or prior ties to the Office. Specifically, the sample of respondents included 138 current and former Department of Labor officials and staff (in both the national and regional offices, excluding OMRD staff); 49 officials and staff administering state or local manpower programs (under CETA, the U.S. Employment Service, and the Work Incentive Program); 31 officials and staff in executive branch agencies other than DOL concerned with manpower; 18 representatives of private groups (for example, unions, public interest groups) active in manpower; 95 individuals involved as staff in past or present OMRD-supported projects; and 17 researchers in fields related to manpower study who have had no contractual association with OMRD. The Committee also received comments from 32 additional researchers through survey letters sent to 53 United States and 16 foreign manpower research centers or organizations.

generated a body of information that is not usually found in the literature on government R&D office operations; it deals with general receptivity to R&D results among a variety of users, focusing especially on the impacts of individuals' institutional roles on their attitudes. This analysis not only illustrates the magnitude of obstacles to effective utilization, but also demonstrates a wide dispersion of the points of influence, intervention, and control for effective utilization within the Department.

The picture is not encouraging, but it should be viewed in context. OMRD has pioneered several innovative utilization procedures and has accomplished much with very limited resources and marginal organizational leverage. Furthermore, the Department itself has recently taken several small steps that should provide greater opportunity to apply R&D findings in the future. (These, along with additional possibilities for better utilization, are discussed in the final section of this chapter.) Nonetheless, the fact that sometimes negative and always conflicting attitudes exist toward the manpower R&D program lends a sense of tragedy to this account. As in most tragedies, no one individual or group is at fault. Poor utilization is endemic to R&D operations in a mission setting; all participants in the R&D process face the common problem that many government agencies do not have the capacity for effective use of the results of scientific inquiry.

Policy Makers*

The excitement that characterized economic and social policy activity in the early and mid-1960s made manpower R&D efforts extremely important to policy executives within the Department of Labor. They expected manpower study to justify an expanded scope for federal manpower programming and to make such activities more effective. Confidence in the potential of social science helped establish an almost continuous demand for R&D. Early R&D results, often directly incorporated in legislation or departmental regulations, served to reinforce those positive views.

As more and more complex labor force and labor market problems came under policy purview after the mid-1960s, however, the limitations of manpower R&D became increasingly apparent, and a gradual loss of confidence was accelerated by disappointments in R&D in other fields. Furthermore, rapid turnover at top policy echelons within the Department led to expectations for short-term R&D payoffs that were difficult to fulfill. Today, many DOL executives regard OMRD's work as high in academic content but requiring too long a time commitment to provide usable results.

Policy Makers Outside the Manpower Administration

A majority of DOL policy makers outside the MA indicated that they did not know what OMRD was doing, saw little in the way of useful results, and criticized

*This group included current and former Department of Labor officials at the Secretary, Under Secretary and Assistant Secretary levels.

OMRD's tendency to insulate itself from policy control. However, it was not evident that the policy officials expressing such criticisms had made any effort to examine OMRD's work or to educate themselves in the relevance of research for policy decisions.

Policy makers found the Office's *Projects Book* bewildering, its many unrelated titles giving no suggestion of coherence or potential value. Direct briefings on specific results have been effective but infrequently used. Policy makers agreed that the daily demands of running an agency tend to make it difficult to take a longer view and to explore and apply available R&D findings on a more regular basis.

Occasionally, analytic staffs (in this case personnel in the Office of the Assistant Secretary for Policy, Evaluation, and Research) have pulled together OMRD findings for policy development purposes; examples include ASPER work on welfare reform, inner city unemployment, and offender rehabilitation. While these were short-term responses to immediate concerns, they illustrate how an R&D office, working with appropriate analytic staff, can serve as a repository of accumulated knowledge--available when needed.

Policy makers generally prefer not to be told by scientists about problems for which there are no ready solutions and on which findings are far from definitive; this tends to discourage R&D use. They want immediately applicable knowledge, and they expect usable products to reach them independently. While this has happened in a few instances--for example, in work on discrimination in apprenticeship in the mid-1960s--R&D findings usually do not suggest solutions to complex policy issues and are not readily communicated within a large organization. Instead, R&D findings may help a policy maker understand better the nature of problems in need of solutions, however imperfect. For example, the dual labor market concept (developed partly through OMRD support) directs attention to a set of issues; while it does not by itself suggest a solution, a policy ignoring those issues might be deficient.

Some policy officials appreciate these intrinsic constraints and recognize the need for a continuum of R&D, including short-term inquiry regarding operational problems and long-term attention to fundamental policy and scientific issues. Even those individuals, however, have expressed frustration because they could not be sure that any of this work would eventually be relevant to DOL missions.

Policy Makers in the Manpower Administration

Policy makers in the MA were generally aware of R&D results. They had reviewed OMRD plans and received briefings on findings with greater regularity than their counterparts outside the MA. Their interest in R&D was mainly to obtain findings, especially demonstration project results applicable to program operations, and they expressed less concern for the use of new knowledge in policy development.

These officials were aware that the small Utilization Division within OMRD essentially carried out a dissemination function with only limited internal resources to develop communications between OMRD and program managers within the Manpower Administration. They were also aware that CETA poses new problems for establishing effective R&D utilization connections between Washington and Prime Sponsors. There was a clear recognition that Regional Office staffs had not

provided such a link in the past, but hope was expressed that extensive training would help those staffs expand their capabilities into the realm of substantive technical assistance, drawing upon R&D results.

Some MA policy makers saw OMRD as an office serving chiefly an academic constituency. Concern was expressed about the extent of OMRD interest in program operations, and therefore, about (what those policy makers considered to be) the extent of effective R&D utilization. However, the preferred approach among these officials for improving utilization was ad hoc, centering on specific short-term issues.

Analytic Staffs*

ASPER

ASPER is charged with policy development, with program budget analysis, and with planning, coordination, and synthesis for research, development, and evaluation. It draws upon work conducted throughout the Department in pursuing these tasks. ASPER does not have sufficient funds to support much R&D activity on its own, but it can act as a conduit between OMRD and Department policy officials. ASPER staff members, however, admitted that they did not regularly play this connecting role.

Because of their strong belief in the value of econometric analysis, many ASPER staff members were critical of what they considered the low quality (that is, non-mathematical orientation) of OMRD's work. A number of ASPER staff members, particularly those in research and evaluation units, are young academics, temporarily in government, whose chief interest and experience is in econometric model-building. ASPER's staff is not now broadly representative of the behavioral and social sciences or of the variety of approaches in economics necessary for general, comprehensive manpower study, and relationships with OMRD are heavily influenced by the very limited concerns and methodological preferences of those staff researchers. ASPER and OMRD often view each other as competing rather than cooperating organizations.

Furthermore, ASPER staff members are heavily engaged in "fighting fires" and meeting tight deadlines; they have little time to examine OMRD's work or to synthesize R&D findings for application in policy development. There have been instances where this was done, but ASPER is generally insensitive to the potential uses of OMRD project results. Some ASPER staff members expressed the view that even if there were time and concern, ambitious young academics want to do their own research rather than summarize the research of others for policy

---

*ASPER serves as the primary analytic arm for the Secretary and Under Secretary while OPER carries out this function for the Assistant Secretary for Manpower. Staff members in both these organizations were interviewed, as well as "program assistance" personnel associated with Manpower Administration line agencies. Included in this last category were not only staff members of formally organized technical assistance and training units, but also program specialists in line agencies who often play significant roles in the design and improvement of manpower program activities.

makers. Nor were many top policy officials in the 1972-74 period interested in such examination and synthesis as a means of enhancing R&D utilization.

There was also a sense of discouragement in ASPER about the feasibility of assisting OMRD program planning. ASPER staff participation with OMRD staff on ad hoc task forces created to suggest future R&D themes and to identify gaps in understanding for certain areas of policy concern was viewed as a positive step toward improvement. However, there were complaints from the ASPER staff that ultimate project funding decisions by OMRD bore little relationship to such planning efforts.

OPER

OPER is divided into three offices: OMRD, an office of evaluation, and a policy planning office that includes a legislative analysis staff.*

The Committee's most interesting finding was that staffs in the three OPER units do not talk with each other on a regular basis. Some noted that until 1973 they were scattered around town in separate buildings, but the more basic reasons were said to be a concentration upon short-term work, much of it administrative and carried out under heavy time pressure, and a division of labor that did not require much contact. Most agreed that whatever interaction exists occurs through the OPER director. Since the OPER director generally has some knowledge of R&D outcomes and often participates in Manpower Administration efforts to draft legislation, utilization can occur without the movement of discrete and identifiable R&D "products" between individuals or organizational units. Even if R&D results are not a key factor in reaching any one decision, they can provide a better understanding of manpower problems that will affect an official's advice and decisions.

Program Assistance Staff

More than any other group within the Manpower Administration, program assistance personnel have used manpower R&D project results. This is due largely to the relatively long-term personal relationships built up between these individuals and OMRD staff members. However, the program assistance orientation is highly operational, literally at a "nuts and bolts" level, limiting the amount of R&D considered relevant. Program assistance personnel have relied on OMRD to bring potentially applicable findings to their attention, rather than either having searched out applicable findings or taken an active part in R&D planning.

The program assistance role in CETA implementation best illustrates the incomplete nature of relationships with OMRD. During 1974, program assistance personnel prepared technical assistance guides for CETA Prime Sponsors on many topics, including planning, management information systems, and evaluation techniques. Although OMRD staff members were consulted, the content of these guides does not reflect R&D findings. (One guidebook does contain an extensive

---

*Interviews were conducted with the heads of the three offices and their ranking staff.

bibliography of R&D reports.) Nor was a technical assistance guide on R&D utilization published and distributed, even though OMRD's Utilization Division did prepare and submit such a guide for use by Regional Office staffs.

Program Administrators*

Since early R&D activities were designed to challenge the practices and policies of established bureaus and since discretionary program funds were allocated to special (E&D) projects, it is not surprising that many program officials were initially opposed to the R&D program. But as innovation in all operations became more important and more highly rewarded in the Department, the manpower R&D program established a solid constituency among national program administrators. Enthusiasm waned somewhat as the pace of manpower program expansion slowed during the 1970s. Only a few local administrators know how the manpower R&D mission has been conceived and conducted.

National Program Managers

The attitudes of national program managers toward the R&D program have changed dramatically--as has their use of R&D results--since 1962. Under MDTA, there was substantial use of R&D results for program design and in operational decision making. Almost all of this work was done at a time of the political excitement, rapid program development, and growing importance of the Manpower Administration during the 1960s. R&D influence on programs declined after 1970, partly because the executive branch emphasized tighter control over social spending, program decategorization, and allocation of responsibility for program management to the local level, which weakened both incentives to develop new programs and relationships between OMRD and continuing program operations. This fundamental change has colored the attitudes of the national program managers.

The attitudes of program managers toward the manpower R&D program also seem to be deeply rooted in their particular bureaucratic roles and in the nature of their interaction with OMRD staff. The dominant ethos among program managers is a "can do" emphasis on program implementation. The roles of most federal personnel under MDTA did not require substantive expertise in the delivery of services. Rather, the skills demanded were those of public administration.

---

*The national program managers interviewed included several former Manpower Administration program officials and the current heads (Associate and Deputy Assistant Secretaries) of the principal Manpower Administration units with substantive operational responsibilities (the Bureau of Apprenticeship and Training, the Office of Field Direction and Management, the U.S. Employment Service, the Unemployment Insurance Service, and the Office of Manpower Development Programs) and some members of their immediate staffs. Other officials interviewed included DOL regional office executives and staff in five of the ten federal regions, as well as administrators and elected officials involved at the state and local levels in the operation of CETA Prime Sponsor programs.

Federal program officers wrote regulations, let contracts, distributed funds, insured accountability of contractors (in terms of expenditures and adherence to the regulations), and reported to Congress on these processes. This absorption in procedural matters explains why national program managers sometimes view the utilization of R&D results as not directly relevant to their responsibilities. Research that defines problems or explores issues strikes them as having little potential payoff. Furthermore, they have little time to read R&D project materials; when there is time, they have difficulty understanding summaries of R&D findings, much less technical project reports.

In general, national program managers believe OMRD is overly divorced from operations and too esoteric in its interests. OMRD is not perceived as responsive to R&D ideas solicited from agency or bureau staff, despite substantial evidence to the contrary in past OMRD activities. For example, many of the veteran cadre of the Employment Service reported good relationships with OMRD in obtaining assistance and R&D resource commitments to address operational problems. But the younger staff members in the Manpower Administration, especially those who had recently come into positions of authority, did not hesitate to comment on the lack of utility they see in the R&D effort and of their limited interest in R&D generally.

In addition to such attitudes, a major impediment to R&D utilization in national program management exists because of the skills, experiences, responsibilities, and relative isolation of OMRD staff. Even though many of those staff members were associated earlier in their careers with line units in the Department, they are now primarily contracting officers rather than program experts (or social science researchers) because of the heavy administrative demands on their time. The structure of the Manpower Administration, serious understaffing, and a lack of funds for travel and training have insulated them further from programs at a field level. Lacking direct contact with the changing world of manpower programming, OMRD staff members have been unable to play an effective part in relating R&D to operational concerns.

Furthermore, there has been little opportunity for OMRD as an organization to cultivate relationships with program managers in Washington and elsewhere. It has insufficient access to those managers to maintain a sustained dialogue concerning either short-range interests or the potential utility of more fundamental, long-term inquiry for program operations. Nor does OMRD normally receive extensive feedback from operating levels regarding the outcome of efforts to apply R&D findings in manpower programs.

Regional Officials

Regional office staffs were contacted by the Committee at a time when their old responsibilities under MDTA were withering and their new functions under CETA had not yet been clearly defined. Both generalist field staff and technical assistance personnel in the regions recognized that they were in transition from heavy-handed to helping roles. Most admitted that they lacked the substantive expertise in program design and modification essential in assisting Prime Sponsors. Their skills were mainly in the areas of contract monitoring and interpreting federal regulations. In general, they did not know what type of information would be needed for program assistance to Prime Sponsors or where this information might be found or developed.

Among regional office staff, there was a very limited knowledge of OMRD and its work. Most did know that R&D project reports were sometimes sent to the regional office, but once again, there was little or no time to read them. Those who had reviewed some of the OMRD-supported work claimed it was too academic and difficult to interpret.

It was also apparent that Regional Office staff do not consider responsibility for the use of R&D as part of their jobs. No regional offices have staff positions with such assignments. A few officials--most often at the top of the regional hierarchy--have a clearer perception of OMRD. Much like national program managers, however, they saw OMRD existing, as one put it, "in splendid isolation." There were complaints that requests from OMRD for new R&D project ideas or for comments on specific R&D proposals did not allow sufficient time for careful regional response. When ideas and comments were forwarded, there was little or no feedback from OMRD about their value or eventual disposition.

Prime Sponsors

The majority of CETA Prime Sponsor administrators and officials had even less awareness of OMRD and of manpower R&D products than regional office staff. Research to them means primarily the generation of local labor market information. Demonstration and development projects were viewed primarily as means for obtaining extra program funds and for gaining new operational experience, rather than as opportunities to design and test new methods of manpower programming.

The chief interest among local and state administrators is to build politically viable organizations for integrating efforts among the usually large number of community organizations involved in manpower service delivery. They are reminiscent of Model Cities managers of a few years ago, and many of them have such backgrounds. They are public administrators for the most part, not manpower specialists.

Prime Sponsor staffs did express interest in program evaluation. They want to know how specific service mixes and program structures are working. They have given little thought to how such information might fit into a national reporting or evaluation system, but several said they would like to receive information about how other Prime Sponsors were faring with comparable programs.

Prime Sponsor administrators indicated a commitment to comprehensive planning that would relate manpower training programs to the job requirements of an area and coordinate with local decisions for economic development, housing, transportation, and urban growth. This is surely a fundamental objective of CETA: to overcome program fragmentation and to tailor service delivery to local needs. However, there is no basis yet for determining whether this can be done through the mechanism of locally controlled manpower programming.

University Researchers

In striking contrast to the attitudes of government officials that R&D is too divorced from operations, virtually all university researchers interviewed insisted that OMRD-supported work has been too closely tied to operational rather

than theoretical interests. Researchers' views also reflect internal changes within disciplines, economics in particular, between 1962 and 1975.

In its early stages, when there was no established field of manpower study, the manpower R&D program initially drew upon a very small number of academics, primarily institutional economists working in labor relations who had been concerned during the 1950s with labor force and labor market problems. Although OMRD made a concerted effort to engage sociologists, psychologists, and other social scientists, the manpower R&D program relied most heavily on economists, and its identification with that discipline grew. Criticisms by noneconomist researchers are rooted in this perception of the manpower R&D orientation.

Within economics, criticism of OMRD's work has come from two sources. First, macroeconomists, who focus mainly on fiscal and monetary management in a broad context, have been critical of micro-analysis focused on individuals, firms, occupations, and specific labor markets. Second, during the 1960s, a new generation of manpower economists, better equipped with the skills of quantitative analysis and committed to model-building approaches, began to question some OMRD-supported research, ostensibly less rigorous because of its nonmathematical orientation.*

During the 1970s, economic events have further reduced the extent of common agreement among economists regarding basic assumptions, theoretical constructs, and methods of inquiry. While all social sciences have grown more complex in technical terms, work in economics has been further complicated by such competing views. For OMRD, the lack of consensus has meant that whatever performers the Office selected, the choices would be disputed by some social scientists.

The attitudes of policy makers, program officials, and academic researchers represent a set of perceptual and institutional constraints facing R&D program managers. None of these attitudes is a direct derivative of OMRD efforts and results; rather, they reflect the differing responsibilities, expectations, and interests of the individuals concerned. The reward structure for policy makers and program officials demands that OMRD address practical questions under real time constraints; OMRD is not judged by its scientific contributions to manpower study. Within academia, however, incentives and reward patterns form around disciplinary distinctions and competing modes of analysis and thought; OMRD is judged according to its technical competence, its long-term commitment to specific lines of theoretical inquiry, and the prestige of these lines relative to other scientific pursuits. The chasm between expectations and realities is immense on all sides, and the locus of responsibility for bridging this gap remains undetermined.

UTILIZATION OBSTACLES AND OPPORTUNITIES

An increased potential for the utilization of R&D results in manpower programs exists today because a great deal of knowledge has been generated over the past decade about manpower and because, under CETA, local jurisdictions have

---

* Interestingly, many of these younger academics had received OMRD Small Grants Program support for their graduate studies.

flexibility to develop programs on the basis of that knowledge. An increased potential for R&D utilization in manpower policy exists because of the current economic situation (which has raised questions about basic economic policy assumptions) and because of the evolving federal role under CETA's form of decentralized programming. To realize this potential, however, requires significant change in the attitudes and responsibilities of policy and program officials with respect to social R&D in general and to OMRD in particular.

The Committee is not recommending a comprehensive utilization system partly because of perceptions in the Department, but more importantly, because the Committee does not believe that any single system can address the wide diversity of possible use and users of manpower R&D. Instead, the Committee has recommended steps to improve OMRD's technical capacity (staff and financial resources) for dissemination and utilization and to increase the Office's direct access to significant user groups. To go beyond the limited scope of these recommendations will require new appreciation of the continuing obstacles to utilization throughout the entire manpower community and a concerted effort by the Department of Labor as a whole to take greater advantage of opportunities to benefit from OMRD activities.

Obstacles

Three major obstacles have impeded effective R&D utilization within the Department of Labor: (a) absence of continuing communication about R&D among policy makers, program officials, and OMRD personnel and performers; (b) conflicts over OMRD's role and autonomy; and (c) extremely limited dispersion of responsibility for R&D utilization throughout the Department. These obstacles may never be fully removed, but their effects can perhaps be reduced.

The lack of communication about R&D is caused by differences in the cognitive worlds of government officials and researchers as well as their time priorities. The researcher isolates and examines one small piece of reality while the official lives in a realm of buzzing confusion where variables scramble together and decisions must be made in the face of uncertainty. Mutual education is often necessary for government executives and researchers to understand each other, but time for this interchange does not seem to be available. The pressure of daily business weighs upon officials, driving out long-range planning, problem anticipation, and efforts to cull R&D results for policy and program decisions.

Disseminating R&D reports cannot by itself solve the problem. Intermediaries are needed to help overcome the natural impediments to effective communication in a large organization. At least within the Department of Labor, such potential intermediaries--the staffs in ASPER and OPER as well as program assistance personnel in the Manpower Administration--who are in a position to blend R&D, policy, and program perspectives for decision makers have not done so regularly.

The second obstacle to effective utilization is conflict over OMRD's role and autonomy. In light of the attitudes described above, it is understandable that OMRD avoids continuous interaction with other units to safeguard its own agenda and create a more stable world for itself. OMRD constituencies are so diverse that it is in constant danger of satisfying no one. Under the form of decentralization mandated by CETA, if OMRD satisfies the highly operational

knowledge demands of Prime Sponsors, it provides no information base for long-term policy development on a national scale; if it satisfies those more fundamental knowledge demands, it abrogates its mission-oriented responsibilities to provide real-time, program-oriented advice.

At the same time, there are reasons for some potential R&D consumers to avoid close interaction with OMRD. Policy and program officials may be interested only in new ideas for which funds are available and that do not detract from other activities. R&D findings that challenge existing programs or the assumptions upon which they rest, and thus the managing agency or bureau's existence, are likely to be rejected out of hand. If it is effective, social R&D in a mission setting represents a threat as well as a promise to potential users. OMRD may, in fact, be forced to avoid certain topics, possibly topics of direct relevance to policy and program decisions to ensure its own survival. Or, it may be given only limited direct access to potential R&D consumers, as appears to be the case in relation to field operations under CETA.

That few personnel outside OMRD's small Utilization Division are asked to review, let alone supply, R&D results as a part of their assignments illustrates the third major obstacle to greater R&D use--limited dispersion of responsibility for utilization. Instances of intensive involvement by Department officials and staff in OMRD activities have generally been one-time, project-specific experiences. There has been limited recognition that the Department can benefit from something other than an R&D project report. Participation in the R&D process itself can teach officials how to couch policy and program issues in researchable terms and how to integrate R&D results with the flow of operations.

Neither Manpower Administration field staff nor Prime Sponsor personnel have been strongly encouraged to incorporate concern for R&D into their work. The haste of transition from MDTA to CETA, as well as continuing changes in the regulations, has occupied practitioners with operational problems. That operational focus will probably continue as the overall CETA effort is revised and Prime Sponsor plans are reviewed annually. However, the potential for increased R&D utilization is also present in this fluid situation. What is obvious is that programs can no longer be designed or modified unilaterally by Washington. The Manpower Administration is in a market situation; to influence certain state and local choices, it should pursue all possible avenues of cooperative action to make its wares attractive to Prime Sponsors.

To take full advantage of the expanded R&D utilization opportunities created by CETA, change in OMRD and Department operations appears necessary on several levels. The R&D dialogue should be expanded to include the larger number of actors now involved in manpower. There are officials in widely scattered jurisdictions who should share some responsibility for using R&D results.

In order to improve prospects for R&D utilization at the state and local levels, the Department of Labor should act as a resource--a repository of knowledge and experience--upon which Prime Sponsors can draw. This is not a traditional role for a federal agency; to be effective, the Department will have to be committed to including R&D results as a central element in CETA operations. Fulfilling that commitment does not necessitate organizational change (which may not be desirable because of the prevailing attitudes toward R&D among program managers in Washington and because OMRD also serves the national policy making community), but rather, more concerted attempts to establish appropriate methods for communicating usable R&D findings and for promoting their use under a unique system of decentralized policy administration.

A far better sense of timing than has been yet demonstrated by the Department is also required for effective R&D utilization. When major departures are being made in policy and program structure, there is generally greater receptivity to new information and an increased opportunity for a substantial R&D contribution. For CETA, for example, the period of peak opportunity to define and promote new, more effective delivery systems and to indicate the best manpower programming practices has already passed. The initial stages of CETA, however, coincided with a time of low status and declining Departmental support for OMRD. Since then OMRD and the Department of Labor have been taking some tentative yet important steps toward improving the potential for R&D utilization in CETA programming.

Opportunities

Opportunities for R&D Utilization in Programs

After delay because of preoccupation with CETA implementation, the Manpower Administration has begun to pursue plans for a national Target Group Model Development Program that represents a demand structure for R&D results. Through that Program, promising service delivery strategies and new training program designs, developed mainly through OMRD E&D activities, would be further tested in cooperation with Prime Sponsors. OMRD, technical assistance, and other staffs within the Manpower Administration would together establish priorities in terms of program models for different groups in the labor force. Acting together, MA units would also play a catalytic role in conveying information about new treatment approaches to the field and encouraging Prime Sponsors to participate in the final stages of development. Prime Sponsors who participate could ultimately become key utilization agents in promoting proven new programs to other CETA officials.

There are other new or modified approaches for enhancing R&D utilization that OMRD has initiated. OMRD has commissioned an increased number of special syntheses of R&D project reports and findings with respect to specific Prime Sponsor needs. These needs can be defined in terms of particular operational functions--such as planning, assessing occupational interests among training program clients, projecting employer demand for certain skills, and trainee job placement--or in more general terms--such as describing characteristics of different types of local or occupational labor markets. In both cases, it appears that greater attention is being paid than before to identifying areas in which knowledge may be relevant to users. The people producing such syntheses are consulting more frequently with CETA Prime Sponsors and other consumers.

OMRD is planning to help one of the regional offices establish an R&D information center. Such a facility would serve not only as a library for R&D reports, but also as a continuous source of information and referral for local, state, and regional manpower staffs. If it is effective, other regional offices might establish similar centers. OMRD is also planning to develop and test three other mechanisms for delivering new program information to CETA staffs.

OMRD has widened the scope of its institutional grant program to include efforts to link knowledge producers and consumers on a local basis.* Although information conveyed to Prime Sponsor officials through those grantees need not be derived from other OMRD activities, this link can be an important means for promoting the use of R&D results. The extent to which this happens will depend on the balance struck by grantees between this relatively new type of function and the more traditional research and research training activities normally associated with institutional grant support.**

Each of these new developments parallels certain elements of the intermediary strategy that was pioneered by OMRD and has been employed on an ad hoc basis since the mid-1960s.*** The intermediary or clearinghouse concept has enabled OMRD to realize substantial multiplier effects in its dissemination efforts by using strong, well-established, and credible networks of communication and interaction that sometimes exist among potential R&D consumers. However, such networks have not existed in complete form among local program officials (now CETA Prime Sponsors); unless they develop, the clearinghouse method is quite limited.

Approaches such as the Target Group Model Development Program and the new roles for institutional grantees are important experiments. They may establish a number of regular channels of interchange for R&D, which in turn may contribute to the creation of a comprehensive manpower R&D utilization network, but they are not the only possibilities for more effective utilization that can be explored by the Department.

One possibility involves current plans for replicating in all DOL regional offices the Boston Manpower Training Institute (MTI). The MTI was established in 1974 by the Boston Regional Office in cooperation with an OMRD institutional grantee and other universities in that city. It was designed as a continuing intramural capability to provide technical assistance and classroom instruction to local, state, and regional staffs and to give opportunities for those staffs to interact regularly with each other and with manpower researchers. While other regional offices have been given some flexibility in adapting the MTI to their particular needs, the Boston model might not prove totally effective in all locations.**** If this occurs, the Department should be flexible enough to

*See Chapter 6 for a full description of the Institutional Grants Program.

**As noted in Chapter 3, the Committee is doubtful that all institutional grant objectives can be effectively realized at current levels of funding.

***The example of the American Bar Association was discussed above; others include engaging non-DOL organizations to help promote the use of R&D findings in the areas of apprenticeship training, work sampling for occupational interest measurement, individualized instructional techniques for education in literacy and other basic work skills, and strengthening Employment Service office relationships with employees at the local level.

****The development of the MTI in Boston (which was one of the five regional offices where interviews were conducted by Committee members and staff) can be attributed in large measure to the presence of a relatively large number of experienced manpower researchers in area universities and a history of interaction between those researchers and local, state, and regional manpower program officials. Those two conditions did not appear to exist in the other four regional office cities visited.

change the MTI approach. For example, attempts might be made to deliver sustained technical assistance and instruction, designed around current knowledge in manpower, on a state-by-state basis, perhaps in cooperation with State Manpower Advisory Councils established under CETA. Over time, local, state, and federal officials in a region could determine which performers and arrangements provide the best services. The criteria for judging effectiveness should not be limited to effective CETA staff training; the connections provided for R&D utilization--including provisions for obtaining feedback on Prime Sponsor knowledge needs and for discussing and engaging in cooperative R&D ventures--should also be considered.

There are additional possibilities for developing new utilization intermediaries or clearinghouse structures outside the Department's normal hierarchy and chain of command. During the course of the Committee's interviews, Prime Sponsor staffs reported receiving quicker response and more reliable information about the Department's plans from the National League of Cities, the National Association of Counties, or the National Governors Conference (each of which has undertaken technical assistance efforts under CETA, funded in part by the Manpower Administration) than they did from the regional offices. Those organizations might be engaged directly as R&D utilization agents to communicate significant new findings to local and state officials. There are early indications that the activities of such groups might lead to the creation of a professional association of manpower practitioners, a prospect that should be followed closely and perhaps actively encouraged by the Department.

The Department has not yet seriously considered opportunities to, in effect, "purchase" the interest of CETA Prime Sponsors in applying new knowledge. There is precedent in government R&D activity for set-aside funding to support short-term local development projects (Title III of the Elementary and Secondary Education Act, for example). While it would require additional R&D staff and resources, an annual national competition for the best development ideas and proposals, even at a level of $50-$100,000 per project, would convincingly establish DOL (and OMRD) as a source of ideas, information, and technical assistance. Recognizing that most locally based developmental activity would be repetitive (since the vast majority of local officials and administrators desire new operating experience and not new scientific knowledge), such a program might nonetheless engender a spirit of inquiry and innovation in CETA. That kind of atmosphere could, in turn, open the world of manpower programming to the use of R&D results of greater sophistication, technical validity, and significance.

Opportunities for R&D Utilization in Policy

In contrast to its effect on possibilities for increased utilization of R&D in programming, CETA has not precipitated significant changes within the Department that would increase the use of manpower R&D findings in national policy making. The Committee believes that such changes require new attitudes more than they require new structure.

There is still no consistent dialogue about R&D within the Department. ASPER, which is in a strategic position to promote such communication, continues its irregular involvement in OMRD planning and project implementation. Although such involvement can be very fruitful--a recent example is a joint effort by

ASPER and OMRD to work with the Employment Service to define a long-term R&D agenda aimed at strengthening Employment Service operations*--neither OMRD nor ASPER is adequately staffed to engage in this kind of effort for all MA units. Nor is it likely that all MA units would welcome such active OMRD or ASPER involvement in their affairs.

Continuing conflicts within the Department sometimes steer R&D activity away from subjects relevant to manpower policies and programs (although a more collegial atmosphere has recently developed in the Manpower Administration, especially under the current Assistant Secretary). The range of sensitive topics may change from time to time, but in recent years it has included the future of federal-state relationships under the Employment Service, discrimination in apprenticeship training, and the effects of collective bargaining and other union activities on the demand for labor, worker productivity, and the functioning of internal labor markets. The problem is one of institutional motivation. Units in a federal department are generally loath to challenge specific elements of their own missions or to deal extensively in areas that may touch upon the domains of other units.

Social R&D in government should provide opportunities for rational analysis and self-correction in line with a department's general responsibility for public policies. In a mission setting, that requires receptivity among policy and program executives to probing questions and fair criticism. The spirit of cooperation, which has been growing slowly in the Manpower Administration, has not yet been fully translated into an atmosphere that would support open and sustained inquiry by OMRD.

There are few indications that responsibility for R&D utilization is being shared more widely among policy officials within the Department, despite the new knowledge requirements associated with the tasks of overall CETA guidance and of managing other manpower activities in relation to CETA. Department executives have tended to view manpower policy formulation as the province of the Manpower Administration, but the Manpower Administration is usually preoccupied with operational rather than policy problems. Usable R&D findings often disappear into the operational abyss. The impetus for change will have to come from the highest levels of the Department.

Such impetus characterized those periods in the past when R&D played a productive role in manpower policy development. What could be dampening more recent demands for new knowledge and for its application is that manpower policies and programs today appear to lack thorough justification in terms of both economic and social theory and government fiscal and monetary policies. Yet, the nation is experiencing and will surely continue to experience serious problems of unemployment, underemployment, and poverty among members of the labor force and a need to improve worker productivity. More workable means for addressing such problems are imperative, whether or not inquiry provides a total theoretical justification for government involvement in manpower and regardless of what department, agency, or bureau directs relevant policies. The manpower R&D program in the Department of Labor has been useful and can be made even more effective as an instrument in developing those means.

---

* The basis for that activity was an OMRD-supported project (5) that surveyed Employment Service problems and knowledge needs in several states.

Appendix

STUDY SOURCES AND METHODS

The broad content and evolving operations of the manpower R&D program required the Committee to use a large number of sources and methods to collect information about OMRD and to gain perspective on the existence of an R&D office in a federal department. Those sources and methods are detailed in this appendix.

Subcommittees

During the first eighteen months of the study, five subcommittees served as focal points for the Committee's work. Each subcommittee considered a set of related issues:

- generation and initiation of R&D projects--sources of ideas for manpower study; methods of program planning and project and performer selection.
- manpower R&D findings and results--the content, quality, and contributions of OMRD-supported work.
- utilization--dissemination of R&D reports; methods for promoting the use of R&D findings; knowledge of and attitudes toward R&D activity among actual and potential users.
- R&D organization and management--relationships between OMRD and other DOL organizations; OMRD internal structure, operations, and staff capabilities.
- future manpower problems and policies--demographic, economic, and social changes and their potential effects on the labor force.

Subcommittees were chaired by a member of the parent Committee; each was composed of several additional Committee members and other individuals recruited because of their familiarity with OMRD, with manpower problems in general, or with R&D operations in and outside of government. Those individuals were:

Victor Alicea
Director, Puerto Rican Research and Resources Center, Washington, D.C.

Curtis C. Aller
Center for Applied Manpower Research, Berkeley, California

Peter Barth
Head, Department of Economics, University of Connecticut

Barbara R. Bergmann
Professor, Department of Economics, University of Maryland

Ralph R. Canter
Program Manager, Directorate of Life Sciences, U. S. Air Force Office of Scientific Research, Arlington, Virginia*

Leonard Goodwin
Research Associate, The Brookings Institution, Washington, D.C.**

Sar Levitan
Director, Center for Manpower Policy Studies, Washington, D.C.

Ray Marshall
Director, Center for the Study of Human Resources, The University of Texas at Austin

Sherwin Rosen
Professor, Department of Economics, University of Rochester

Jerome M. Rosow
Manager, Public Affairs Planning, Exxon Corporation, New York City

Robert Schrank
Project Specialist, Division of National Affairs, Ford Foundation, New York City

Harold Sheppard
The W. E. Upjohn Institute for Employment Research, Washington, D.C.***

All subcommittees met at least twice; several met four or five times. Formal and informal reports were made to the Committee, and all information obtained by the subcommittees was available to the Committee in its discussions and deliberations.

*Currently, Chief, Manpower Development and Utilization Technical Area, Army Research Institute, Arlington, Virginia

**Currently, Professor and Head, Department of Social Science and Policy Studies, Worcester Polytechnic Institute

***Currently, Principal Research Scientist, American Institutes for Research, Washington, D.C.

Commissioned Papers

Ten papers were commissioned by the Committee; five addressed general issues of manpower policy and research, and five reviewed and assessed particular aspects of OMRD-sponsored manpower study. The papers helped define significant questions for Committee consideration, provided a great deal of information about past manpower R&D activity and future knowledge needs in manpower policy making, and outlined a variety of possible approaches to strengthening OMRD operations. The papers and their authors were:

Peter Barth, *Labor Market Operations: A Review of Research*

Vernon M. Briggs, Jr., *Special Labor Market Segments: A State-of-Art Review*

Glen G. Cain, *Report on OMRD Research on Labor Supply and the Demand for Labor*

Jesse E. Gordon, *The Utility and Utilization of Manpower Research in Manpower Service Delivery*

Denis Johnston, *The U.S. Labor Force in a Changing Economy--Implications for Manpower Policy and Research*

Ray Marshall, *Implications of Labor Market Theory for Manpower Policy*

Herbert Parnes, *The National Longitudinal Surveys: An Interim Assessment*

Michael Piore, *Notes on the Conceptualization of Labor Market Reality*

Harold Sheppard and Jon Michaelson, *Experimental and Demonstration Programs in Manpower: Purposes and Performance*

William F. Whyte, *Organizational Aspects of Manpower Research and Training*

The Committee plans to publish these papers in 1976 as a separate volume.

Staff Papers

Committee staff served as a research arm for the Committee and its subcommittees. Staff work resulted in nearly 100 formal reports, most in brief memorandum form. Major staff papers were:

OMRD: Structure and Operation

Scholars and Statesmen Scan the Manpower Horizon

Institutional Grants: An Alternative Way to Facilitate R&D

The Development and Evolution of Manpower Policy

Dimensions of Manpower R&D in the U.S.

Case Study: Utilization of R&D Efforts in the Licensure Field

An Analysis of the Programs of the Office of Manpower Research and Development

Capabilities of OMRD Staff: Analysis of a Questionnaire

Unsolicited Proposals--the Review Process

Interviews

Committee members and staff relied heavily on interviews as a source of information.

- 26 OMRD professional staff members were individually interviewed regarding daily activities and responsibilities, the effectiveness of various OMRD operating procedures, and future directions for OMRD and for manpower study. Group interviews were also conducted with Office Division Chiefs on these same general topics. Informal discussions were held throughout the course of Committee work with virtually all professional staff regarding particular OMRD-supported projects and specific aspects of office operations.

- 138 current and former Department of Labor officials and staff were interviewed formally to elicit their views of OMRD activities and contributions. This group included individuals in both the Department's national office and five of its ten regional offices. All were professional employees, varying in rank from mid-level career civil servant to Secretary of Labor.

- 49 officials and staff administering state or local manpower programs (under CETA, the U.S. Employment Service, and the Work Incentive Program) were interviewed concerning their knowledge and use of manpower R&D results.

- 31 officials and staff in federal agencies (other than the Department of Labor) involved in the formulation and execution of manpower and related policies were interviewed regarding OMRD and other sources of manpower analysis.

- 18 representatives of private groups (unions, employers, public interest groups) were interviewed regarding R&D in manpower.

- 95 individuals involved as staff in 34 past or present OMRD-supported projects were interviewed regarding their OMRD work, their experiences as OMRD contractors or grantees, and their views of desirable future directions for the manpower R&D program.

- 17 university-based researchers in disciplines and fields related to manpower study who have had no contractual association with OMRD were interviewed concerning OMRD's past contributions and future role.

- 32 additional researchers responded to survey letters, sent by the Committee to 53 U.S. and 16 foreign manpower research centers or organizations, commenting upon their own work in manpower and their views of needed study during the next decade.

Archival Searches

Committee members and staff were afforded complete access to OMRD files (excluding personnel records and confidential materials relating to individual DOL employees) and to the files of several other Manpower Administration units (for example, financial records for OMRD contracts and grants). OMRD staff members were particularly helpful in providing written material from their own working files and in guiding the Committee's search through the massive volume of paper that has accumulated since 1962. The Committee found certain documents to be the most useful in tracing important manpower R&D program decisions, including:

- annual plans, including working papers by office staff members that contributed to the annual planning process, and corresponding budget material.

- official files kept for individual OMRD-funded projects, including project proposals, contract and grant material, progress reports, and utilization notes and plans.

- minutes of advisory or coordinating group meetings, including, for example, those of the MA's Coordinating Committee for Manpower Research.

Data Collection and Analysis Concerning Past OMRD Projects and Expenditures

Since there is no integrated system within the Manpower Administration for maintaining substantive and financial information on R&D projects, a number of data sources were searched by Committee staff. Primary sources included: project files (containing contract or grant documents and, often, project proposals and project reports); ledgers maintained by OMRD's Operational Control and Special Grants Division; a card file of project-by-project cumulative allocations maintained by the Contract Management and Review Service unit for OPER; final project reports submitted by contractors and grantees; expenditure records maintained by the Manpower Administration's Division of Finance; and OMRD's annual *R&D Projects Book*. Secondary sources consulted were: listings of ongoing projects prepared by OMRD for internal management purposes; one-page summary sheets of (primarily E&D) projects, also prepared as internal documents; and unofficial summaries or listings maintained by individual OMRD project officers.

An attempt was made to verify financial data in at least two primary sources. This proved possible for all but some fiscal 1963 and fiscal 1966

projects; data for these were confirmed by at least two secondary sources. Substantive data (e.g., topical coverage) were obtained wherever possible from the *Projects Book* or, in the case of early E&D activities, internal one-page summaries. Actual project reports were used to verify and supplement those sources. In instances where written materials were unclear or contradictory on particular points, OMRD staff were consulted. Standard references such as *American Men and Women of Science* and the *National Faculty Directory* were used to confirm each principal investigator's discipline or field.

Data were collected between January and June, 1974. For projects still in progress at the end of that period, OMRD estimates of final costs were used. A comparison of data for fiscal 1973 projects (most of those continuing activities) with data for projects initiated in earlier years shows little variation in expenditures.

Projects involving multiple contracts (or grants) with the same performer engaged for continuation of essentially the same work were considered a single effort. Similarly, brief (six months or less) feasibility studies that led to more extensive projects were not counted separately, but as part of the larger effort. The categories employed in analyzing the data were developed by Committee staff in consultation with Committee members, staff of the Assembly of Behavioral and Social Sciences, and OMRD personnel.

Special Materials Provided by OMRD

OMRD kept the Committee informed of its past and continuing activities by providing a range of additional material, such as up-to-date copies of the Office's *R&D Projects Book*. Two such items were especially helpful: a paper, *Program of the Office of Research and Development*, prepared by Dr. Howard Rosen, OMRD's Director, and presented to the Committee at its initial meeting in June 1973; and a second paper by Dr. Rosen, *Utilization of Manpower R&D*, presented in January 1974 at a Seminar on Manpower and Social and Economic Policy held in Tucson, Arizona, and made available to the Committee.

In addition, Dr. Rosen, his immediate deputies (first, Mr. Seymour Brandwein and later Mr. Herman Travis), and other members of the OMRD staff were a constant source of assistance. Their attendance and frank contributions at several early Committee meetings helped familiarize Committee members with OMRD's activities and problems and their comments, whenever requested, were essential ingredients in producing an accurate and detailed account of OMRD operations.

Observation

OMRD officials and staff took considerable initiative in inviting or arranging for Committee members and staff to attend as observers a number of different kinds of meetings: preliminary discussions between OMRD and potential performers regarding particular projects; R&D program planning and budget review sessions; utilization strategy meetings; and meetings of advisory groups for the manpower R&D program.

Conference of R&D Office Directors

The Committee sought to determine whether the OMRD experience--and particularly the terms and conditions of its existence in a federal department--was common to other government offices operating behavioral and social sciences R&D programs. In a one-day conference, representatives of ten such offices were invited to discuss their operations with several Committee members in terms of relationships with other units and with policy echelons within their home organizations; program administration, including consideration of office structure, the requirements of intramural and extramural support, and office-contractor relationships; sources for R&D project ideas; formal and informal planning processes; performer selection procedures. The offices represented at the conference were:

Research and Demonstration Branch
Bureau of Occupational and Adult Education
Office of Education

Office of the Assistant Secretary for Research and Demonstration
Department of Housing and Urban Development

Office of External Research
Department of State

Social Processes Technical Area
U.S. Army, Research Institute for the Behavioral and Social Sciences

Career Education Program
National Institute of Education

Office of Population
Agency for International Development

Directorate of Life Sciences
U.S. Air Force Office of Scientific Research

Human Resources Research Office
Advanced Research Projects Agency
Department of Defense

Office of Manpower Program Evaluation
Department of Labor

Office of Manpower Research and Development
Department of Labor

A transcript and a summary of this meeting were made available to the Committee.

Previous Assessments of OMRD Activities

The Committee drew substantially on several previous examinations of manpower R&D program activities:

Advisory Committee on the Assessment of Experimental Manpower R&D Laboratories. *The Experimental Manpower Laboratory as an R&D Capability.* (Washington, DC: National Academy of Sciences, 1974).

Sar A. Levitan. *An Assessment of the Manpower Institutional Grants Program.* (Washington, DC: National Manpower Policy Task Force, 1972).

Garth L. Mangum. "Manpower Research and Manpower Policy," in *A Review of Industrial Relations Research,* vol. 2. (Madison, WI: Industrial Relations Research Association, 1971, pp. 61-124).

F. Ray Marshall, "Research and Development: Innovations in Manpower Policy," in Seymour L. Wolfbein, ed., *Manpower Policy: Perspectives and Prospects.* (Philadelphia, PA: Temple University, School of Business Administration, 1973).

The W. E. Upjohn Institute for Employment Research. *The Experimental and Demonstration Program of the U. S. Department of Labor.* (Washington, DC: The W. E. Upjohn Institute for Employment Research, 1966).

General Materials

Following are general sources of information that the Committee found useful:

Advisory Committee for Assessment of University Based Institutes for Research on Poverty. *Policy and Program Research in a University Setting: A Case Study.* (Washington, DC: National Academy of Sciences, 1971).

Advisory Committee on the Management of Behavioral Science Research in the Department of Defense. *Behavioral and Social Science Research in the Department of Defense: A Framework for Management.* (Washington, DC: National Academy of Sciences, 1971).

Ivar Berg. *Education and Jobs: The Great Training Robbery.* (New York: Beacon Press, 1969).

Neil W. Chamberlain. *A Decade of Industrial Relations Research.* reprint of 1958 ed. (Ann Arbor, MI: University Microfilms, 1966).

Henry David. *Manpower Policies for a Democratic Society: The Final Statement of the Council.* National Manpower Council. (New York: Columbia University Press, 1965).

Herbert Heneman. *Employment Relations Research Studies.* reprint of 1960 ed. (Ann Arbor, MI: University Microfilms, 1966).

Miriam Johnson. *Counter Point: The Changing Employment Service.* (Salt Lake City, UT: Olympus Publishing Co., 1973).

Sar A. Levitan and Garth L. Mangum. *Making Sense of Federal Manpower Policy*, 2d ed. Policy Paper in Human Resources and Industrial Relations No. 2. (Ann Arbor, MI: Institute of Labor and Industrial Relations, 1967).

Sar A. Levitan, Garth L. Mangum, and F. Ray Marshall. *Human Resources and Labor Markets.* (New York: Harper & Row, 1972).

Sar A. Levitan and Irving H. Seigel, eds. *Dimensions of Manpower Policy: Programs and Research.* (Baltimore: The Johns Hopkins Press, 1966).

Gene M. Lyons. *The Uneasy Partnership: Social Science and the Federal Government in the Twentieth Century.* (New York: Russell Sage Foundation, 1969).

Garth L. Mangum. *MDTA: Foundations of Federal Manpower Policy.* (Baltimore: The Johns Hopkins Press, 1968).

Charles A. Myers. *The Role of the Private Sector in Manpower Development.* Policy Studies in Employment and Welfare No. 10. (Baltimore: The Johns Hopkins Press, 1971).

Richard P. Nathan. *Jobs and Civil Rights: The Role of the Federal Government in Promoting Equal Opportunity in Employment and Training.* (Washington, DC: Civil Rights Commission, 1969).

National Commission on Technology, Automation, and Economic Progress. *Technology and the American Economy.* (Washington, DC: National Commission on Technology, Automation, and Economic Progress, 1966).

National Manpower Advisory Committee. *Federal Manpower Policy in Transition: National Manpower Advisory Committee Letters to the Secretaries of Labor and Health, Education, and Welfare, 1972-1973.* (Washington, DC: U. S. Department of Labor, Manpower Administration, 1974).

National Manpower Advisory Committee. *Manpower Advice for Government: National Manpower Advisory Committee Letters to the Secretaries of Labor and of Health, Education, and Welfare, 1962-1971).* (Washington, DC: U. S. Department of Labor, Manpower Administration, 1972).

Alice Rivlin, *Systematic Thinking for Social Action.* (Washington, DC: The Brookings Institution, 1971).

Peter H. Rossi and Walter Williams, eds. *Evaluating Social Programs: Theory, Practice, and Politics.* (New York: Academic Press, 1972).

Gerald G. Somers, ed. *The Next Twenty-Five Years of Industrial Relations.* (Madison, WI: Industrial Relations Research Association, 1973).

Special Commission on the Social Sciences of the National Science Board, National Science Foundation. *Knowledge into Action: Improving the Nation's Use of the Social Sciences.* (Washington, DC: National Science Foundation, 1969).

Lloyd Ulman. *Manpower Programs in the Policy Mix.* (Baltimore: The Johns Hopkins Press, 1973).

U. S. Department of Health, Education, and Welfare, Office of Education. *Educational Research and Development in the United States.* (Washington, DC: U. S. Department of Health, Education, and Welfare, 1970).

U. S. Department of Labor, Manpower Administration. *Manpower Report of the President.* (Washington, DC: U. S. Department of Labor, 1963 through 1975).

Walter Williams. *Social Policy Research and Analysis: The Experience of the Federal Social Agencies.* (New York: American Elsevier, 1971).

Seymour L. Wolfbein. *Employment, Unemployment, and Public Policy.* (New York: Peter Smith, 1965).

Seymour L. Wolfbein, ed. *Manpower Policy: Perspectives and Prospects.* Paper on the occasion of the tenth anniversary of the Manpower Development and Training Act of 1962. (Philadelphia, PA: Temple University, School of Business Administration, 1973).

REFERENCES

Work done under a contract with the U. S. Department of Labor Manpower Administration is indicated by a contract number.

NTIS numbers indicate availability from the National Technical Information Service, Operations Division, 5285 Port Royal Road, Springfield, VA 22151.

An asterisk (*) denotes studies comprising the basic data and analyses resulting from the National Longitudinal Study of Labor Force Behavior (the Parnes Study).

Two asterisks (**) denote examples of analyses prepared by Ohio State University staff in conjunction with the Parnes Study.

Three asterisks (***) denote examples of work using Parnes Study data.

1. Abt Associates, Inc. An Assessment of the Experimental and Demonstration Interstate Program of South Texas Migrants, 1969. 1969. Contract 82-23-70-16 with Abt Associates, Inc. (NTIS PB 199487)
2. Abt Associates, Inc. An Assessment of the Experimental and Demonstration Interstate Program of South Texas Migrants, 1971. 1971. Contract 82-23-70-16 with Abt Associates, Inc. (vol. 1, NTIS PB 204550; vol. 2, NTIS PB 204551; vol. 3, NTIS PB 204552; vol. 4, NTIS PB 211190)
3. Advisory Committee on the Assessment of Experimental Manpower R&D Laboratories. The Experimental Manpower Laboratory as an R&D Capability. Washington, DC: National Academy of Sciences, 1974.
4. Aller, Curtis C., Ramona K. First, Donald Mayall, John Mitchell, and David Roberts. Labor Market Variables Affecting Employment Service Productivity. Berkeley, CA: Center for Applied Manpower Research, 1974.
5. Aller, Curtis C., Donald Mayall, John Mitchell, and David Roberts. An Employment Service Research and Development Strategy. Berkeley, CA: Center for Applied Manpower Research, 1975.
6. Andrisani, Paul. An Empirical Analysis of the Dual Labor Market Theory. Columbus: Ohio State University, Center for Human Resource Research, 1973. (NTIS PB 225528/9AS)
7. Ashenfelter, Orley. Minority Employment Patterns, 1966 (Analysis of Employer Information Report EEO-1). 1968. Contract 81-09-67-13 with W. E. Upjohn Institute for Employment Research. (NTIS PB 180385)
8. Associate Control Research and Analysis, Inc. A Case Study of Certain Casual Labor Patterns in Selected Geographic Areas. 1973. Contract 82-11-72-26 with Associate Control Research and Analysis, Inc.
9. Bachman, Jerald G. and Jerome Johnston. The Transition from High School to Work: The Work Attitudes and Early Occupational Experience of Young Men. 1973. Contract 81-26-72-05 with the University of Michigan Survey Research Center. (NTIS PB 225938/AS)

10. Bain, Trevor. Labor Market Experience of Engineers During Periods of Changing Demand. 1974. Manpower Research Monograph No. 35. Grant 21-36-73-30. (NTIS PB 227220/AS)
11. Barkin, Solomon. Manpower Policy: Economic Policy Instrument and Independent Policy System. Amherst: University of Massachusetts, Labor Relations and Research Center, 1973.
12. Barret, Nancy S. and Richard D. Morgenstern. Why Do Blacks and Women Have High Unemployment Rates? 1974. Grant 91-11-72-40 to The American University. (NTIS)
13. Baum, John F. An Evaluation of an NAB-JOBS Training Program for Disadvantaged Workers. 1973. Doctoral dissertation grant 91-53-70-08 to the University of Wisconsin. (NTIS PB 226792)
14. Becker, Gary. Human Capital. Chicago: University of Chicago Press, 1964.
15. Becker, Joseph M. Guaranteed Income for the Unemployed: The Story of SUB. Baltimore, MD: Johns Hopkins Press, 1968.
16. Black, S. W. and H. H. Kelejian. A Macro Model of the U. S. Labor Market. Econometrica 38(5):712-41, 1970.
17. Bloch, Joseph. The Operation of Severance Pay Plans and Their Implications for Labor Mobility. Bureau of Labor Statistics Bulletin No. 1462. Washington, DC: U. S. Department of Labor, 1966.
18. Bluestone, Barry, William M. Murphy, and Mary Stevenson. Low Wages and the Working Poor. Ann Arbor: University of Michigan, Wayne State University, Institute of Labor and Industrial Relations, 1971.
19. Bolino, August C. Occupational Education as a Source of Economic Growth. 1974. Grant 91-11-72-25 to Catholic University of America. (NTIS PB 214189)
20. Borus, Michael E., John P. Brennan, and Sidney Rosen. A Benefit-Cost Analysis of the Neighborhood Youth Corps: The Out-of-School Program in Indiana. Journal of Human Resources 5(2):139-59, 1970.
21. Bowen, William G. and Aldrich T. Finnegan. The Economics of Labor Force Participation. Princeton, NJ: Princeton University 1967.
22. Brazziel, William F. Factors in Workers' Decisions to Forego Retraining Under the Manpower Development and Training Act. 1964. (NTIS AD 603410)
23. Brecher, Charles. Upgrading Blue-Collar and Service Workers. 1972. Grant 21-36-73-51 to Johns Hopkins University. (NTIS PB 214814)
24. Briggs, Jr., Vernon M. The Houston Labor Market. Negro Employment in the South, vol. 1. 1971. Manpower Research Monograph No. 23. Contract 81-19-68-13 with the University of Kentucky Research Foundation. (NTIS PB 219612)
25. Brown, David. Academic Labor Markets. vol. 2. 1965. (ERIC ED 016135)
26. California Department of Human Resources Development, California State Personnel Board. Report on Job Search Information, Job Market Information, and Manpower Data in the California Department of Human Resources Development. Sacramento: California Department of Human Resources Development, 1972.
27. Cargill, B. F. and G. E. Rossmiller, eds. Fruit and Vegetable Harvest Mechanization. 3 reports. Contract 81-24-68-42 with Michigan State University. (Rural Manpower Report No. 16, 17, 18, Bulletin Office, Agricultural Hall, Michigan State University)

28. Casey, Florence M. Upgrading--Problems and Potentialities: The R&D Experience. Washington, DC: U. S. Department of Labor, Manpower Administration, 1975. Manpower R&D Monograph No. 40.
29. Cayton, Paul W. and Norma B. Brewer. Individualized Reading Instructional System (IRIS). 1973. Grant 21-01-73-38 to Rehabilitation Research Foundation. (NTIS PB 236431)
30. Choldin, Harvey M. and Grafton D. Trout. Mexican Americans in Transition, Migration and Employment in Michigan Cities. 1970. Contract 81-24-66-32 with Michigan State University. (NTIS PB 199901)
31. Clarke, John. Upward Mobility for the Underemployed Worker. 1971. Contract 82-34-70-04 with Information Science Corp. (NTIS PB 201148)
32. Cobern, Morris. The Family Assistance Plan: Its Impact on the State Employment Service. 1970. (NTIS PB 197366)
33. Cobern, Morris. Manpower Needs in State and Local Public Safety Activities: The Impact of Federal Programs. 1971. (NTIS PB 200292)
34. Cohen, Eli E. Career Mobility for Paraprofessionals in Human Service Agencies. 1969. Contract 92-34-69-08 with National Committee on Employment of Youth, New York. (NTIS PB 199497; MA-MDTA Experimental and Demonstration Findings No. 8)
35. Cohen, Malcolm S. On the Feasibility of a Labor Market Information System. 3 vols. Contract 71-24-70-02 with University of Michigan, Wayne State University, Institute of Labor and Industrial Relations. (NTIS PB 236259/AS, 236260/AS, 236261/AS)
36. Cohen, Malcolm S., Samuel A. Rea, Jr., and Robert I. Lerman. A Micro-Model of Labor Supply. Bureau of Labor Statistics Staff Paper No. 4. Washington, DC: U. S. Department of Labor, 1970.
37. Commonwealth of Puerto Rico, Department of Labor, Migrant Division. Final Report on the Puerto Rican Migrant Relocation Project. San Juan: Commonwealth of Puerto Rico, 1969.
38. Conference on Upgrading and New Careers. Proceedings of conference. National Manpower Policy Task Force, Washington, DC, March 20, 1970.
39. Cook, Phillip J. and Robert H. Frank. The Inflationary Effects of Public Service Employment. Berkeley: University of California, Institute of Industrial Relations, 1971.
40. Craft, James A. Public Service Jobs and Transitional Employment: The Vermont Experience and Demonstration Project. Pittsburgh, PA: University of Pittsburgh, Graduate School of Business, 1974. Grant 92-42-72-29.
41. Crosslin, Robert L. Asking Wage Behavior of Unemployed Workers: An Empirical Investigation. 1973. Doctoral dissertation grant 91-29-72-41 to University of Missouri. (NTIS PB 222019)
42. Daicoff, Darwin W. Construction Labor Market Information System: Kansas City SMSA. 3 vols. Kansas City, MO: Midwest Research Institute, 1973.
43. Davis, Harry E. Pension Provisions Affecting the Employment of Older Workers. Monthly Labor Review 96(4):41-45, 1973.
**44. Davis, Joseph M. Impact of Health on Earnings and Labor Market Activity. Monthly Labor Review 95:46-49, 1972. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research.

45. Derryck, Dennis A. Improving the Retention Rate of Indentured Apprentices Placed by Apprenticeship Outreach Programs. 1973. Contract 82-25-71-36 with Brandeis University. (NTIS PB 221245)

46. Diamond, Daniel E. and Hrach Bedrosian. Industry Hiring Practices and the Employment of Disadvantaged Groups. Contract 81-34-66-25 with New York University, School of Commerce, 1970.

47. DiNunzio, Michael A. Aerospace Employment Project, Finding New Careers in Local Government for Unemployed Engineers and Scientists, Final Report. 1972. Contract 82-11-71-22 with League of Cities--Conference of Mayors, Inc. (NTIS PB 213670)

48. Doeringer, Peter B. Explorations in Low Pay, Collective Bargaining and Economic Mobility. Cambridge, MA: Harvard University, John F. Kennedy School of Government, 1973.

49. Doeringer, Peter B. and Michael J. Piore. Internal Labor Markets and Manpower Analysis. Cambridge, MA: Lexington-Heath Books, 1971.

50. Dorkin, Murray and Herman S. Solomon. Project Spruce: Special Program of Rehabilitation for Unemployment Insurance Exhaustees. 2 vols. 1973. Contract 82-34-69-45 with New York State Department of Labor. (NTIS 224011/AS)

51. Dow, J. Kamal. Historical Perspective of the Florida Citrus Industry and the Impact of Mechanical Harvesting on the Demand for Labor. 1970. Contract 81-10-68-34 with University of Florida.

52. Drotning, John E., David B. Lipsky, and Myron D. Fottler. Jobs, Education, and Training: Research ot a Project Combining On-the-Job and Literacy Training for the Disadvantaged, Final Report. 1972. Contract 41-9-002-34 with Research Foundation of the State University of New York at Buffalo. (NTIS PB 211181)

53. Dunning, Bruce B. and James L. Unger. Schools' Responses to Vouchered Vocational Training: Experiences With the Portland WIN Voucher Training Program. 1975. BSSR: 538. Grants 15-11-73-02, 51-41-74-01 to Bureau of Social Science Research, Washington, DC.

54. Eckerman, William C., Eva K. Gerstel, and Richard B. Williams. A Comprehensive Assessment of the Problems and Characteristics of the Neighborhood Youth Corps Enrollees: A Pilot Investigation. 1968. Contract 81-35-67-01 with Research Triangle Institute.

55. Eckman, Bruce K. A Three-Part Study of the Effectiveness of Monetary Incentives on the Acquisition of Remedial English Skills by Disadvantaged Trainees. 1972. Contract 42-36-73-02 with Mobilization for Youth, Inc. (NTIS PB 213879)

56. Edwards, Richard C., David M. Gordon, and Michael Reich. Labor Market Segmentation: A Research Report to the U. S. Department of Labor. 1973. Grant 21-25-73-18 to Harvard University, Center for Educational Policy Research. (NTIS PB 221991)

**57. Egge, Karl A., Andrew I. Kohen, John R. Shea, and Frederick A. Zeller. Changes in the Federal Minimum Wage and the Employment of Young Men, 1966-67. In Youth Unemployment and Minimum Wages. Washington, DC: U. S. Department of Labor, 1970. Bureau of Labor Statistics Bulletin 1657. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research.

58. Ehrenberg, Ronald G. An Economic Analysis of Municipal Government Employment and Wages. 1973. Grant 91-25-73-09 to University of Massachusetts, Department of Economics. (NTIS PB 225073)

59. Evaluation Technology Corporation. NYC Goes to a Community College, 1970. 1970. Contracts 42-9-003-05, 42-0-001-05 with Evaluation Technology Corporation. (NTIS PB 202932)

60. Evaluation Technology Corporation. Summer NYC Goes to a Community College, 1971. 1971. Contracts 42-9-003-05, 42-0-001-05 with Evaluation Technology Corporation. (NTIS PB 202931)

**61. Faulk, Diane Rochelle Chappelle. Job Expectations and Unemployment Among Young Women with Work Experience. 1973. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research. (NTIS PB 222738)

62. Feldman, Penny H., David M. Gordon, Michael Reich, and Peter B. Doeringer, eds. Low-Income Labor Markets and Urban Manpower Programs: A Critical Assessment. 1969. Grants 91-23-68-06, 91-23-68-50 to Harvard University. (NTIS PB 192484)

63. Ferman, Louis A. The Negro and Equal Employment Opportunities: A Review of Management Experience in Twenty Companies. 1966. (NTIS PB 176721; ERIC ED 015308)

64. Ferman, Louis A. and Joe A. Miller. Welfare Careers and Low-Wage Employment. 1972. Contract 51-24-69-05 with University of Michigan, Wayne State University, Institute of Labor and Industrial Relations. (NTIS PB 221197)

65. Fichter, Joseph H. Graduates of Predominantly Negro Colleges, Class of 1964. 1967. (MDTA 22-64; Public Health Service Publication 1571)

66. Fine, Sidney A. The Feasibility of a Direct Method of Obtaining Manpower Demand Data. 1968. Contract 81-09-67-22 with Upjohn Institute for Employment Research. (NTIS PB 182146)

***67. Flanagan, Robert J. Discrimination Theory, Labor Turnover, and Racial Unemployment Differentials. Labor Force Experience, Job Turnover, and Racial Wage Differentials. In Robert J. Flanagan, ed., Labor Turnover, Racial Unemployment Differentials, and the Dual Market Hypothesis. Chicago: University of Chicago, Graduate School of Business, 1974.

68. Fleisher, Belton M., Donald O. Parsons, and Richard D. Porter. Dynamic Analysis of the Labor Force Behavior of Men and Youth. 1972. Grant 91-39-71-48 to Ohio State University.

69. Foltman, Feliciana F. Apprenticeship Training in the 1970's: Report of A Conference. Washington, DC: U. S. Department of Labor, 1974. Manpower Research Monograph No. 37.

70. Fox, Andrew, W. Theodore May, and Paul L. Schwartz. Black Teenage Girl Project in School Neighborhood Youth Corps. Memphis, TN: Memphis Board of Education, 1974.

71. Franke, Walter H. and Irwin Sobel. The Shortage of Skilled and Technical Workers: An Inquiry into Selected Occupations in Short Supply. 1968. Contract MDTA 5-64 with the University of Illinois. (NTIS PB 180367)

72. Franklin, David S. A Longitudinal Study of WIN Dropouts: Program and Policy Implications. 1973. Contract 51-05-70-05 with University of Southern California. (NTIS PB 212033)

73. Freeman, Marcia. Good Jobs, Poor Jobs: The Search for Shelter. (To be published) Grant 21-36-73-51 to Columbia University.
74. Freeman, Richard B. Engineers and Scientists in the Industrial Economy. 1971. Contract 81-23-68-37 with Harvard University.
75. Friedlander, Stanley L. Unemployment in the Urban Core: An Analysis of Thirty Cities with Policy Recommendations. New York: Praeger Pubs., 1972. Contract 81-34-68-44.
76. Friedman, Lucy N. First Annual Research Report on Supported Employment. 1973. Grant 92-36-72-12 to Vera Institute of Justice, New York.
77. Fuller, Varden. Rural Worker Adjustment to Urban Life: An Assessment of the Research. 1970. Policy Paper in Human Resources and Industrial Relations, No. 15. Contract 81-09-66-31 with University of Michigan, Wayne State University, Institute of Labor and Industrial Relations.
78. Garcia, Fred A. Final Report on the Analysis of Impact of Utilization by Regular Manpower Agencies of E&D Developed Basic Occupational Language Training (BOLT) Program. 1973. Contract 20-11-73-02 with Development Associates, Inc., Washington, DC.
79. Garvin, Charles D. Incentives and Disincentives to Participation in the Work Incentive Program. 1974. Contract 51-24-69-10 with University of Michigan, School of Social Work. (NTIS PB 231585)
80. Gilpatrick, Eleanor G. and Paul K. Corliss. Health Services Mobility Study, Final Report for the Period October 1967 to March 1972. 1973. Contract 82-34-69-34 with the Research Foundation of the City University of New York. (NTIS PB 210912)
81. Gilpatrick, Eleanor G. and Paul K. Corliss. The Occupational Structure of New York City Municipal Hospitals. 1971. Health Services Mobility Study, Research Report 2. Contract 82-34-69-34 with the Research Foundation of the City University of New York.
82. Ginzberg, Eli. The Manpower Effects of Diverse Governmental Policies. In Seymour Wolfbein, ed. Manpower Policy: Perspectives and Prospects. Philadelphia, PA: Temple University, School of Business Administration, 1973.
83. Goldenberg, I. Ira. Employment and Addiction: Perspectives on Existing Business and Treatment Practices. 1972. Grant 92-25-71-05 to Harvard University. (NTIS PB 211650)
84. Goldstein, Harold M., Morris A. Horowitz, and Kathleen A. Calore. Improving the Utilization of Health Manpower--Two Year Report. 1974. Grant 42-25-72-10 to Northeastern University, Department of Economics, Center for Medical Manpower Studies.
85. Goodwin, Leonard H. Conference on Manpower Services for the Welfare Poor: Summary of Findings and Discussion. 1972. Contract 51-11-72-01 with The Brookings Institution. (NTIS PB 210334)
86. Goodwin, Leonard H. A Study of the Work Orientations of Welfare Recipients Participating in the Work Incentive Program. 1971. Contract 51-09-69-02 with The Brookings Institution. (NTIS PB 202812)
87. Gordon, Margaret S. and Margaret Thal-Larsen. Employer Policies in a Changing Labor Market--Report of the San Francisco Bay Area Employer Policy Survey. 1969. Contract 81-05-67-24 with University of California, Institute of Industrial Relations. (NTIS PB 188051)

88. Granovetter, Mark S. Getting a Job, A Study of Contacts and Careers. Cambridge, MA: Harvard University Press, 1974.

89. Greenfield, Harry I. Allied Health Manpower: Trends and Prospects. New York: Columbia University Press, 1969. Contract 81-34-67-25.

90. Greenleigh Associates, Inc. The Employer Services Improvement Program, A Year of Action (Report of Implementation in Ten States). New York: Greenleigh Associates, Inc., 1974. Contract GA1 with Illinois Bureau of Employment Security acting on behalf of the Manpower Administration, U. S. Department of Labor.

91. Gurin, Gerald. A National Attitude Study of Trainees in MDTA Institutional Programs. 1968. Contract MDTA 17-63 with University of Michigan. (NTIS PB 193723)

***92. Hall, Robert E. and Richard A. Kasten. The Relative Occupational Success of Blacks and Whites. Brookings Papers on Economic Activity 3:781-97, 1973.

93. Hardin, Einar and Michael E. Borus. Retraining Courses: Economic Costs and Benefits. Lexington, MA: D. C. Heath and Company, 1971. Contract MDTA 9-63 with Michigan State University. (NTIS PB 189116)

94. Harrison, Bennett. Employment of Ghetto Residents: Three Studies on Employment Policy for the Urban Ghetto. 1972. Contract 91-11-71-05 with National Civil Service League. (NTIS PB 211205)

95. Harrison, Bennett. Ghetto Economic Development: A Survey. Journal of Economic Literature 12(1):1-37, 1974.

96. Helfand, Abe and Irwin Feifer. Problems of the Disadvantaged in Test Taking. 1970. Contract 42-36-73-02 with Mobilization for Youth, Inc. (NTIS PB 199431)

97. Heneman, Jr. Herbert G. and George Seltzer. Employer Manpower Planning and Forecasting. 1970. Manpower Research Monograph No. 19. Grant 91-25-67-10 to University of Minnesota. (NTIS PB 179078)

98. Hiestand, Dale L. Discrimination in Employment. 1970. Policy Paper 16. Contract 81-09-66-31 with National Manpower Policy Task Force. (University of Michigan, Wayne State University, Institute of Labor and Industrial Relations)

99. Hiestand, Dale L. Economic Growth and Employment Opportunities for Minorities. 1964. Contracts MDTA 13-63, 81-34-67-25 with Columbia University.

100. Holt, Charles C. Labor Market Improvement and Economic Trade-Offs. Washington, DC: U. S. Department of Labor, 1974. Grant 92-11-72-36 to The Urban Institute.

101. Holt, Charles C. Manpower Policies to Reduce Inflation and Unemployment. In Lloyd Ulman, ed. Manpower Programs in the Policy Mix. Baltimore, MD: Johns Hopkins University Press, 1973.

102. Holt, Charles C. Modeling a Segmented Labor Market. Unpublished working paper 350-63, The Urban Institute, Washington, DC, 1974. Grant 92-11-72-36 to The Urban Institute.

103. Holt, Charles C. The Potential Impact of the Employment Service on the Economy. Unpublished working paper 350-59, The Urban Institute, Washington, DC, 1973. Grant 92-11-72-36 to The Urban Institute.

104. Holt, Charles C., C. Duncan MacRae, and Stuart O. Schweitzer. Manpower Policies to Reduce Inflation and Unemployment. Washington, DC: The Urban Institute, 1973. Urban Institute Report 139-350-39. Grant 92-11-72-36 to The Urban Institute.

105. Holt, Charles C., Ralph E. Smith, Richard S. Toikka, William J. Scanlon, Jean E. Vanski. Labor Market Inflation and Manpower Policy. 1975. Grant 92-11-72-36 to The Urban Institute.

106. Horowitz, Morris A., Harold M. Goldstein, and Nadine Rowan. Hiring Standards for Paramedical Manpower. 1968. Grant 91-23-67-57 to Northeastern University, Department of Economics. (NTIS PB 179846)

107. Howard University, Institute for Youth Studies. New Careers for the Disadvantaged in Human Service (An Innovative Work-Training Effort Combining Social Rehabilitation and Occupational Change). 1970. Contract 82-08-43 with Howard University. (NTIS PB 199127; MA-MDTA Experimental and Demonstration Findings No. 9)

108. Huff, H. Pope. Relocating the Unemployed: Evaluation and Policy Implications for a National Program. 1973. Contract 82-26-70-12 with Systematic Training and Redevelopment (STAR), Jackson, MS. (NTIS PB 237930)

109. Illinois Bureau of Employment Security, Human Services Manpower Career Center. Manpower for the Human Services: Report 5: Community Organizations for Allied Health Manpower. 1971. Contract 82-15-70-22 with and grant 92-15-69-22 to Illinois Bureau of Employment Security. (NTIS PB 209207)

110. Jewish Employment and Vocational Service. Work Samples: Signposts on the Road to Occupational Choice (Real Job Tasks to Assess Potential of the Disadvantaged). 1968. Contract 82-40-67-40 with Jewish Employment and Vocational Service, Philadelphia, PA. (NTIS PB 201966)

111. JOBS NOW. Coaching in a Manpower Project. 1972. Contract 82-15-68-08 with JOBS NOW (the YMCA of Metropolitan Chicago). (NTIS PB 204301)

112. JOBS NOW. Final Report for Phase 1, Second Year (Hire Now, Train Later Program Emphasizing Orientation, Coaching, and Employer Involvement). 1968. Contract 82-15-68-08 with JOBS NOW (the YMCA of Metropolitan Chicago). (NTIS PB 199436)

113. Jobs for Progress, Inc. Operation SER, Final Report of Jobs for Progress, Inc. 1970. Contract 82-46-66-53 with Jobs for Progress, Inc., Santa Monica, CA. (NTIS PB 199510)

114. Jones, Ethel B. A Feasibility Study to Identify the Underemployed and to Examine the Labor Market Attachment of Labor Force Non Participants in a Low-Income Area. 1967. Grant 91-11-66-46 to University of Georgia. (NTIS PB 177559; ERIC MP 000531)

115. Joseph, Myron L. Feasibility Study for Research on Public Utility Internal Labor Market. 1973. Grant 92-42-72-34 to Carnegie-Mellon University.

116. Kesselman, Jonathan. Labor-Supply Effects of Income, Income-Work, and Wage Subsidies. Journal of Human Resources 4(3):275-92, 1972.

117. Kidder, David E. and Alice E. Kidder. Negro and White Perception of Company Employment Policy in the South. 1971. Grant 91-11-69-33 to Atlanta University, Atlanta, GA. (NTIS PB 201290)

**118. Kim, Sookon. Cross-Substitution Between Husband and Wife as One of the Factors Determining the Number of Hours of Labor Supplied by Married Women. 1972. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research. (NTIS PB 211648)

119. King, Allan G. and Nancy Lee. A Pilot Project to Overcome Barriers to Employment of Minority Women in White Collar Jobs. Austin: University of Texas, Center for the Study of Human Resources, 1974.

120. Kirsh, Arthur W. and Donald D. Cooke. Upgrading the Labor Force: Problems and Possibilities. New York: E. F. Shelley and Company, Inc., 1971. Contract 82-34-70-26. (NTIS PB 199153)

121. Klausner, Samuel Z. The Work Incentive Program: Making Adults Economically Independent. 1972. Contract 51-40-69-01 with University of Pennsylvania. (vol. 1, NTIS 220204; vol. 2, NTIS 220205)

**122. Kohen, Andrew I. Determinants of Labor Market Success Among Young Men: Race, Ability, Quantity, and Quality of Schooling. 1973. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research. (NTIS PB 208638)

*123. Kohen, Andrew I. with the assistance of Paul Andrisani. Career Thresholds: A Longitudinal Study of the Educational and Labor Market Experience of Male Youth. vol. 4 (1969 survey). 1974. Manpower Research Monograph No. 16. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research. (NTIS PB 220734)

*124. Kohen, Andrew I. and Herbert S. Parnes. Career Thresholds: A Longitudinal Study of the Educational and Labor Market Experience of Male Youth. vol. 3 (1968 survey). 1971. Manpower Research Monograph No. 16. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research. (NTIS PB 201287)

**125. Kohen, Andrew I., Herbert S. Parnes, and John R. Shea. Income Stability Among Young and Middle-Aged Men. In James Smith, ed. The Personal Distribution of Income and Wealth. 1974. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research.

126. Koziara, Karen S. Labor Force Nonparticipation of Males in Urban Poor Areas. 1969. Grant 91-40-68-08 to Temple University. (NTIS PB 183538)

127. Kraft, David. San Jose Residential Manpower Center Drug Project. 1974. Memorandum of agreement 82-11-71-14 with the U. S. Department of Labor, Job Corps Health Unit.

128. Kreps, Juanita. Sex in the Marketplace: American Women at Work. Baltimore: Johns Hopkins Press, 1971. Contract 81-09-66-31 with the National Manpower Policy Task Force.

129. Lachman, Sheldon L. and Benjamin D. Singer. The Detroit Riot of July 1967--A Psychological, Social, and Economic Profile of 500 Arrestees. 1968. Contract 81-24-68-03 with the Behavior Research Institute. (NTIS PB 178035; ERIC MP 000559)

130. Landay, Donald. Labor Mobility and Private Pension Plans--A Study of Vesting, Early Retirement, and Portability Provisions. 1964. U. S. Department of Labor, Bureau of Labor Statistics Bulletin 1407. (MDTA 1-63B)

131. Lecht, Leonard A. Manpower Needs for National Goals in the 1970's. New York: Praeger Pubs., 1969.

132. Lecht, Leonard A. Poor Persons in the Labor Force: A Universe of Need. 1970. Contract 81-09-68-36 with National Planning Association, Center for Priority Analysis. (NTIS PB 196742)

133. Lecht, Leonard A. Priorities for Research in Anticipating State-Local Government Employment Resulting from the Federal Grants-in-Aid System. 1972. Contract 81-09-70-16 with National Planning Association. (NTIS PB 211440)

134. Lecht, Leonard A. and Morris Cobern. Utilizing Persons with Engineering Backgrounds in the Health Related Industries. 1972. Contract 81-09-70-16 with National Planning Association. (NTIS PB 211439)

135. Legal Resources, Inc. Opportunities Industrialization Centers: A Synthesis and Analysis of Fifteen OIC Final Reports. 1969. Contract 82-09-69-27 with Legal Resources, Inc., Washington, DC. (NTIS PB 199551)

136. Leiberg, Leon. Project Crossroads (Pre-Trial Intervention with First Offenders), A Final Report. 1969. Contract 82-34-68-15 with National Committee for Children and Youth, Washington, DC. (NTIS PB 199131)

137. Leiter, Sarah F. Training and Employment of the Older Worker: Recent Findings and Recommendations Based on Older Worker Experimental and Demonstration Projects. 1969. Contract 82-22-67-41. (NTIS PB 202482)

138. Lennihan, Kenneth J. The Financial Resources of Released Prisoners. 1974. Bureau of Social Science Research: 531. Contract 82-11-71-45 with Bureau of Social Science Research, Inc.

139. Levine, Louis. Labor Market Information for Local Delivery of Manpower Services. 1972. Contract 71-11-72-05. (NTIS PB 221314)

140. Levine, Louis and Raymond Erhle. Program Innovation in the Employment Service. University Park: Pennsylvania State University, Institute for Research on Human Resources, 1968.

141. Levitan, Sar A. An Assessment of the Manpower Institutional Grants Program. 1972. Contract 82-11-72-17 with National Manpower Policy Task Force. (NTIS PB 211638)

142. Lineham, Jean D. A Chance to Get Ahead: Proficiency Examinations for Clinical Laboratory Personnel. 1974. Contract 82-22-70-35 with National Committee for Careers in the Medical Laboratory and the Educational Testing Service, Princeton. (NTIS PB 236178)

143. Lorber, Fred. Fulfilling the Potential of NYC-2. Six Monographs: Using Government Agencies for Training the Disadvantaged for Employment in the Public and Private Sectors; Preventive Phonetics for Teaching English Pronunciation to Spanish-Speaking Trainees; A Study of Three Major Textbooks Which Use the Audiolingual Method for Teaching English as a Second Language; Operating a Public Service Business as a Neighborhood Youth Corps Training Site: Overenrollment Problems in a Manpower Training Program; and Guidelines in the Utilization of Training Incentives. 1972. Contract 42-36-73-02 with Mobilization for Youth, Inc., New York. (NTIS PB 211814)

144. MacRae, C. Duncan and Stuart O. Schweitzer. The Relation Between Vacancies and Unemployment. Unpublished working paper 350-42, The Urban Institute, Washington, DC, 1973. Grant 92-11-72-36 to The Urban Institute.

145. MacRae, C. Duncan and Stuart O. Schweitzer. Wage Inflation and the Dispersion of Unemployment. Unpublished working paper 350-50, The Urban Institute, Washington, DC, 1973. Grant 92-11-72-36 to The Urban Institute.

146. Mandell, Wallace. Retraining Problem Drinkers on the Job. 1974. Grant 21-24-73-23 to Johns Hopkins University, School of Hygiene and Public Health.

147. Manpower Science Services, Inc. Role Modeling, Role Playing: A Manual for Vocational Development and Employment Agencies. 1970. Contract 82-24-68-34 with Manpower Science Services, Inc., Ann Arbor, MI. (NTIS PB 199840)

148. Markowitz, Edward A., Daniel Quinn Mills, and John T. Dunlop. A Feasibility Study of a Computer-Based Manpower Information System for the Construction Industry. 1973. Contract 71-25-71-01 with Joint Center for Urban Studies, Harvard University and Massachusetts Institute of Technology. (NTIS PB 21404)

149. Marshall, F. Ray. The Economics of Racial Discrimination: A Survey. Journal of Economic Literature 12(3):849-71, 1974.

*150. Marshall, F. Ray. Negro Employment in the South. 3 vols. 1972. Contract 81-19-68-13 with University of Kentucky Research Foundation. (NTIS PB 219611)

151. Marshall, F. Ray. Rural Workers in Rural Labor Markets. Salt Lake City, UT: Olympus Publishing Company, 1974. U. S. Office of Economic Opportunity Grant 61202 to University of Texas, Center for the Study of Human Resources.

152. Marshall, F. Ray and Vernon M. Briggs, Jr. The Negro and Apprenticeship. Baltimore, MD: Johns Hopkins Press, 1967. Contract 81-46-66-01 with University of Texas. (NTIS PB 177568)

153. Marshall, F. Ray, William S. Franklin, and Robert W. Glover. A Comparison of Union Construction Workers Who Have Achieved Journeyman Status Through Apprenticeship and Other Means. 1973. Contract 82-48-71-28 with University of Texas, Center for the Study of Human Resources. (NTIS)

154. Mathematica, Inc. A Study of Unemployment Insurance Exhaustees. Contracts 20-34-74-23, 11-34-74-01 with Mathematica, Inc., Princeton, NJ. (Ongoing project--final report not yet available)

155. Matilla, J. Peter. The Impact of Extending Minimum Wages to Private Household Workers. 1971. Grant 91-39-71-44 to Ohio State University Research Foundation. (NTIS PB 204585)

156. McArthur, Virginia A. From Convict to Citizen: Programs for the Woman Offender. 1974. Grant 92-11-72-05 to District of Columbia Commission on the Status of Women. (NTIS PB 236170/AS)

157. McHugh, Paul. The Work Sample: Reality-Based Assessment of Vocational Potential. 1970. Contract 82-34-69-21 with Mobilization for Youth, Inc., New York. (NTIS PB 199474)

158. McKinlay, Bruce. Developing a Career Information System: Final Report. 1974. Contract 82-41-72-03 with Oregon State Board of Education.

159. Miles, Guy and William Henry. An Experimental Program for Ethnic Minority Youth from the Rural Southwest. Minneapolis, MN: North Star Research Institute, 1974.

**160. Miljus, Robert C., Herbert S. Parnes, Donald M. Schmidt, and Ruth S. Spitz. Some Correlates of the Labor Market Status of Male Youth. Pages 47-75 in The Transition from School to Work. Princeton, NJ: Princeton University, Industrial Relations Section, 1968. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research.

161. Miller, Herbert S. The Closed Door: The Effect of a Criminal Record on Employment with State and Local Public Agencies. 1972. Contract 81-09-70-02 with Georgetown University. (NTIS PB 207680)

162. Miller, Paul B. The Role of Farm Labor Market Institutions in the Lower Rio Grande Valley of Texas. 1971. Contract 81-46-68-16 with Texas A & M University. (NTIS PB 218318)

163. Mills, Daniel Quinn. Industrial Relations and Manpower in Construction. Cambridge, MA: Heath Lexington Books, 1972. Contract 81-23-69-17 with Harvard University.

***164. Mincer, Jacob and Solomon Polacheck. Family Investment in Human Capital: Earnings of Women. Paper presented at Population Conference II, Chicago, IL, June 4-5, 1973.

165. Mississippi State University. A Training Manual in Human Resource Development. 1972. Contract 82-26-69-17 with Mississippi State University. (NTIS PB 199482)

166. Moore, Geoffrey H. Measurement and Interpretation of Job Vacancies--A Conference Report of the National Bureau of Economic Research. New York: Columbia University Press, 1966. Contract MDTA 31-64 with National Bureau of Economic Research.

167. Moser, Collette, ed. Labor Market Information in Rural Areas: Proceedings of a Conference February 22-23, 1972. 1972. Grant 21-26-73-52 to Michigan State University, Center for Rural Manpower and Public Affairs. (NTIS PB 218796)

168. Murton, Thomas O., Phyllis Jo Baunach, and Kenneth Demorest. Shared Decision-Making as a Treatment Technique in Prison Management. 1975. Grant 21-27-74-29 to the Murton Foundation for Criminal Justice, Inc., Minneapolis, MN.

169. Myers, John G. Job Vacancies in the Firm and the Labor Market. 1968. Contract 81-34-66-13 with National Industrial Conference Board. (NTIS PB 179864)

170. National Civil Service League. Emergency Action Plan for Public Service Employment. 1971. Contract 82-09-70-24 with National Civil Service League. (NTIS PB 202818)

**171. Nicholson, Edward A. and Roger D. Roderick. Correlates of Job Attitudes Among Young Women. 1973. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research.

172. North Carolina Manpower Development Corporation. Demonstration of Manpower Development Centers in North Carolina Communities. 1972. Contract 82-35-70-01 with North Carolina Manpower Development Corp., Chapel Hill, NC. (vol. 1 NTIS PB 201161; vol. 2 NTIS PB 201162)

173. North, David S. and William G. Weissert. Immigrants and the American Labor Market. 1973. Manpower Research Monograph No. 31. (NTIS PB 221200)

174. Nye, Charles and Patricia Mapp. Women in Apprenticeship--Why Not? Washington, DC: U. S. Department of Labor, 1973. Manpower Research Monograph No. 33.

175. Orth, III, Charles D. and Frederic Jacobs. Demonstration Project to Design, Develop, and Teach a Model Health Care Career Program for the Neighborhood Youth Corps. Boston, MA: Career Development International, Inc., 1973.

*176. Parnes, Herbert S. The National Longitudinal Surveys Handbook. 1973. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research.

*177. Parnes, Herbert S., Karl A. Egge, Andrew I. Kohen, and Ronald M. Schmidt. The Pre-Retirement Years: A Longitudinal Study of the Labor Market Experience of Men. vol. 2 (1967 survey). Washington, DC: U. S. Department of Labor, Manpower Administration, 1970. Manpower Research Monograph No. 15. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research.

*178. Parnes, Herbert S., Belton M. Fleisher, Robert C. Miljus, and Ruth S. Spitz. The Pre-Retirement Years: A Longitudinal Study of the Labor Market Experience of Men. vol. 1 (1966 survey). Washington, DC: U. S. Department of Labor, Manpower Administration, 1970. Manpower Research Monograph No. 15. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research.

**179. Parnes, Herbert S. and Jack A. Meyer. Withdrawal from the Labor Force by Middle-Aged Men, 1966-1967. Pages 63-68 in Gloria Shatto, ed., Employment of the Middle Aged: Papers from Industrial Gerontology Seminars. Springfield, IL: Charles C Thomas Co., 1972. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research.

*180. Parnes, Herbert S., Robert C. Miljus, and Ruth S. Spitz. Career Thresholds: A Longitudinal Study of the Educational and Labor Market Experience of Male Youth. vol. 1 (1966 survey). 1970. Manpower Research Monograph No. 16. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research. (NTIS PB 183539)

*181. Parnes, Herbert S., Gilbert Nestel, and Paul J. Andrisani. The Pre-Retirement Years: A Longitudinal Study of the Labor Market Experience of Men. vol. 3 (1968 and 1969 surveys). Washington, DC: U. S. Department of Labor, Manpower Administration, 1973. Manpower Research Monograph No. 15. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research.

**182. Parnes, Herbert S. and Ruth S. Spitz. A Conceptual Framework for Studying Labor Mobility. Monthly Labor Review 92(11):55-58, 1969. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research.

*183. Parnes, Herbert S., Avril Van Adams, Paul J. Andrisani, Andrew I. Kohen, and Gilbert Nestel. The Pre-Retirement Years: A Longitudinal Study of the Labor Market Experience of Men. vol. 4. Washington, DC: U. S. Department of Labor, Manpower Administration, 1973. Manpower Research Monograph No. 15. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research.

184. Peterson, Gertrude D. An Evaluation of the Concept of Trainee Camps for Unemployed Youth. 1965. Contract 81-04-15 with Stanford Research Institute. (NTIS PB 177326; ERIC ED 015321)

185. Phelps, Edmund S., ed. The Microeconomic Foundations of Employment and Inflation Theory. New York: W. W. Norton Co., 1970.

186. Quinn, Robert P., Graham L. Staines, and Margaret R. McCullough. Job Satisfaction: Is There a Trend? Washington, DC: U. S. Department of Labor, 1974. Manpower Research Monograph No. 30.

187. Reder, Melvin W. Unemployment Among New Labor Market Entrants. Palo Alto, CA: Stanford University, 1969.

188. Richardson, Ann and Laure M. Sharp. The Effect of Vouchered Training in WIN: Report on the First Phase of the Study. 1974. Bureau of Social Science Research: 538. Grants 15-11-73-02, 51-41-74-01 to Bureau of Social Science Research.

*189. Roderick, Roger D. with the assistance of Joseph M. Davis. Years for Decision: A Longitudinal Study of the Educational and Labor Market Experience of Young Women. vol. 2 (1969 survey). 1974. Manpower Research Monograph No. 24. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research. (NTIS PB 220735)

*190. Roderick, Roger D. and Andrew I. Kohen. Years for Decision: A Longitudinal Study of the Educational and Labor Market Experience of Young Women. vol. 3. Manpower Research Monograph No. 24. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research. (NTIS PB 232331)

191. Rogers, David and Roslyn Menzel. Interorganizational Relations and Inner City Manpower Programs. New York: New York University, Graduate School of Business, 1971.

192. Rosen, Hjalmar, Gerald Cooke, and Lynn B. Anderson. On-the-Job Orientation of Unemployed Negro Skill Center Trainees and Their Supervisors. 1970. Contract 81-24-68-35 with Wayne State University. (NTIS PB 192568)

193. Rosenthal, Neal H. Pilot Survey of Occupational Training in Industry. 1972. Contract 81-09-70-19 with U. S. Department of Labor, Bureau of Labor Statistics.

*194. Ross, David R. State and Local Governments. Negro Employment in The South. vol. 3. 1973. Manpower Research Monograph No. 23. Contract 81-19-68-13 with University of Kentucky Research Foundation. (NTIS)

195. Rovner-Pieczenik, Roberta. The First Decade of Experience: A Synthesis of Manpower R&D Projects in Criminal Justice and Corrections (1963-1973). 1973. Manpower Research Monograph No. 28. Grant 92-25-72-18 to Criminal Justice Research, Inc., Cambridge, MA. (NTIS PB 220081)

196. Rowan, Richard L. and Lester Rubin. Opening the Skilled Construction Trades to Blacks: A Study of the Washington and Indianapolis Plans for Minority Employment. 1972. Contract 82-42-71-26 with University of Pennsylvania. (NTIS 213282)

197. Russell, Wendel. Upgrading in an Industrial Setting--Final Report. 1973. Grant 20-47-73-18 to Oak Ridge Associated Universities, U. S. Atomic Energy Commission, Oak Ridge, TN. (NTIS PB 230967)

198. Schenkman, Jerome G., Fred Lorber, Betty Pudney, and Richard Tobias. Fulfilling the Potential of NYC-2. Four Monographs: Integrating Remedial Education into NYC Training Programs; Criteria for the Selection and Training of NYC Work Supervisors; New Directions in Vocational Counseling of NYC Trainees; The Utilization of Industrial Advisory Committees to Increase Employment Opportunities. 1970. Contract 42-36-73-02 with Mobilization for Youth, Inc., New York. (NTIS PB 199437)

199. Schiller, Bradley R. The Impact of Urban WIN Programs. 1973. Contract 51-09-70-10 with Pacific Training and Technical Assistance Corporation. (NTIS PB 210469)

200. Schweitzer, Stuart O. and Ralph E. Smith. The Persistence of the Discouraged Worker Effect. Industrial and Labor Relation Review 27(2): 249-60, 1974. Grant 92-11-72-36 to The Urban Institute, Washington, DC.

201. Schwenger, Robert B. A Conceptual Framework for Measurement of the Impact of Foreign Trade on Workers. 1971. Grant 91-09-70-61 to U. S. Department of Agriculture, Graduate School. (NTIS PB 198579)

202. Scoville, James G. Concepts and Measurements for Manpower and Occupational Analysis. 1968. Contract 81-23-67-23 with Harvard University. (NTIS PB 187702)

203. Shapiro, Theresa R. Black Male Professionals in Industry. Washington, DC: U. S. Department of Labor, 1973. Manpower Research Monograph No. 26. Contract 81-36-71-07 with Recruiting Management Consultants, Inc., New York.

204. Shapiro, Theresa R. Negro Construction Craftsman in a Southern Labor Market. 1972. Contract 81-20-70-20 with Louisiana State University. (NTIS PB 212233)

205. Sharp, Laure M. and Albert D. Biderman. The Employment of Retired Military Personnel. 1966. Contracts MDTA 16-38, 81-08-26 with Bureau of Social Science Research, Inc. (NTIS AD 646463)

**206. Shea, John R. Welfare Mothers: Barriers to Labor Force Entry. Journal of Human Resources 8(Supplement):90-102, 1973. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research.

*207. Shea, John R., Sookon Kim, James Murphy, Roger D. Roderick, and Joseph M. Davis. Dual Careers: A Longitudinal Study of the Labor Market Experience of Women. vol. 2 (1968 survey). 1973. Manpower Research Monograph No. 21. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research. (NTIS PB 214569)

**208. Shea, John R. and Jack A. Meyer. Potential Recipients of Family Assistance Payments: Characteristics and Labor Market Behavior. 1972. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research. (NTIS PB 209287)

*209. Shea, John R., Roger D. Roderick, Frederick A. Zeller, and Andrew I. Kohen. Years for Decision: A Longitudinal Study of the Educational and Labor Market Experience of Young Women. vol. 1 (1968 survey). 1971. Manpower Research Monograph No. 24. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research. (NTIS PB 201289)

*210. Shea, John R., Ruth S. Spitz, and Frederick A. Zeller. Dual Careers: A Longitudinal Study of the Labor Market Experience of Women. vol. 1 (1967 survey). 1970. Manpower Research Monograph No. 21. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research. (NTIS PB 193239)

211. Shelley and Company, Inc., E. F. Worker Relocation: A Review of U. S. Department of Labor Mobility Demonstration Projects. 1970. Contract 87-34-69-01 with E. F. Shelley and Company, Inc., Washington, DC. (NTIS PB 199499)

212. Shepard, Jon M. Technology, Division of Labor and Alienation from Work. 1970. Grant 91-23-69-34 to Massachusetts Institute of Technology, Sloan School of Management, Industrial Relations Section. (NTIS PB 191258)

213. Sheppard, Harold L. and A. Harvey Belitsky. The Job Hunt: Jobseeking Behavior of Unemployed Workers in a Local Economy. Baltimore, MD: Johns Hopkins Press, 1966. Contract MDTA 6-64 with Upjohn Institute for Employment Research.

214. Shimberg, Benjamin, Barbara F. Esser, and Daniel H. Kruger. Occupational Licensing Practices and Policies. Washington, DC: Public Affairs Press, 1973. Contract 81-32-69-03 with Educational Testing Service, Princeton, NJ. (NTIS PB 213055)

215. Small, Theodore D. Upgrading: Three Years Experience in Cleveland. 1972. Contract 82-39-72-10 with Metropolitan Cleveland Jobs Council, Cleveland, OH. (NTIS PB 208174)

216. Smith, Leonard and Caroline Pezzullo. Career Progression Systems in the Internal Labor Market of the Food Service Industry and the Role of the National Restaurant Association. 1973. Contract 82-34-70-04 with Humanic Designs Division, Information Science Corporation.

217. Smith, Ralph E. A Simulation Model of the Demographic Composition of Employment, Unemployment, and Labor Force Composition: A Status Report. Unpublished working paper 350-65, The Urban Institute, Washington, DC, 1974. Grant 92-11-72-36 to the Urban Institute.

218. Smith, Ralph E. and Charles C. Holt. A Job Search-Turnover Analysis of the Black-White Unemployment Ratio. Proceedings, 23rd Annual Meeting of the Industrial Relations Research Association, Detroit, MI, December 28-29, 1970.

219. Smyth, David J. Short-Run Employment Fluctuations in Public Utilities. 1974. Grant 91-06-72-45 to Claremont Graduate School, Claremont, CA. (NTIS PB 228259)

220. Somers, Gerald G. and J. Kenneth Little. Cost-Benefit Analysis of Manpower Policies, Proceedings of a North American Conference. Kingston, Ont., Canada. Queens University, Industrial Relations Centre, 1969.

221. Sprague, Norman. The Community in Action--Solving Older Worker Unemployment Problems. New York: The National Council on Aging, 1966.

222. Sprague, Norman. Final Report on Experience in Community Projects with Conclusions and Recommendations. New York: The National Council on Aging, 1966.

223. Stanback, Jr., Thomas M. and Richard V. Knight. The Metropolitan Economy: The Process of Employment Expansion. New York: Columbia University Press, 1970. Contract 81-34-67-25.

224. Steinberg, Edward. Upward Mobility of Low Income Workers. New York: Institute of Public Administration, 1973. Grant 21-06-74-05 to Joint Training Committee of the California Processors, Inc. and the California State Council of Cannery and Food Processing Unions. (NTIS PB 236192/AS)

225. Stephenson, Jr., Stanley P. The Economics of Job Search: A Biracial Analysis of Youth Job Search Behavior. Paper presented at the Econometric Society Meetings, Toronto, Canada, December 1972.

226. Stern, James L. Training, Transfer, and the Influence of Job Search Procedures, Psychological Attributes, and Personal Characteristics on Earnings of Workers Affected by Plant Closure. 1974. Grant 91-55-73-04 to University of Wisconsin, Department of Economics. (NTIS PB 231553)

227. Stern, James L. and David B. Johnson. Blue-to-White Collar Labor Mobility. 1968. Contract MDTA 14-63 with University of Wisconsin. (NTIS PB 177360)

228. Stevens, David W. An Experimental Labor Market Information Program to Encourage Self-Initiated Job Search by Selected Registrants with Public Employment Service Offices. 1971. Contract 81-38-69-19 with Oklahoma State University of Agriculture and Applied Science Research Foundation, Stillwater, OK. (NTIS PB 204594)

229. Stevens, David W. Job Search Techniques: A New Index of Effectiveness. The Quarterly Review of Economics and Business 12(2):99-103, 1972.

230. Stevens, David W. Supplemental Labor Market Information as a Means to Increase the Effectiveness of Job-Search Activity. 1968. Contracts 81-40-67-05, 81-40-67-09 with Pennsylvania State University and Bureau of Employment Security. (NTIS PB 180531; ERIC MP 000993)

231. Stigler, George. Information in the Labor Market. Journal of Political Economy 70:94-105, 1962.

232. Strodtbeck, Frederick and Leonard P. R. Granick. The Youth-Tutoring-Youth Model for In-School Neighborhood Youth Corps: An Evaluation. 1972. Grant 42-0-005-34 to National Commission on Resources for Youth, Inc. (NTIS PB 232194/AS)

233. Stromsdorfer, Ernst W., James S. Fackler, Marianne V. Felton, and Robert E. Kelcher. An Economic Analysis of the Work Experience and Career Exploration Program: 1971-1972 School Year. 1973. Contract 82-18-71-29 with Indiana University Foundation. (NTIS PB 223366; ERIC 080790)

234. Sultan, Paul E. and Darryl D. Enos. Farming and Farm Labor: A Study in California. 1974. Grant 92-06-72-14 to Claremont Graduate School, Center for Urban and Regional Studies, Claremont, CA.

***235. Suter, Larry E. and Herman P. Miller. Income Differences Between Men and Career Women. American Journal of Sociology 78(4):962-74, 1973.

236. Swanson, Steven M., Irwin L. Herrnstadt, and Morris A. Horowitz. The Role of Related Instruction in Apprenticeship Training (A Pilot Study). 1973. Contract 82-25-71-21 with Northeastern University. (NTIS PB 229261/AS)

237. The Technical Education Research Center, Inc. The Individualized Manpower Training System. 1974. Contract 82-25-71-10 with Technical Education Research Center, Inc. (NTIS)

238. The Technical Education Research Center, Inc. Multi-Media Staff Training Package. 1974. Contract 82-25-71-10 with Technical Education Research Center, Inc.

239. Thal-Larsen, Margaret, Gordon Cavana, and John Dana. Placement and Counselling in a Changing Labor Market: Public and Private Employment Agencies and Schools. 1970. Contract 81-05-68-43 with University of California, Berkeley, Institute of Industrial Relations. (NTIS PB 197271)

240. Thal-Larsen, Margaret, Stephen Laner, and Donald Mayall. Requirements and Design of A Labor Market Information System for A Large Metropolitan Area. 1972. Contract 71-05-70-03 with University of California, Berkeley. (NTIS PB 213744)

241. Travis, Sophia Cooper. Formal Occupational Training of Adult Workers--Its Extent, Nature, and Use. 1964. Manpower/Automation Research Monograph No. 2. Contract MDTA 7-63 with U. S. Department of Labor, Bureau of Labor Statistics.

242. Trimble Associates, Inc., M. K. National Pilot Program on Household Employment. 1971. Contract 82-11-71-05 with M. K. Trimble Associates, Inc., Annandale, VA. (NTIS PB 199476)

243. Ullman, Joseph C. and George P. Huber. The Local Job Bank Program: Performance, Structure, and Direction. Cambridge, MA: Heath-Lexington Books, 1972.

244. U. S. Department of Health, Education, and Welfare, Office of Education. Education for a Changing World of Work, Summary Report of the Panel of Consultants on Vocational Education Requested by the President of the United States. Washington, DC: U. S. Department of Health, Education, and Welfare, 1963. (Government Printing Office)

245. U. S. Department of Labor, Bureau of Labor Statistics, Office of Manpower and Employment Statistics. Tomorrow's Manpower Needs, National Manpower Projections and a Guide to Their Use as a Tool in Developing State and Area Manpower Projections. 4 vols. Washington, DC: U. S. Department of Labor, Bureau of Labor Statistics, 1969. (Government Printing Office)

246. U. S. Department of Labor. The Older American--Age Discrimination in Employment. A Report of the Secretary of Labor to the Congress Under Section 715 of the Civil Rights Act of 1964. Washington, DC: U. S. Department of Labor, 1965.

247. U. S. Department of Labor. Breakthrough for Disadvantaged Youth. Washington, DC: U. S. Department of Labor, 1969.

248. U. S. Department of Labor. A Sharper Look at Unemployment in U. S. Cities and Slums, A Summary Report Submitted to the President by the Secretary of Labor. Washington, DC: U. S. Department of Labor, Office of the Secretary, 1967.

249. U. S. Department of Labor, Manpower Administration. Manpower Report of the President, 1967. Washington, DC: U. S. Department of Labor, 1967. (Government Printing Office)

250. U. S. Department of Labor, Manpower Administration. The Manpower Research Institutional Grant Program: A Progress Report 1966-73. Washington, DC: U. S. Department of Labor, 1973.

251. U. S. Department of Labor, Manpower Administration. The Neighborhood Youth Corps: A Review of Research. Washington, DC: U. S. Department of Labor, 1970. Manpower Research Monograph No. 13. (Government Printing Office)

252. U. S. Department of Labor, Manpower Administration. Orientation, Counseling, and Assessment in Manpower Programs. Washington, DC: U. S. Department of Labor, 1969. MDTA Experimental and Demonstration Findings No. 5. (Government Printing Office)

253. U. S. Department of Labor, Manpower Administration. Technology and Manpower in the Health Service Industry, 1965-75. Washington, DC: U. S. Department of Labor, 1967. Manpower Research Bulletin No. 14.

254. U. S. Department of Labor, Manpower Administration. Worklife Expectancy and Training Needs of Women. Washington, DC: U. S. Department of Labor, 1967. Manpower Report No. 12.

255. U. S. Department of Labor. Unused Manpower: The Nation's Loss. Washington, DC: U. S. Department of Labor, 1965. Manpower Research Bulletin No. 10.

256. U. S. Department of Labor, Office of Manpower Policy, Evaluation, and Research. Manpower Development and Training in Correctional Programs. Washington, DC: U. S. Department of Labor, 1968. MDTA Experimental and Demonstration Findings No. 3. (Government Printing Office)

257. U. S. Department of Labor, Office of Work Incentive Programs. WIN Health Assessment Project. Grant 42-11-73-04 to Office of Work Incentive Programs. Staff interviews and development of questionnaire for state-WIN sponsors.

258. U. S. Department of Labor, Manpower Administration and the U. S. Department of Health, Education, and Welfare, Office of Human Development. Manpower Report of the President, 1975. Washington, DC: U. S. Department of Labor, 1975. (Government Printing Office)

259. U. S. President's Task Force on Manpower Conservation. One-Third of a Nation: A Report on Young Men Found Unqualified for Military Service. Contract 81-08-13 with President's Task Force on Manpower Conservation. (Government Printing Office)

*260. Van Adams, Arvil. The Memphis Labor Market. Negro Employment in The South. Volume 2. Washington, DC: U. S. Department of Labor, 1973. Manpower Research Monograph No. 23. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research. (Government Printing Office)

261. Vera Institute of Justice. The Pioneer Messenger Service--Supported Employment Project of the Vera Institute of Justice (Report on Phase 1: January 1971 to April 1972). Washington, DC: U. S. Department of Labor, 1972. Contract 82-36-71-09 with Vera Institute of Justice, New York. (NTIS PB 214575)

262. Vogel, Anita S. Establishing a New Career: The Social Health Technician. 1970. Contract 82-34-69-18 with Mobilization for Youth, Inc., New York. (NTIS PB 199118)

263. Vogel, Anita S. Upgrading and Credentialling Paraprofessionals: Developing New Models in Human-Service Occupations. Washington, DC: U. S. Department of Labor, Manpower Administration, 1973. Contract 82-34-70-29 with National Committee on Employment of Youth (NCEY), New York.

264. Walker, James L. Economic Development, Black Employment and Black Migration in the Nonmetropolitan Deep South. 1973. U. S. Office of Economic Opportunity grant 61202 to University of Texas, Center for the Study of Human Resources.

265. Wallace, Phyllis A. Unemployment Among Black Teenage Females in Urban Poverty Neighborhoods. 1972. Contract 41-0-004-34 with Metropolitan Applied Research Center, Inc. (NTIS PB 210210)

266. Walsh, John. Classified Help Wanted Ads: How Much Help? 1974. Grant 21-11-73-28 to Olympus Research Corporation, Washington, DC.

267. Walther, Regis H., Margaret Magnusson, and Shirley Cherkasky. A Study of the Effectiveness of Selected Out-of-School Neighborhood Youth Corps Programs. Washington, DC: George Washington University, Social Research Group, 1968.

268. Watkins, Ted. Final Report on Community Elite Corps. Washington, DC: U. S. Department of Labor, Manpower Administration, 1973. Contract 42-0-002-05 with Watts Labor Community Action Committee, Los Angeles.

269. Weinstein, Robert. Native Americans in Rural and Urban Poverty. 1973. U. S. Office of Economic Opportunity grant 61202 to University of Texas, Center for the Study of Human Resources.

270. Welch, Finis R. and Marvin Kosters. An Analysis of (1) The Cyclical Stability of Aggregate Employment and (2) The Effects of Federal Minimum Wage Legislation on Teenage Employment. 1971. Grant 91-34-70-58 to National Bureau of Economic Research, Inc., NY. (NTIS PB 202404)

271. Western Workshop on Public Employment and the Disadvantaged, Berkeley, 1969. Public Employment and the Disadvantaged: Report of the Western Workshop. 1970. Contract 82-09-69-31 with National Civil Service League. (NTIS 203450)

272. Wilson, Michael. Job Analysis for Human Resource Management: A Review of Selected Research and Development. 1974. Manpower Research Monograph No. 36. Grant 21-11-73-40 to Manpower Management Institute, Washington, DC.

273. Wilson, Thurlow R., Robert M. Madsen, and John A. Richards. Employment Assistance to Ex-Servicemen with Other Than Honorable Discharges: A Study of the Department of Labor's Exemplary Rehabilitation Certificate Program. 1974. Technical Report 74-9. Grant 92-51-72-15 to Human Resources Research Organization, Alexandria, VA. (NTIS PB 220314; ERIC ED 078154)

274. Woglom, Geoffrey, R. H. The Implications of Search Unemployment for Labor Market Behavior and the Phillips Curve. 1974. Doctoral dissertation grant 91-09-71-42 to Yale University. (NTIS PB 228426/AS)

275. Wool, Harold and Leonard Lecht. The Labor Supply for Lower Level Occupations, 1960-1980. Grant 21-11-73-02 to National Planning Association, Washington, DC.

276. Wright, Emmett Earl. Industrial Recruiting Experience in Small City Job Markets. 1968. Doctoral dissertation grant 91-04-66-70 to University of Arkansas. (NTIS PB 179749)

277. Yavitz, Boris and Dean W. Morse, with Anna B. Dutka. The Labor Market: An Information System. New York: Praeger Pubs., 1973. Grant 21-36-73-47 to Columbia University.

*278. Zeller, Frederick A., John R. Shea, Andrew I. Kohen, and Jack A. Meyer. Career Thresholds: A Longitudinal Survey of the Educational and Labor Market Experience of Male Youth. vol. 2 (1967 survey). 1971. Manpower Research Monograph No. 16. Contract 82-39-72-21 with Ohio State University, Center for Human Resource Research. (NTIS PB 201288)