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DEVELOPMENT OF MICHIGAN JTPA TITLE IIA PERFORMANCE
STANDARDS REGRESSION MODELS UNDER
THE NEW FEDERALISM

by

Yung Sung Wu

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Public Administration
Center for Public Administration Programs

Western Michigan University
Kalamazoo, Michigan
December 1987

DEVELOPMENT OF MICHIGAN JTPA TITLE IIA PERFORMANCE
STANDARDS REGRESSION MODELS UNDER
THE NEW FEDERALISM

Yung Sung Wu, D.P.A.

Western Michigan University, 1987

The purpose of this study has been to make some contribution toward an understanding of the United States Department of Labor's (USDOL) JTPA Title IIA performance standards models and their policy implications. The major objective of the study has been to construct, evaluate, and document short-run econometric models which would be available for policy analysis and ex ante forecasting. The consequences of job training programs may have important effects on participants and the manpower service delivery system--hence, this study of the relationship between program activities and their consequences.

The State of Michigan has been using USDOL's JTPA Title IIA performance standards models since 1985. These models are utilized as the basis for both awarding annual incentive grants to Service Delivery Areas (SDAs) with good performance and also sanctioning SDAs with poor performance. An evaluation of USDOL's models was thus conducted to assess the validity and utility of these models.

The following evaluation criteria were used: (a) high explanatory power, (b) stability, (c) face validity, (d) lack of heteroscedasticity, and (e) lack of multicollinearity. It was found that USDOL's models had the following technical deficiencies: lower

predictive power; definitional, measurement, heteroscedasticity and multicollinearity problems; and biased regression parameters. These deficiencies may result in political and legal liabilities for the State.

Michigan performance standards models were therefore built upon three separate factors affecting SDA performance: (1) client characteristics, (2) program characteristics, and (3) economic characteristics. An econometric technique called ordinary least squares (OLS) was used to develop Michigan performance standards models. SDA was used as the unit of analysis in the development of Michigan performance standards models.

The results of the study indicated that USDOL's JTPA Title IIA performance standards models were invalid measures of Michigan SDAs' performance. They also led to lower expenditures and higher placement rates of JTPA programs as reported by SDAs. Michigan JTPA Title IIA performance standards models, however, performed well in predicting Michigan SDAs' performance. It was also concluded that the Michigan performance standards models might have practical applicability to other states as well.

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ACKNOWLEDGEMENTS

I would like to express my appreciation to the members of my dissertation committee, Drs. Peter Kobrak, Myron Ross, and Lyke Thompson, for the invaluable time and advice they provided me. I am most indebted to my chairman, Dr. Peter Kobrak, who provided his expertise on job training to assist me in further exposition of the issues, and also critically read the final copy. I am grateful to both Drs. Myron Ross and Lyke Thompson, who provided valuable assistance on technical aspects of the research. I also wish to thank Dr. Raymond Zelder for participating in the dissertation defense.

I would like to thank Mrs. Marjorie Miller, who did an excellent job of typing the drafts and final copy.

Finally, I would like to express my special gratitude to my wife, Jane, and my daughter, Janice, for providing support and encouragement at the times in the process when it was most needed.

Yung Sung Wu

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CHAPTER I

INTRODUCTION

Statement of the Problem

Sweeping changes in federal job training policy took place after the passage of the Job Training Partnership Act (JTPA), PL 97-300 (Job Training Partnership Act, 1982). Effective October 1, 1983, JTPA replaced the Comprehensive Employment and Training Act (CETA) program, which has been in operation since 1972. Changes introduced by JTPA evolved from a decade of legislative instability and reflected a diversity of goals and objectives that had become attached to employment and training programs (Guttman, 1983). CETA had become encumbered with such a diversity of objectives that its demise was to be expected. The goals and intent of JTPA focus on training, a fundamental change in intergovernmental relations in program process and delivery, a concerted effort to restrict costs, and a greater emphasis on performance monitoring.

The Job Training Partnership Act (JTPA) shifts a number of responsibilities from the federal government to the states and to "Private Industry Councils" at the local service delivery area. Under JTPA, the state's role is not that of design and implementation of the details of the training programs; but it is coordination, supervision, review, monitoring and assignment of performance goals and sanctions for nonperformance (Guttman, 1983).

The emphasis on performance and performance evaluation, complete with fiscal bonuses for exceptional performance and sanctions for poor performance, is found in Title I-A, Section 106 of the legislation (JTPA, 1982). A system is called for in which the Secretary of the U.S. Department of Labor (USDOL) proffers a set of performance standards that must be based upon a set of identified factors. Governors can make adjustments to the standards for areas within their respective states and within limits set by the Secretary, and governors are charged with implementing the evaluations, including the bonuses and sanctions.

There are two different approaches to the evaluation of employment and training programs. The first approach focuses the effects of a program on the client or participant and examines questions of changes in employment status and earnings of individuals. Thus, the unit of analysis for this approach is the participant. The second uses the job training area as the unit of analysis. Therefore, it utilizes aggregate indices, examining placement rates, average wages, and costs of program delivery. The first approach is organized around samples of individuals; the second conducts evaluations around different manpower service delivery areas. The evaluation may be focused on the local service delivery area or be aggregated to a national summary. The performance standards system mandated in the legislation is of the second variety.

The current USDOL's JTPA performance evaluation system has the

following characteristics. First, the focus is on program outcomes at termination. Second, under JTPA, states are allowed to adjust the performance expectations derived from the models and can even develop their own systems to evaluate performance standards. Third, SDA performance is linked to fiscal incentives and sanctions. Fourth, the final setting of performance expectations for each SDA, the monitoring and evaluation of SDA performance, and the awarding of incentive funds and sanctions are the responsibility of the individual states. The evaluation process under JTPA does attempt to address all four objectives mentioned above. However, the flexibility allowed to the states within the evaluation process has resulted in a variety of state implementation schemes rather than a uniformly adhered to evaluative process. In effect, ETA's evaluation procedures provide a skeletal framework which the states are to flesh out with their selection of options.

In mandating performance standards, Congress called for measures that assess the return on the investment in human capital through JTPA. The basic return on the investment is measured by the increased employment and earnings of participants and the reductions in welfare dependency (JTPA, 1982). Performance criteria are separately specified for the adult and youth programs under Title II-A, which funds programs intended to serve the economically disadvantaged worker. In general, the term "economically disadvantaged worker" is defined in the act to include individuals receiving cash welfare payments, with incomes not meeting defined

poverty levels, or adults with mental or physical disabilities constituting a substantial handicap to employment (JPTA, 1982).

The Employment and Training Administration (ETA), U.S. Department of Labor, has developed regression models to assist the states in setting performance standards for their respective Service Delivery Areas (SDAs). These regression models have been the vehicle for implementing a performance standard system as called for in the new legislation. ETA has defined seven performance measures to meet the legislative objectives:

Adult

1. Entered Employment Rate (AEER): the number of adults who entered employment at termination as a percent of adults who terminated.

2. Cost per Entered Employment (ACEE): total expenditures for adults divided by the number of adults who entered employment.

3. Average Wage at Placement (AAWP): average hourly wage for all adults who entered employment at the time of termination.

4. Welfare Entered Employment Rate (AWEE): the number of adult welfare recipients who entered employment at termination as a percentage of the number of adult welfare recipients who terminated.

Youth

5. Entered Employment Rate (YEER): the number of youth who entered employment at termination as a percentage of youth who terminated.

6. Positive Termination Rate (YPTR): the number of youth who had a positive termination (entered employment, met one of the employability enhancement criteria, or attained youth employment competencies as recognized by the local Private Industry Council) as a percentage of youth who terminated.

7. Cost per Positive Termination (YCPT): total expenditures for youth divided by the number of youth who had a positive termination.

Each of the above performance measures except the adult welfare entered employment rate is related to a set of local factors that serve to account for the variation among the local service delivery areas and to provide a basis for calculating an expected performance level for each local area. Each factor selected had to satisfy four "tests" established by ETA: it had to make common sense; it had to be quantifiable; data had to be consistently available at the substate level; and the data had to be beyond the SDA's control (U.S. Dept. of Labor, ETA, 1981). The final selected factors resulted from consultation between ETA and a technical workgroup composed of representatives selected from SDAs, governor' offices, academia, and other federal agencies (U.S. Dept. of Labor, ETA, 1984).

As the JTPA Program Year 1986 entered its third quarter, criticisms of the ETA models began to surface. There are three fundamental problems associated with the ETA models. First, the explanatory power of the models was found to be low, ranging from 31 to 45%. Thus, the models fail to account for at least one-half of the variability associated with each performance measure. So long as such models were used only to serve as a guide for planning, as was contemplated with the benchmarks system under the Comprehensive Employment and Training Act (CETA), such low levels of explanatory power could be tolerated. But with actual state policy and funding decisions now based on the models, their lack of explanatory power becomes a critical issue. In essence, the state policy-maker is placed at high risk in his/her decisions because of the high degree of error associated with each of the models.

A second problem is that the models are incorrectly specified. This means that variables critical to the estimation of each performance measure have been left out of the models. Consequently, the omission of these variables from the true model yields biased and inconsistent parameter estimates.

Finally, the models offer no guidance as to why an SDA fails or succeeds. The type of variables relating to program and policy is not included in the models and thus no diagnostic indicators are available to the states to assist in determining the technical assistance needs of unsuccessful SDAs. The models are descriptive and provide a national framework, satisfying ETA's purpose but not

those of the states.

In summary, the effects of all of these problems with ETA's models are borne by state policy-makers and not ETA. The State of Michigan has been using ETA's models to distribute its annual Incentive Grants of about \$4.8 million since Program Year 1984. It assumes that the technical issues of ETA's models are not problems. But as the State is called upon to sanction SDAs which are performing below expectations, the model's severe technical limitations may become political and legal liabilities.

Significance of the Study

Carol Weiss (1972) states the purpose of evaluation research quite succinctly.

The purpose of evaluation research is to measure the effects of a program against the goal it set out to accomplish as a means of contributing to subsequent decision making about the program and improving future programming. Within that definition are four key features: "To measure the effects" refers to the research methodology that is used. "The effects" emphasizes the outcomes of the program, rather than its efficiency, honesty, morale, or adherence to rules or standards. The comparison of effects with goals stresses the use of explicit criteria for judging how well the program is doing. The contribution to subsequent decision making and the improvement of future programming denote the social purpose of evaluation (p. 4).

In discussing the evaluation of educational curriculums, Scriven distinguishes between formative and summative evaluation. Formative evaluation produces information that is fed back during the development of a curriculum to help improve it. It serves the

needs of developers. Summative evaluation is done after the curriculum is finished. It provides information about effectiveness to school decision makers who are considering adopting it. The distinction has since become a fundamental typology and the terms are now applied more broadly than they were by Scriven.

This distinction can be applied to the evaluation of job training programs as well. Summative evaluations of job training programs are aimed at determining the overall effectiveness of job training programs and are particularly important in making decisions about continuing or terminating an experimental program or demonstration project. As such, manpower evaluations for summative purposes focus on program outcomes. Formative manpower evaluations, in contrast, concentrate on ways of improving and enhancing job training programs. Thus, formative information is particularly useful to program administrators and staff.

The present ETA's JTPA Title IIA Performance Standards Models are developed to establish performance standards for Service Delivery Areas. Service Delivery Areas (SDAs) performing above performance standards are awarded with incentive grants; and SDAs performing below performance standards are sanctioned. ETA's models analyze the functional relationship between program activities and program outcomes. They are utilized to improve and enhance job training programs. Therefore, they are formative evaluations.

The important causal question in manpower evaluation research is: does the implemented job training program lead to the desired

outcomes? To venture into the arena of causality is to undertake the task of theory construction. As Blalock (1964) explained:

The problem of causality is part of the much larger question of the nature of the scientific method and, in particular, the problem of the relationship between theory and research. There appears to be an inherent gap between the language of theory and research which can never be bridged in a completely satisfactory way. One thinks in terms of a theoretical language that contains notions such as causes, forces, systems, and properties. But one's tests are made in terms of covariations, operations, and pointer readings (p. 5).

Job training programs under JTPA have several desired goals: to increase the employment and earnings of participants and the reductions in welfare dependency. To assess the effectiveness of job training programs, the United States Department of Labor has defined seven performance measures: adult entered employment rate, adult average wage at placement, adult cost per entered employment, adult welfare entered employment rate, youth entered employment rate, youth positive termination rate, and youth cost per entered employment. These measures are the yardsticks by which manpower programs can be evaluated.

There is also the possibility that job training programs will have consequences that they did not intend. What looks elementary in theory may turn out to be different from practice. Programs are nowhere near as neat and accommodating as the researcher expects. Whole platoons of unexpected problems may spring up. What are

originally conceived as good results in one sphere may be dysfunctional in the longer view. The unexpected consequences of the job training program may have significant impact on people and the manpower service delivery system. But research on the unanticipated consequences of job training programs has been limited.

A study of the relationship between program activities and their consequences will thus expand the theory of unemployment, and labor market theory. An understanding of such relationship is important in the determination of national manpower policy. Therefore, it is the intention of this volume to investigate such complex relationship and to provide a foundation upon which sound manpower policy can be developed.

Purpose of the Study

The Job Training Partnership Act of 1982 reflected sweeping changes in federal employment and training policies. Research, evaluation, and collection of basic data have been drastically curtailed under JTPA. The new law has a much stronger emphasis on immediate job placement after program participation. Therefore, it mandates SDAs to collect data on a trainee's status at program termination. It also requires the state to use performance standards to measure the effectiveness of job training programs.

To assist the states in setting standards for their respective Service Delivery Areas (SDAs), the Employment and Training Administration (ETA), U.S. Department of Labor, developed performance

standards regression models in 1985. These models have been the vehicle for implementing a performance standards system as called for in the new legislation.

The State of Michigan has been using ETA's models since 1985. The ETA's models are utilized as the basis for both awarding incentive grants to SDAs with good performance and also sanctioning SDAs with poor performance.

But what is the technical properties of ETA's performance standards models? Are the ETA's models valid for measuring Michigan SDAs' performance? The answers to these questions are clearly important to the determination of national manpower policy. It is to reach an understanding of ETA's performance standards models and their policy implications that this study has been undertaken.

This study addresses the link between two areas of public policies. The first area is the relationship between program activities and their consequences. How do ETA's models affect SDAs' performance? Secondly, the study deals with the technical properties of ETA's models. Do the ETA's models provide valid measures of Michigan SDAs' performance? If the ETA's models are found to be invalid, Michigan performance standards regression models will be developed and evaluated. The experience in Michigan will be used as a case study.

More specifically, the following research questions will be investigated in the study:

1. How do ETA's models affect SDAs' performance?

2. Are the ETA's models valid for measuring Michigan SDAs' performance?
3. Would proposed Michigan performance standards regression models be better predictors of Michigan SDAs' performance than the ETA's performance standards models?

The ETA's models focus on short-term program effects. But short-term measures may not be good predictors of a trainee's status three to four years following training. To study the relationship between short-and long-term impacts on JTPA participants will require the use of follow-up data. However, as of today, no follow-up data on JTPA participants is available in Michigan. Therefore, this study will concentrate on the investigation of the research questions discussed earlier. A clear understanding of these problems should provide a basis upon which sound manpower policies can be developed.

Outline of the Study

The general focus of the study is the application of certain econometric techniques to predict Michigan Service Delivery Area (SDA) performance. The subject matter includes the review of selected economic literature, evaluation research on job training, and federal employment and training policies, discussed in Chapter II of the study. Chapter III presents a brief overview of Michigan's job training programs for the period of October, 1983 to June, 1986.

The information discussed in Chapters II and III partially

provided the initial foundation for the evaluation of the Employment and Training Administration's JTPA Title IIA performance standards regression models, discussed in Chapter IV of the study. The model specifications, predictive power, and other econometric properties of the ETA's models will also be examined in this chapter.

Chapter V will focus on the development of Michigan JTPA Title IIA performance standards regression models. More specifically, the modeling approach and model formulation, measurement and the collection of data, and equation estimation of Michigan Title IIA performance standards models will be elaborated.

In Chapter VI the analysis, evaluation and validation of the Michigan Title IIA performance standards regression models will bring together the theoretical and data components of the study. The econometric properties of the equations will be identified and examined.

Chapter VII will conclude with a summary and conclusions pertaining to the study and suggestions on possible directions for future research.

A Glossary of Acronyms and Terms Used in Chapter I

AAWP: Adult Average Wage at Placement--average hourly wage for all adults who entered employment at the time of termination.

ACEE: Adult Cost per Entered Employment--total expenditures for adults divided by the number of adults who entered employment.

AEER: Adult Entered Employment Rate--the number of adults who entered employment at termination as a percent of adults who terminated.

AWEE: Adult Welfare Entered Employment Rate--the number of adult welfare recipients who entered employment at termination as a percentage of the number of adult welfare recipients who terminated.

CETA: The Comprehensive Employment and Training Act of 1972.

ETA: Employment and Training Administration, United States Department of Labor.

JTPA: The Job Training Partnership Act of 1983.

SDA: Service Delivery Areas as defined under JTPA.

YCPT: Youth Cost per Positive Termination--total expenditures for youth divided by the number of youth who had a positive termination.

YEER: Youth Entered Employment Rate--the number of youth who entered employment at termination as a percentage of youth who terminated.

YPTR: Youth Positive Termination Rate--the number of youth who had a positive termination (entered employment, met one of the

employability enhancement criteria, or attained youth employment competencies as recognized by the local Private Industry Council) as a percentage of youth who terminated.

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter includes the review of selected economic literature, evaluation research on job training, and federal employment and training policies. This review will partially furnish the basis upon which the evaluation of ETA's JTPA Title IIA Performance Standards regression models can be made.

Review of Selected Economic Literature

There is a voluminous economic literature about technological change, economic growth, productivity growth, theories of unemployment, theory of labor demand, and labor market theory. This review will, however, focus only on literature relating to the theory of human capital, theory of labor demand, and labor market theory. A clear understanding of these theories should provide a strong basis upon which one can study the unemployment problems faced by individuals or demographic groups. Thus, sound manpower policies can be developed for the unemployed.

Employment and training programs have been based primarily on a traditional human capital approach to the labor market (Ehrenberg & Smith, 1982). Workers invest in education and training. Such investments can provide workers with skills which can be utilized by an employer. The value of each worker's human capital is dependent

on how much those skills are worth in the labor market. Education and training increase skills. The theory of human capital has been linked with the unemployment problems faced by individuals or demographic groups to form the basis for employment and training programs.

Theories of unemployment are related to the labor market flows and are designed to account for differences in the proportion of individuals seeking employment at a given state by time, in a geographic area or from a demographic group. Policies addressing unemployment need to address both the incidence and duration of unemployment. Evidence indicates that most unemployed persons experience joblessness briefly; much of the unemployment may be attributed to a small group who experience unemployment for relatively long period of time (Ehrenberg and Smith, 1982).

Economists classify unemployment into four types: frictional, structural, cyclical (or demand-deficient), and seasonal. In a dynamic labor market where people are frequently between jobs, frictional unemployment occurs. Programs (such as the provision of employment services) which address institutional barriers may help alleviate such frictional unemployment. Structural unemployment results from a change in labor demand or in worker skills sought by the employer. The classroom training, on-the-job-training (OJT), and work experience components of employment and training programs address structural unemployment. Training develops new skills which enable unemployed persons to match employer demands.

Cyclical (or demand-deficient) unemployment results from reduced aggregate demand for labor. Firms frequently lay off workers and do not replace those who either quit or retire. The public service employment (PSE) component of employment and training programs addresses cyclical unemployment. Temporary tax credits might similarly reduce demand-deficient unemployment. Other macroeconomic policies strive to increase aggregate demand by increasing the level of government spending, reducing taxes, and increasing the rate of the growth of the money supply. Finally, seasonal unemployment, like cyclical unemployment results from a decreased demand for labor but follows a systematic pattern over the course of a year.

Employment and training programs have tended to focus on different types of unemployment in different periods. At times, unemployment has been perceived as primarily structural, and to some degree frictional; education and training programs designed to provide workers with skills demanded by the labor market have then been the primary thrust. At other times, unemployment has been characterized as demand deficient. Job creation largely through public service employment, becomes the focus. Employment and training programs have further attempted to target those demographic groups with the worst unemployment problems.

Most evaluations of employment and training programs have focused on their effectiveness in enhancing worker skills. There is substantial evidence that classroom training, OJT and work experience

have the strongest impact in terms of increased employment and increased wage rates for those persons with no previous work experience or limited recent work experience. Women, who tend to have little or no previous work experience, derive both positive employment and wage rate effects. Men, frequently possessing more stable employment histories, have had only employment gains and benefit less consistently than women. Evidence relating to differences experienced by minority group members from such programs is less clear (U.S. Congressional Budget Office, 1982). To the extent that minority workers possess little previous work history, they show higher gains when compared to non-minority workers with recent or more stable work histories.

Perry, C., Anderson, B., Northrup, H. & Rowan, R., (1976) suggest that the basic contribution of training programs has been to provide a person with skills and attributes that facilitate entry or re-entry into the labor force, rather than to encourage job mobility or to serve as a mechanism to alter the present market structure. Gains are seen most frequently for those persons who are able to move into jobs impossible to obtain without training. Classroom training has primarily moved women into clerical fields, and OJT has shifted Black males into skilled jobs.

Women may gain more from training than men because they are being trained in fields characterized by high growth or high turnover. A study of female job training in the Manpower Development and Training Act (MDTA) revealed that 70% of all female

enrollees were trained in either clerical or health occupations. Both occupational fields saw high growth. Therefore, female trainees faced good employment opportunities but at the price of being channeled into narrow occupational limits (Perry et al, 1976). Perry et al. argue that female training in fields with high demand appeared to contribute significantly to "... the level, structure and durability of their earnings gains" (Perry et al, 1976). Kiefer's (1979) analysis suggests that training effects on wages may vary by occupation, with the effect much stronger for high growth skills.

Dual labor market theorists question the assumption of a competitive labor market, suggesting instead that there are separate and unequal labor markets. Worker characteristics such as race or sex are used to divide the labor force into non-competing labor forces, creating a dual labor market. A secondary market, characterized by low-wage, non-mobile, unstable jobs, exists alongside the primary market. Women and minorities are primarily relegated to this secondary market and are largely unable to break into the primary market. Fair employment and affirmative action are seen as critical policies to remedy these inequalities.

If a secondary market does exist, the apparent success of employment and training programs for women, and to some extent minorities, is a limited success. That apparent success may be attributed to training being received in secondary labor market jobs, characterized by high growth and demand (e.g., clerical, service, and health occupations). Access tends to be limited to

relatively low wage jobs.

Roos and Reskin (1984) suggest using internal labor market theory as a theoretical framework. They focus on such factors as conditions of labor supply, characteristics of labor demand, and structures of labor market institutions. But using a single theoretical framework is of limited utility in analyzing the incidence and duration of unemployment faced by various demographic groups, developing programs to address such unemployment differentials, and evaluating such programs. Each reflects certain insights into labor market participation and the experiences of individuals but is incomplete. For example, the type of training provided by an employment and training program may reduce differences in the labor supply characteristics of women and minorities. Yet, there remains evidence of differential wage structures and unemployment rates despite the acquisition of comparable human capital (Corcoran & Duncan, 1979).

An understanding of the interactive nature of labor supply, demand, and institutional structures is essential in analyzing the dynamic properties of unemployment incidence and duration. A job training policy must be cognizant of the separate and the interactive impacts of supply, demand, and institutional structures on unemployment. Such an analysis allows one to assess the effects of a given strategy, such as skill enhancement, determine the limits of that strategy, and consider how it may be enhanced as a component of a comprehensive interactive job training program. Focusing

solely on the effects of skill enhancement or removal of institutional barriers seems to indicate that each is ineffective, yet the interactive effect may be substantial.

An understanding of the theories of unemployment is essential in developing manpower strategies for the unemployed. It is also useful to review a number of federal job training policies for the past few decades. Such a review should provide a historical background upon which sound future manpower policies can be developed.

Review of Federal Employment and Training Policies

The federal government established a number of programs to employ the millions of people out of work during the Depression. They included the Works Progress Administration, the Public Works Administration, and the Civilian Conservation Corps. At any one time, 20 to 45% of the unemployed had jobs through these federal efforts, demonstrating the ability of job creation programs to respond to severe cyclical unemployment (Johnson, 1985).

Since the Depression years, the U.S. Government has attempted on a lesser scale to provide employment and training opportunities for its unemployed and economically disadvantaged populations. The first post-war Federal employment and training effort, the Area Redevelopment Act (ARA) of 1959, sought to attract new businesses to economically depressed areas and to provide skill training to disadvantaged workforce. The Manpower Development and Training Act

(MDTA) of 1962 initiated institutional and on-the-job training efforts targeted for displaced workers in economically depressed areas (Baumer, 1985).

Several new manpower programs were added by the Economic Opportunity Act of 1964, the most ambitious of which was the Job Corps. It provided a residential environment for learning and development where poor youth age 14 to 21 could escape from deprivation and realize their full potential. The Economic Opportunity Act also initiated job creation programs for the hard-to-employ who were left behind despite accelerating economic growth in the mid-1960s. The Neighborhood Youth Corps (NYC) provided in-school, summer and out-of-school work experience for teenagers to promote the development of needed employability skills. The antipoverty act also created jobs on the assumption that work was preferable to dependency. In 1965 the New Careers program was introduced which sought to restructure professional jobs in the public and nonprofit sectors, to train the disadvantaged to perform as paraprofessionals, and to subsidize their on-the-job learning. New Careers evolved in the late 1960s into the Public Service Careers (PSC) program, retaining the emphasis on providing career ladders into unsubsidized public and nonprofit jobs.

A Work Incentive (WIN) program was adopted in 1967 as a substitute for the antipoverty workfare program. By providing institutional and on-the-job training, plus financial incentives for work by welfare recipients, it aimed to facilitate private sector

rather than public sector employment. The Job Opportunities in the Business Sector (JOBS) program was launched to increase private sector involvement in manpower programs through contract and voluntary on-the-job training of the disadvantaged. The Concentrated Employment Program (PEP) provided extra resources to poverty areas to be used primarily for preemployment services such as counseling, motivation activities, job development, and placement assistance.

The Emergency Employment Act of 1971 initiated the first countercyclical job creation program since the New Deal—the Public Employment Program. This initiative completed the system of employment and training programs. The components have remained essentially unchanged ever since. The employment and training system included basically preventive measures, primarily summer and in-school jobs to help disadvantaged youth, remedial activities such as JOB Corps and institutional training under MDTA. A number of ameliorative interventions now existed, including temporary jobs for older workers, welfare recipients, and dropout youth, job access efforts such as job restructuring under PSC, placement and job development under CEP and WIN, on-the-job training under MDTA and JOBS, and countercyclical measures, as typified by the Public Employment Program.

To organize better the employment and training system, Congress passed the Comprehensive Employment and Training Act (CETA) in 1973 with the aim of consolidating federal employment and training resources into block grants to local units of government representing

populations of more than 100,000, and to states representing the remaining smaller areas within their borders. These local units of government were called prime sponsors. The summer employment and public service employment (PSE) programs were retained by the Comprehensive Employment and Training Act. The JOB Corps was continued as a distinct, nationally directed program, although its authorization was included under the CETA umbrella and its management shifted from the Office of Economic Opportunity to the Department of Labor. Nationally-run programs for special needs groups such as older workers, migrants, Indians, offenders, and displaced homemakers were added incrementally. The WIN program was removed from the CETA umbrella, and placed in the then Department of Health, Education, and Welfare (HEW).

From 1973 to 1983 CETA was the centerpiece of American policy for the unemployed. The CETA system was hardly operational before there were major changes and then dramatic expansion. The 1976 amendments separated public service employment into countercyclical and structural components, the first directed to the victims of recession and funded by a "trigger formula" which would automatically expand resources when unemployment rose, and the second aimed at providing career entry opportunities, training, and short-term work for persons of limited employability. A national Skills Training Improvement Program (STIP) was initiated providing grants to competitively-selected prime sponsors to provide long-term training linked to the private sector. The Youth Employment and

Demonstration Projects Act in 1977 created two new categorical programs targeted specifically at youth. Operated by most and in some cases all Prime Sponsors, this large-scale experimental program tested a job guarantee, in selected prime sponsor areas, and a conservation program operated by the Departments of Labor, Agriculture and Interior on public lands.

The change continued without pause. A Private Sector Initiative Program (PSIP) was authorized in the 1978 CETA amendments. PSIP established Private Industry Councils (PIC) in each prime sponsor area to plan and administer CETA-authorized activities linked to the private sector. The 1978 amendments increased the targeting as well as the training emphasis under the structural public service employment program.

The Job Training Partnership Act (JTPA), which replaced CETA in 1983, emphasized the importance of skill training and private sector job placement in federal efforts to aid the structurally unemployed. The new law excluded public service employment jobs, revised program guidelines, and shifted principal management authority from local government to a shared power among governors, local elected officials, and private sector representatives.

As of 1987, a complex set of federal programs aids the unemployed. Training programs for low-income youth, adults, and displaced workers are available through JTPA. Temporary income support is provided to the unemployed through unemployment insurance. Employers can receive federal tax credits for hiring

long-term unemployed and disadvantaged workers under the targeted jobs tax credit.

JTPA expanded the role of the private sector and the governors, and reduced the total amount of available employment and training funds. It also relied on performance standards as the basis for analysis of program performance. A new addition to job training policy was a distinct program for displaced workers in response to recent economic problems. A two-year forward funding cycle was instituted to enhance statewide coordination, especially between job training programs and education institutions.

Review of Evaluation Research on Job Training

Over the past two decades, there have been literally hundreds of studies and evaluations of employment and training programs. The employment and training programs before JTPA mandated major research and evaluation components. However, many of the studies had serious limitations. There are few experimental studies which control all relevant variables, randomly assign certain members of a group to training, and compare what happens to them with a similar control group not receiving training. Studies vary widely in the degree to which they have an adequate control group and whether they utilize sufficient follow-up long enough to sort out short-term placement from long-lasting changes in employment and income. The following review will concentrate on major evaluation studies of federal job training programs for the past few decades. An understanding of

these past studies should provide good foundations upon which future manpower policies can be developed.

Classroom Training Programs

Classroom training is thought to address structural unemployment because it is designed to develop an individual's academic or technical training skills. Various studies have been undertaken to evaluate the impact of such remedial training on participant's employment and income.

Some studies have reported that increased earnings are related to length of training. The 1982 Congressional Budget Office (CBO) evaluation study shows that female participants in classroom training, OJT, and work experience programs gained from longer training, but male participants did not. Mallar's study (1978) indicates that higher employment rates and starting wages result when a youth remains in the program longer. Keifer (1979) reports that female participants gained from longer training for both classroom training and OJT in the Manpower Development and Training Act. Hardin and Borus (1971) present conflicting data; their evaluation of the Area Reindustrialization Act and the MDTA classroom training found the earnings effect to be the greatest in shorter training courses. For example, training of 60 to 200 hours produced no earnings effect and more than 600 hours was correlated with an earnings decline.

Several studies have reported that classroom training increases

the earnings of female trainees relative to the earnings of females in the control groups (Borus, 1978; Hardin & Borus, 1971; Kiefer, 1979; Main, 1966). The Congressional Budget Office study (1982) found that classroom training increased female earnings by \$1,400 per year; four-fifths of the increase was accounted for by increased hours worked, higher labor force participation, and an increased ability to hold a job. The remaining 20% was attributable to a higher wage. Gurin (1970) reported both employment and wage rate effects.

The effects of training reflect less consistent earnings increases for male trainees. No training effects for male trainees were found by CBO (1982), or Kiefer (1979). Other studies indicated earnings increases but increases were due solely to increased working hours (Hardin & Borus, 1971; Main, 1966). Training programs did not affect male wage rates in any of the studies. A CBO (1982) study also found that classroom training had the greatest effect on those persons with no previous work experience regardless of sex or minority status.

The Job Corps Programs

Several studies have been conducted to assess the effectiveness of the Job Corps programs on educational attainment. The results are mixed. Mangum and Walsh's study (1980) of the Job Corps found that the "basic education seemed ineffective for those who tested below the sixth grade level" (p. 9). Levitan and Johnston's study

(1975) reported that the Job Corps trainees had gains in reading and arithmetic. It also found that the greatest gains were made by the lowest educational levels upon entry into the program (third to sixth grade). Trainees with better than sixth-grade reading level actually showed losses (Levitan, Johnston & Taggart, 1975). The most recent major study of the Job Corps programs, which looked at educational trends over a four-year period, found that trainees had a higher probability of (a) receiving a high school diploma, (b) attending more weeks of college, and (c) attending some kind of vocational school than their controls (Mallar, 1978).

Some differential impacts on education were as follows. Levitan, Johnston and Taggart's study (1975) found that female trainees made fewer educational improvements than did male trainees. Somers and Stromsdorfer's study (1972) reported that only black females and white males made significant gains in terms of likelihood of graduating from high school than their controls.

Mallar in his study (1978) reported that the Job Corps trainees had an increase in their time of employment, accompanied by a \$10 weekly increase in their earnings. Earlier studies similarly indicated positive employment and earnings effect from the Job Corps (Cain, 1968; Levitan et al., 1975; Mallar, 1978). Harris's study (1967) found that program graduates (enrollees that stayed longer than six months) and youth under eighteen enjoyed higher employment rates than their controls.

Males increased their military involvement and decreased

receipt of unemployment insurance; females with children increased their participation in training programs and decreased their receipt of public aid, in comparison to the controls (Mallar, 1978). Kiefer's study (1976) found that the Job Corps had some effect on black males with respect to earnings (due to increased labor force participation) and no effect on females.

The recent study by Mallar (1978) found that racial differences in post-program employment and earnings were not statistically significant for females but were for males. White and Hispanic male earnings and postprogram employment were higher than those of Black and American Indians. Black and Hispanic males were more likely than white and American Indian males to stay and complete the Job Corps program.

CETA youth discretionary nonresidential training programs provide a less costly alternative to the Job Corps. Hahn and Lerman's study (1983) reported that participants in nonresidential discretionary programs increased their earnings relative to control groups. However, comparison of classroom training and OJT revealed that the major share of earnings gains from discretionary programs come from OJT rather than classroom training.

In summary, classroom training was most effective in increasing employment and wage rates of female participants. The degree to which these effects are dependent on participants receiving training in high growth fields is not known. Classroom training is less effective for adult male participants. For those youth who graduate

from the Job Corps, its intensive program provides significant increases in education, employment, and earnings.

Work Experience Programs

Work experience programs are designed to provide short-term subsidized employment to youth. It is appropriate for those individuals who have never worked or who have not worked for an extended period of time.

Relatively few evaluations of work experience programs have been conducted. Studies of Neighborhood Youth Corps (NYC) participants found no improvements in relation to controls in either probability of graduating from high school (Mangum & Walsh, 1980; Somers & Stromsdorfer, 1972; Taggart, 1981; U.S. General Accounting Office, 1982) or the number of grades completed (Somers & Stromsdorfer, 1972). The Somers and Stromsdorfer study found that trainees generally had less of a chance of graduating than did their controls. The study did show, however, that black males and white females displayed no statistically significant increased likelihood of graduating from high school, while black females had an increased (12.5%) chance of graduating from high school.

The impact of work experience in improving the employability of trainees was mixed. Somers and Stromsdorfer's study found that NYC males, due to increased labor force participation, showed improvements in earnings while females did not. Blacks in the NYC seemed to gain more than whites in earnings (Kiefer, 1979; Somers &

Stromsdorfer, 1972). Studies by Mangum and Walsh (1980) reported that there was no relation between occupational success and part-time work (Mangum & Walsh, 1980).

Participant gains from work experience programs have been less consistent than other training programs. For example, in Supported Work for AFDC recipients, only women who had not worked before showed wage rate gains. This contrasts with wage rate gains for all women in classroom training and OJT. Youth frequently gain in employment from work experience. Gains are increased, for example, as a result of reduced dropout rates or more part-time school employment when jobs are linked to school. Youth employment programs were effective in putting minority youth to work but had little impact on future employment.

Public Service Employment Programs

Public service employment (PSE) programs provided short-term employment to the unemployed. While PSE appears successful as a short-run measure to increase aggregate employment, it has not been as successful as a training program. As a job creation program, PSE can be evaluated with regards to the effect on aggregate employment, the participants it serves, and the impact it has on the local economy.

In its evaluation of PSE, the National Urban Coalition (1972) found that most of the persons served by PSE were relatively advantaged; participants were typically adult males with at least a

high school education who had only recently become unemployed.

When CETA was enacted in 1973, Title II contained a small PSE component but the program was limited to areas of substantial unemployment. A year later, Title VI was added as a one-year, countercyclical PSE program. It too served mostly more advantaged unemployed workers. In addition, there was evidence that city governments were utilizing Title VI to pay normal city employees.

The Emergency Jobs Program Extension Act of 1976 tightened targeting requirements and deterred substitution by employing participants in short-term projects outside ongoing governmental services. It also utilized nonprofit agencies as employers.

Johnson and Tomola (1977) suggest that concern with the size of the fiscal substitution is dependent on whether "PSE is viewed primarily as (1) a counter-recession policy, (2) an anti-poverty program, or (3) a form of revenue sharing" (p. 3). With regard to its effect as a counter-recession policy, Johnson and Tomola's study found that fiscal substitution was small. PSE was a very effective short-run policy.

Restructuring PSE in 1976 appeared to move PSE toward serving more workers from families on public assistance or whose income was below the poverty level. Bassi (1982) reported that by 1980, 99% of PSE participants were disadvantaged. Similarly, Nathan (1981) and the National Commission for Manpower Policy (1978) found that Title VI PSE moved toward serving low-income, long-term unemployed people.

As a strategy to reduce demand-deficient unemployment, PSE

appears to be a successful approach in the short-run. PSE appeared ineffective either in the long-term redistribution of jobs toward disadvantaged workers or in the provision of training that would positively affect the subsequent earnings of disadvantaged trainees. A CBO study (1981) found that PSE had more distributive effects after the 1976 and 1978 reforms.

Supportive Services

The level of supportive services to enrollees has been substantially reduced with the advent of JTPA in 1983. The advisability of their change is difficult to assess because little research has been done to evaluate the effect of supportive services either on the feasibility of a person participating in training or on the effects of supportive services on labor force participation, wage rates, or other program impacts.

Smith and Hergberg (1972) conducted a study to analyze the impact of day care on female participation in WIN-supported work. He reported that the availability of child care affected both a caseworker's decision to refer a woman to WIN and a woman's ability to participate in WIN. Sixty-two percent of the caseworkers perceived child care problems as barriers; over two-thirds cited the availability of child care as an important determinant in their decision to refer clients to WIN. With regard to client participation, 20% of the women who were not enrolled had dropped out of WIN or pointed to lack of child care as a problem. The 1976

Survey of Income and Education showed that one-third of female nonparticipants desiring youth jobs cited family responsibilities and child care problems as major reasons for their inability to seek work (Hahn & Lerman, 1983).

Hahn and Lerman reported that in-school work experience programs enhanced by remedial education, pre-employment services, counseling, and other support services had a modest impact on bringing dropouts back to school and retaining those youth once they were back to school. Summer work programs which incorporated remedial education, pre-employment services, and other support slightly increased school enrollment and part-time employment for participants the following autumn. Hahn and Lerman suggest that other work experience programs not tied to remedial services or post-program vocational opportunities are unlikely to produce the same results as "enhanced" work experience. Job placement services in CETA youth programs were found to help youth obtain jobs quickly but did not improve the subsequent wage rate. Taggart's study (1981) found that placement services provided by the Youth Opportunity Centers, the Concentrated Employment Program, and the Work Incentive Program displayed limited success.

Other research conflicts with these findings. Walther and Magnusson's (1975) analysis of the NYC, Mott and Moore's (1976) analysis of vocational counseling, and Walther's (1976) general analysis of the Department of Labor's school-to-work transition program all found no correlation between the amount of time spent in

counseling and employment success.

Program evaluations provide little other information with which to assess the effect of support on program participation and other outcomes. Research from other related social programs lends some support to the perception that the provision of supportive services facilitates program participation for certain disadvantaged groups. For example, other types of services appear to affect women's utilization of and retention in substance abuse programs. A positive relationship between the number of support services and the number of women served in alcoholism programs was reported by Beckman and Kopel (1982).

Although evidence is limited, it appears that provision of ancillary services may increase access to and retention in employment and training programs. In reducing support services, enrollees may be drawn from groups who presently receive some form of public or private assistance, such as adults on public aid or youth who are supported by family members. Fewer enrollees may be low-skilled working adults; these adults may take a minimum wage, dead-end job since they are financially unable to invest in a training program (Bendick, 1982). The impact of a given support service may be dependent upon the target group. Attention must be given to clarifying what are effective or necessary supportive services and for whom those services are effective or supportive before the full impact of supportive services can be determined.

An examination of evaluation research on job training in this

section provides an historical perspective on the effectiveness of various manpower programs. It is also useful to review Michigan's job training programs for the period of 1983 to 1986 in Chapter III because such a review should furnish us with an overview of Michigan's JTPA programs. Thus, sound future manpower policies can be further developed.

CHAPTER III

OVERVIEW OF MICHIGAN'S JOB TRAINING PROGRAMS, 1983-1986

This chapter presents a brief overview of Michigan's Job Training programs for the period of 1983 to 1986.

Background

The purpose of JTPA is "to establish programs to prepare youth and unskilled adults for entry into the labor force and to offer job training to those economically disadvantaged individuals and other individuals facing serious barriers to employment, who are in special need of such training to obtain productive employment" (JTPA, 1983). The JTPA was implemented in 1983 in Michigan. Responsibility for meeting these challenges in Michigan rests on the combined efforts of the Michigan Department of Labor, the Governor's Office for Job Training, and the Michigan Job Training Coordinating Council (MJTCC) under the authority of the governor. These institutions represent the cooperation of private industry, government, education, and labor organizations to meet local needs.

The MJTCC has a range of members representing business, government, education, and labor. Its task is to set statewide policy for Michigan human investment programs. The Michigan Department of Labor has the responsibility for providing SDA program support and is also responsible for JTPA performance evaluation, monitoring, contracting, management information, and financial

management. The Governor's Office for Job Training provides staff support to the MJTCC, serves as a clearinghouse for training information, and selects providers for the JTPA Title III (Dislocated Workers) programs.

Twenty-six Service Delivery Areas (SDAs) were created by the state to administer local JTPA programs (see Figure 10 in Appendix D). Private Industry Councils (PICs), chaired by local business leaders, were also established within these SDAs. These PICs have become working partnerships offering policy and program direction to local job training programs.

Placement is a priority stressed by MJTCC policies. To be truly effective, job training programs must lead to jobs. Performance standards developed by USDOL are also used by the state to evaluate the performance of service delivery areas. SDAs performing above their standards are awarded incentive grants; SDAs performing below such standards for two consecutive years are sanctioned.

The following sections look at the allocations of funds and the number of JTPA participants, terminees, and program outcomes in Michigan for the period of October 1, 1983 to June 30, 1986.

JTPA Allocation of Funds for Michigan

The Job Training Partnership Act, which replaced the CETA program in FY 1983, was authorized as a permanent program but the law established no specific funding level for each activity.

Instead "such sums as necessary" are authorized to be appropriated for each program, with the exception of the Job Corps which was authorized for a \$618 million appropriation in FY 1983 and "such sums" thereafter.

Allocations among programs authorized under the Job Training Partnership Act are as follows: "such sums as necessary" are authorized for adult and youth training under Title IIA, for dislocated workers under Title III, and for national programs under Title VI except for the Job Corps, which has a separate authorization.

Table 1 shows the distribution of JTPA allocations of funds for Michigan for the period of October 1, 1983 to June 30, 1986. Total allocations of JTPA funds for Michigan for this period were \$532.6 million. Approximately 54% of JTPA funds for Michigan were allocated for Title IIA economically disadvantaged; 22.6% for Title IIB summer youth; and 6.4% for Title III dislocated workers.

Table 1
Job Training Partnership Act Allocation of
Funds for Michigan, October 1, 1983
to June 30, 1986

Funding Source	Allocation	Percent
Title IIA (Economically Disadvantaged)	\$286,800,000	53.8
Title IIB (Summer Youth)	120,100,000	22.6
Title IIA (Older Workers)	11,500,000	2.2
Title IIA (Education Coordination Grants)	30,600,000	5.7
Title IIA (Incentives/ Technical Assistance)	22,900,000	4.3
Title IIA (Administration)	19,200,000	3.6
Title III (Dislocated Worker)	33,900,000	6.4
Title III (U.S. Discretionary)	7,600,000	1.4
Total	\$532,600,000	100.0

Source: Michigan Department of Labor, 1986, A Report to the Governor From the MJTCC. Lansing, MI: Author, p. 6.

Enrollment and Placement Data

Table 2 illustrates the distribution of Michigan's JTPA participants by funding source for the period of October 1, 1983 to June 30, 1986. Total enrollment for this period was 259,864. Of this total, 55.3% participants were enrolled in Title IIA Economically Disadvantaged programs; 24.8% in Title IIB Summer Youth

Employment programs; and 10% in Dislocated Workers programs.

Table 3 also shows the distribution of Michigan's JTPA terminees by funding source for the period of October 1, 1983 to June 30, 1986. During this reporting period, 201,437 enrollees were terminated from JTPA programs, and 110,570 terminees entered employment. This results in a placement rate of about 60% for JTPA Title IIA programs. Title III dislocated workers programs had the highest placement rate of 71.2%, since they were better educated and also had longer years of employment history. Thus, they are much easier to place in jobs after training than their counterparts in other JTPA programs.

The summer Youth Employment programs had a placement rate of about 44% during this reporting period. If one uses the positive termination rate to measure the success of Summer Youth programs, the positive termination rate was about 68%. This reflects, in part, that a large portion of Summer Youth programs were designed to improve youth's employability skills rather than focus on placement as their immediate program objectives.

Table 2

Distribution of Michigan's JTPA Participants by Funding Source
October 1, 1983 to June 30, 1986

Funding Source	Number Enrolled	Percent
Title IIA (Economically Disadvantaged)	143,645	55.3
Title IIB (Summer Youth)	64,557	24.8
Title IIA (Older Workers)	5,958	2.3
Title IIA (Education Coordination Grants)	19,810	7.6
Title III (Dislocated Workers)	25,894	10.0
Total	259,864	100.0

Source: Michigan Department of Labor, 1986, A Report to the Governor From the MJTCC. Lansing, MI: Author, p. 10.

Table 3

Distribution of Michigan's JTPA Terminees by Funding Source
October 1, 1983 to June 30, 1986

Funding Source	Number of Terminees	Number Placed	Placement Rate
Title IIA (Economically Disadvantaged)	102,705	61,778	60.2
Title IIB (Summer Youth)	62,966	27,664	43.9
Title IIA (Older Workers)	4,385	1,925	43.9
Title IIA (Education Coordination Grants)	12,158	5,513	45.3
Title III (Dislocated Workers)	19,223	13,690	71.2
Total	201,437	110,570	54.9

Source: Michigan Department of Labor, 1986, A Report to the Governor From the MJTCC. Lansing, MI: Author, p. 11.

Michigan's Performance Evaluation System

The State of Michigan monitors its SDAs according to the performance standards laid out in the Job Training Partnership Act. As discussed in the introductory section, USDOL's performance standards models are utilized by the state as the basis for both distributing its annual incentive grants to good performing SDAs and sanctioning those SDAs which are performing below standards. Michigan's JTPA system is thus driven by ETA's performance standards models.

Performance Comparisons of CETA and JTPA Programs, 1981-1986

Given the widely held belief that JTPA is an improvement over previous efforts at training low-income and low-skilled people, it is important to compare the performance of CETA in Michigan with the initial results of JTPA in meeting the needs of disadvantaged workers. Specifically, CETA will be compared with JTPA in terms of: (1) the participation levels of minority and disadvantaged workers; (2) entered employment rates; and (3) cost per entered employment.

Direct comparisons between JTPA and CETA are complicated by data limitations. The Comprehensive Employment and Training Program, the most important CETA program (in terms of the number of participants), is analogous to Title IIA of JTPA. However, between Fiscal Years 1976 and 1981, most of the funding for CETA went into public sector employment programs--one for unemployed workers in regions of the state where the unemployment rate exceeded 6.5% and the other to combat unemployment connected to downturns in the economy. JTPA, in turn, has a major program not included in CETA, the Title III dislocated workers program.

Tables 4 and 5 are used as the basis of comparisons for some selected indicators between JTPA and CETA programs. More specifically, Table 4 shows the percentage of participants by significant segment and Table 5 presents entered employment and positive termination rates.

Comparisons by significant segment groups reveal that: (1)

there are more individuals aged 22-54 enrolled under JTPA than CETA; (2) there are more high school graduates enrolled under JTPA than CETA; (3) there are more whites enrolled under JTPA than CETA; and (4) there are less AFDC recipients enrolled under JTPA than CETA.

The average entered employment rates during the last three years of CETA (FY 1981 through FY 1983) were much lower than the first three years of JTPA. The differences in the entered employment rates between CETA and JTPA programs may be attributable to the greater likelihood that adults aged 22-54, high school graduates, and whites would find a job after leaving the program. Thus, JTPA entered employment rates were far above the levels recorded under the CETA programs. This reflects, in part, the greater selectivity of the JTPA program and the higher educational level of its participants, as well as the placement standards which cause training agencies to lose funds and contracts unless a specific placement rate is obtained. If one considers total positive terminations rather than simply entered employment figures, the relationship between CETA and JTPA is much closer (see Table 5). It is interesting to note that the placement rate declined 1 percentage point to 61% in PY 1985 from the preceding year while the positive termination rate rose 5 percentage points to 75% in PY '85.

Table 4
Percentage of Participants by Significant Segment
for the Period of 1982 to 1986

Significant Segment	FY '82*	FY '83*	PY '84**	PY '85**
Total Participants	110,922	115,317	52,654	56,826
Males	53	53	52	50
Females	47	47	48	50
Under 22	61	61	38	42
22-54	37	37	60	56
55+	2	2	2	2
Less than High School Education	56	55	33	38
High School or Beyond	44	45	67	62
Whites	56	56	66	64
Blacks	35	35	30	31
Hispanics	6	7	3	3
Native American/Asian	3	2	1	1
AFDC Recipients	45	45	31	31

NOTES:

* Enrollment data for all CETA programs (Titles II B/C, IV A, and VII)

** JTPA Title II A Enrollment Data

Source: Michigan Department of Labor, 1983, Michigan CETA Activity Report for October 1, 1982 Through September 30, 1983, Lansing, MI: Author, p. 21.

Table 5

Entered Employment Rate, Positive Termination Rate for
CETA and JTPA IIA Programs, 1981-1986

Year	Entered Employment Rate (%)	Positive Termination Rate (%)
FY '81*	34	70
FY '82*	35	66
FY '83*	29	62
IPP '83**	56	60
PY '84**	62	70
PY '85**	61	75

NOTES:

- * Enrollment data for all CETA programs (Titles II B/C, IV A, and VII)
- ** Enrollment Data for JTPA Title II A Programs

Source: Michigan Department of Labor, 1983, Michigan CETA Activity Report for October 1, 1982 Through September 30, 1983, Lansing, MI: Author, p. 47.

Table 6 presents the cost per entered employment between CETA Titles II B/C, IV A, and VII and JTPA IIA programs. The cost per entered employment during the initial three years of JTPA (i.e., Program Years 1983 through 1985) showed a much lower figure than the last three years of CETA. This reflects, in part, the greater selectivity of the JTPA program because of the mandate of the performance standard (i.e., cost per entered employment) which caused SDAs to enroll more high school graduates into the program under JTPA than CETA.

Table 6
 Cost Per Entered Employment for CETA Title I/II BC and
 JTPA IIA Programs
 1981-1986

Year	Cost Per Entered Employment
FY '81	\$8,010
FY '82	6,514
FY '83	4,933
PY '83	3,828
PY '84	3,341
PY '85	3,222

Source: Michigan Department of Labor, 1983. Michigan CETA Activity Report for October 1, 1982 Through September 30, 1983, Lansing, MI: Author, p. 47.

CHAPTER IV

EVALUATION OF THE PRESENT ETA PERFORMANCE STANDARDS MODELS

This chapter evaluates the present ETA's JTPA Title IIA Performance Standards regression models. Four sets of technical issues are examined: the issues of definition, measurement, estimation and equity. In addition, ETA's models are reestimated on Michigan PY '84 data. This task involves using the specification of the ETA models and reestimating regression coefficients using data taken from the Michigan PY '84 JTPA reports. The following analysis concentrates on the issues mentioned above.

Background

The Job Training Partnership Act was the first of the major Reagan New Federalism proposals enacted by Congress in 1982. The new law represents a major shift in assumptions and policies concerning unemployment, and it provides an important test of the general orientation of the New Federalism program toward business-oriented training. The intent and goals of this new law concentrate on short-term training, a fundamental change in intergovernmental relations in service delivery, and a stronger emphasis on performance monitoring.

Under the new law, the federal responsibilities have been shifted to the states and to Private Industry Councils (PICs) at the

local service delivery areas. The states have the overall responsibilities for coordination, supervision, review, monitoring and assignment of performance goals and sanctions for nonperformance (Guttman, 1983). Title I-A, Section 106 of the legislation also requires sanctions for poor performance, and awards incentive grants for exceptional performance (JTPA, 1982). To implement the new law, the Secretary of the U.S. Department of Labor proffers a set of performance standards that must be based on a set of identified factors. Governors can make adjustments to the standards in their respective states and within tolerance ranges set by the secretary. The states are charged with the responsibility for implementing the performance standard system, including the use of bonuses and sanctions.

The JTPA Performance Evaluation System

The JTPA performance evaluation system utilizes the service delivery area as the unit of analysis. It uses aggregate measures, such as placement rate, average wages, and cost of program services. Therefore, it has certain significant characteristics which are discussed as follows:

First, it places a strong emphasis on short-term program outcomes at termination. Second, the states are allowed to adjust the performance standards derived from ETA's models and can even develop their own performance standards models. Third, the states have overall responsibility for setting performance expectations for

each SDA, and also monitoring and evaluating SDA performance. Finally, SDA performance is associated with fiscal incentives and sanctions. Good performers are awarded with incentive grants, and poor performers are sanctioned.

JTPA is distinctly different from CETA in intent, funding, administration, and service delivery. These differences confronted ETA with a difficult task in operationalizing a performance standards system, not just conceptually but quantitatively. Furthermore, new or old, the system was compelled to produce program data.

The starting point was found in the regression work done to develop the performance benchmarks for FY 1982 under CETA. New regression models were developed by ETA on six performance criteria using FY '82 CETA data adjusted to definitions appropriate to JTPA. The service delivery areas of JTPA and CETA are not the same. All parameter estimates for calculating the performance expectations on 595 SDAs under JTPA are based upon FY 1982 CETA data as reported by the 475 prime sponsors. In its national JTPA study for the USDOL, the Westat corporation estimated that only 52% of all prime sponsors under CETA survived intact as SDAs under JTPA. This figure represents less than 40% of all SDAs (Cook, 1983).

The establishment of performance standards for job training programs is mandated by Congress to assess the return on the investment in human capital through JTPA. The basic return on the investment is appraised by the increased employment and earnings of enrollees and the decrease in welfare dependency. Performance

measures are separately defined for the adult and youth programs under Title IIA.

As discussed earlier in Chapter I, ETA has defined seven performance measures to evaluate national job training programs. Each of these performance measures except the adult welfare entered employment rate is associated with a set of local variables that serve to provide a basis for computing an expected performance level for each local area. The variables used in the performance standards models are summarized in Table 7 below.

Table 7
Variables Included in the JTPA Performance Models

Variables	Adult Models			Youth Models		
	EER	CEE	AWP	EER	PTR	CPT
Terminee Characteristics (all in %)						
- Female	x	x	x	x	x	x
- 14-15 Years Old				x	x	x
- 55 Years Old and Over	x	x	x			
- Black	x	x	x	x	x	x
- Hispanics	x	x	x	x	x	x
- Other Minority	x	x	x	x	x	x
- Dropout	x	x	x	x	x	x
- High School Grad & Above	x	x	x	x	x	x
- Handicapped	x	x	x			
- Unemployment Comp. Claimant	x	x	x	x	x	x
- Welfare Recipient	x	x	x	x	x	x
- Single Head of Household	x	x	x	x	x	x
Av. Wks Program Participation		x				x
Local Economic Conditions						
- Area Average Wage	x	x	x	x	x	x
- Unemployment Rate	x	x		x	x	x

The ETA's Performance Standards Regression Models

The Job Training Partnership Act of 1982 became operational in October, 1983, and by the end of January 1984, ETA was to have in place its performance standards system. The evaluation system was to be fully operational for Program Year 1984, which encompassed the period from July 1, 1984, to June 30, 1985. Given the short period for implementation, the present evaluation system represents quite an accomplishment, not just technically, but especially in the coordination of effort between ETA and the various state governments.

Data from the CETA Fiscal Year 1982 provided the input for developing the JTPA Title IIA performance standards models. No other data base existed, and although it was possible to adjust CETA report definitions to JTPA, it was not possible to adjust the areas. This is due to the fact that the administrative regions of JTPA and CETA are not the same. The CETA files contained data on prime sponsors and could not be disaggregated geographically or by individual. It was thus not possible to reconstitute the data to the service delivery area of JTPA.

Descriptive Statistics

Actual estimations were derived by USDOL from CETA data in the following manner:

Adult Models

CETA Title II-B/C data

1. Local variables: Quarterly Summary of Participant Characteristics, FY '82 4th quarter reports; Program Status summary reports (average weeks of participation only).

2. Performance measures: Program Status Summary reports; Quarterly summary of Participant Characteristics, FY '82 4th quarter reports (average wage at placement only).

Youth Models

CETA Title IV-A data

1. Local variables: Quarterly Summary of Participant Characteristics, FY '82 4th quarter reports; Program Status Summary reports (average week of participation only).

2. Performance measures: Program Status Summary reports

Descriptive statistics on all local variables are shown in Tables 8 and 9. Table 10 provides descriptive statistics for the performance measures.

Table 8
Means, Standard Deviations and Ranges of
Local variables: Adult Models*

Variable	Mean	Standard Deviation	Minimum	Maximum
% Female	51.508	8.303	16.509	79.134
% 14-15	41.107	12.459	12.278	80.732
% 55 and over	2.192	2.242	0.0	20.149
% Black	29.653	25.888	0.0	95.772
% Hispanic	9.650	15.317	0.0	98.095
% Other Minority	5.261	8.593	0.0	74.655
% H.S. Dropout	29.292	10.222	0.0	64.387
% H.S. grad and above	57.332	13.030	13.514	90.687
% Handicapped	10.285	6.311	0.093	32.231
% Welfare	28.187	12.433	4.636	82.116
% U.C. Claimant	6.941	5.143	0.0	47.443
% Single Head Household	21.272	7.307	4.197	49.649
Avg. Weeks Participation	22.243	8.019	8.796	67.704
Area Avg. Wage (000)	15.245	2.098	10.517	24.689
Cal. Yr. '82 Unemp. Rate	10.022	3.627	3.700	20.500

*n = 437

Source: CSR, Inc. (1984). Documentation of Statistical Analysis Undertaken for the Development of JTPA Title II/A PY '84 Performance Standards Model Based Adjustment Methodology (Tech. Rep. No. 1, p. A-53). Washington, DC: Author.

Table 9
Means, Standard Deviations and Ranges of
Local Variables: Youth Models*

Variable	Mean	Standard Deviation	Minimum	Maximum
% Female	48.473	9.016	21.466	82.407
% 14-15	9.193	13.795	0.0	71.795
% Black	35.720	31.057	0.0	100.000
% Hispanic	10.022	17.354	0.0	100.000
% Other Minority	4.764	9.740	0.0	100.000
% H.S. Dropout	19.704	16.993	0.0	87.200
% H.S. Grad and above	16.300	14.407	0.0	89.474
% U.C. Claimant	0.973	2.120	0.0	35.141
% Welfare	30.137	16.399	0.033	102.703
% Single Head Household	5.585	5.809	0.0	43.243
Avg. Weeks Participation	20.890	11.369	8.710	88.679
Area Avg. Wage (000)	15.248	2.117	10.517	24.689
Cal. Yr. '82 Unemp. Rate	10.155	3.885	3.700	31.200

*n = 422

Source: CSR, Inc. (1984). Documentation of Statistical Analysis Undertaken for the Development of JTPA Title II/A PY '84 Performance Standards Model Based Adjustment Methodology (Tech. Rep. No. 1, p. A-53). Washington, DC: Author.

Table 10
Descriptive Statistics of Performance Measures

Variable	Mean	Standard Deviation	Minimum	Maximum
Adult*				
Entered Emp. Rate	47.015	13.776	14.286	94.271
Cost/Entered Emp.	5801.381	2738.659	1645.527	16593.781
Avg. Wage at Place.	4.436	0.559	3.074	8.331
Youth*				
Entered Emp. Rate	21.353	15.229	0.0	87.500
Positive Term. Rate	80.233	12.729	23.077	100.000
Cost/Pos. Term.	2581.744	1819.225	92.759	14634.389

* Adult n = 437; Youth n = 422

Source: CSR, Inc. (1984). Documentation of Statistical Analysis Undertaken for the Development of JTPA Title II/A PY '84 Performance Standards Model Based Adjustment Methodology (Tech. Rep. No. 1, p. A-53). Washington, DC: Author.

It should be noted that the actual observations used in Tables 8 to 10 were less than the total available in the CETA data base, which contained 475 prime sponsors. Deletions occurred for one or more of the following reasons:

1. Atypical prime sponsors: island areas of Puerto Rico, American Samoa, Guam, Virgin Islands, Northern Mariana Islands, and the Trust Territory of the Pacific Islands
2. Missing one or more quarterly reports

3. Missing data on average wage at placement
4. Discrepancy greater than ten between either total terminations or entered employment as reported on Program Status Summary and Quarterly Summary of Participant Characteristics
5. Extreme values
6. Actual cost per entered employment exceeded \$20,000
7. Actual cost per positive termination exceeded \$20,000
8. Actual average weeks of participation were less than 8.6 or greater than 129.9 weeks

Application of these deletion criteria resulted in an observational base of 437 for the adult models and 422 for the youth.

ETA's Regression Models

Each of the performance standards models was estimated using an econometric technique called ordinary least squares. ETA's final models for Program Year '84 are summarized in Tables 11 and 12 for the adult and youth programs, respectively. Each of the models is statistically significant with R^2 values ranging from a low of .3158 to a high of .4600. Issues concerning these models and estimates are the essence of this chapter.

Table 11
Regression Results for Adult Program Models

	<u>Ent. Emp. Rate</u> ETA	<u>Cost/Ent. Emp.</u> ETA	<u>Avg. Wage Plcmnt</u> ETA
% Female	.030	76.954***	-.005
% Youth	-.007	6.200	-.005
% 55 and over	.264	-109.638*	-.016
% Black	-.100***	10.753*	-.004***
% Hispanic	.095**	-10.267	.000
% Other Minority	.111	-30.845**	.006*
% Dropout	.067	22.191	-.008**
% High School +	.344***	-12.708	.001
% Handicapped	-.288**	1.655	.006
% Welfare	-.217***	29.211***	-.002
% U.C. Claimant	.288**	-23.740	.003
% Single Head Hshld	.106	-105.782***	.003
Avg. Wks. Part		126.311***	
Area Wage	-.440	265.830***	.118***
Unemployment Rate	-1.200***	228.204***	

Table 11--Continued

	<u>Ent. Emp. Rate</u> ETA	<u>Cost/Ent. Emp.</u> ETA	<u>Avg. Wage Plcmnt</u> ETA
n	437	437	437
R ²	.4315	.4600	.3374

* Significant at the .05 level.

** Significant at the .01 level.

*** Significant at the .001 level.

Source: U.S. Department of Labor, ETA. (1984). Guide for Setting JTPA Title IIA Performance Standards for PY '84, Technical Assistance Guide, January 1984. Washington, DC: Author.

Table 12
Regression Results for
Youth Program Models

Variable	Ent. Emp. Rate ETA	Pos. Term. Rate ETA	Cost/Pos. Term. ETA
% Female	.202*	.212**	2.317
% 14-15	-.062	.106**	-7.633
% Black	-.092***	-.005	1.498
% Hispanic	-.027	.026	3.095
% Other Minority	-.065	.156**	-8.974
% Dropout	.193***	-.266***	37.331***
% High School +	.367***	-.161***	37.314***
% U.C. Claimant	.524		.595*
% Welfare	-.125**	-.111***	3.550
% Single Head Hshld	-.062	.069	-34.203
Avg. Wks. Part.			80.215***
Area Wage	.269	-.314	49.676
Unemployment Rate	-.427**	-.499***	50.525**
n	422	422	422
R ²	.3347	.3158	.4570

Source: U.S. Department of Labor, ETA. (1984). Guide for Setting JTPA Title IIA Performance Standards for PY '84, Technical Assistance Guide, January 1984. Washington, DC: Author.

An Analysis of ETA's Performance Standards Models

Generally speaking, no modeling effort is without problems. The analyses in this section seek to probe issues identified with ETA's modeling efforts and to assay each issue in terms of its effects on the integrity of the models. Four sets of issues are discussed: issues of definition, issues of measurement, issues of estimation, and issues of equity.

Issues of Definition

All performance measures and factors describing program clientele are expressed in the context of terminations. In CETA reporting, program clientele were reported as participants, terminees, or entrants into unsubsidized employment. The language of the JTPA legislation, quoted earlier, is in terms of participants, but ETA has defined performance measures in the context of terminees. The ETA's decision appears to be affected by the following argument presented by CSR, Inc.:

The argument in favor of terminee characteristics is that JTPA is outcomes oriented, the performance measures are outcomes based, and, therefore, terminee characteristics are more appropriate for modeling than participant characteristics. The decision on participant vs. terminee characteristics is made on both statistical and policy grounds. Since the statistical results are inconclusive, programmatic consideration dictated the model choice. Since the performance measures describe terminee outcomes, the appropriate choice in this case would be to use terminee characteristics (CSR, 1984, p. 10).

The circular reasoning in this argument should be readily

apparent. Performance measures describe terminnee outcomes only if they are defined to do so! Such measures could just as well describe the outcomes of participants. The focus on terminations does denote a shift away from the development of performance standards that occurred under CETA because the reference base under CETA was participants.

At least three questions surface over the use of terminations as a base. First, does using terminees as a base better capture the intent of the legislation than using participants? A second issue concerns ETA's tests for inclusion in the models, especially the test that a factor had to be beyond the control of an SDA. Can an SDA control who is reported as a terminnee and when? Third, do the alternative bases result in different evaluations and model estimates in terms of the outcomes of the CETA/JTPA programs?

Whether examining participants or terminees best captures the intent of the legislation is debatable. Clearly, the emphasis in the legislation on a performance standards system mandates a focus on outcomes. However, the legislation also stresses defining eligibility for participation in the program. Eligibility is defined in terms of being disadvantaged as a participant in the labor force. Specifically, a disadvantaged worker is one who receives cash welfare payments, who is an individual or member of a family with an income not meeting defined poverty levels, or who is an adult with mental or physical disabilities constituting a substantial handicap to employment (JTPA, 1982). The question at

hand, simply stated, is whether to define outcomes and client characteristics in terms of all participants in the program or in terms of only those participants who terminated from their program activities. Since all participants ultimately become terminees, the question seems specious.

This issue of terminees versus participants as a definitional base is confounded by another issue, namely, that factors included in the models are beyond the programmatic control of an SDA. The question here is whether an SDA can exercise control over who participates in a local JTPA program. Examining this question under CETA, Coffin (1983) postulated that:

When approached as a production problem, the objective of a prime sponsor is to develop a program that maximizes positive terminations generally and job placement specifically. Since the prime sponsor has some control over two aspects of production, personal characteristics of participants and program services offered, we should expect some explicit effort to select personal characteristics and program services to accomplish this production objective. (p. 7)

Coffin's empirical work supported his hypothesis. A focus on terminations rather than all program participants encourages SDAs to pursue short-term outputs and be even more selective on the input side than the prime sponsors were under CETA. The fact that JTPA places much greater emphasis on training than CETA does not alter this expectation. Quite to the contrary, as Jackson (1983) observes:

The risk of non-employment further reduces the desirability of training the most disadvantaged workers. Decision makers who tend to make training decision based either on the expected or actual benefits will generally select the least disadvantaged for training. Thus the selection of the disadvantaged may not be the result of an effort to

exclude the more disadvantaged participant but simply an effort on the part of human resource administrators to maximize the implicit goal of most human resource training programs - employment. (p. 6)

With the cost restrictions that exist under JTPA, which significantly limit administrative and support services costs, SDAs may well elect to serve those with good skills as opposed to those more in need of training--the more economically disadvantaged. Moreover, SDAs, like their prime sponsor equivalents under CETA, may choose not to report as a terminnee, an individual who has completed a program but has yet to be placed in employment.

This process of intake, service programming and termination is conceptualized under JTPA in Figure 1. The performance task of the SDA is to maximize positive terminations, a task which necessitates that the intake process screen applicants, selecting those most readily served by the program mix funded by the SDA. On the outcomes portion, the SDA has had an opportunity to select "input", plan activities for the participants, and recycle participants not ready for placement or delay reporting nonpositive terminees.

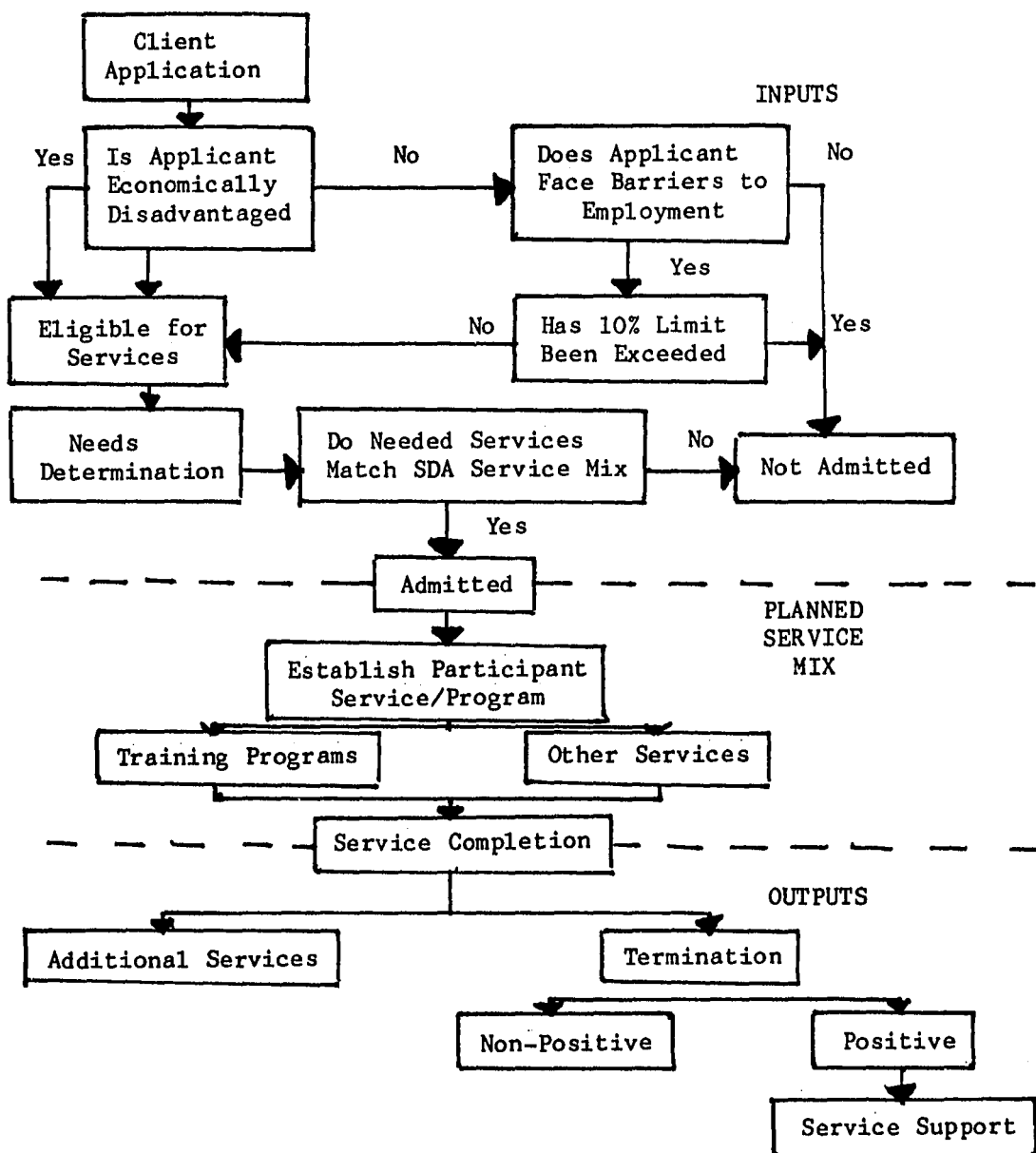


Figure 1. Participant Flow in JTPA

On the basis of the above observations, when terminations are used as the definitional basis for performance measures and explanatory variables, actual calibrations of program outcomes

should be biased upward and may serve more as a mask than a gauge of the degree to which the program is serving disadvantaged workers.

Issues of Measurement

The performance standards system has been operational since JTPA Program Year 1984 (July 1, 1984 to June 30, 1985). This necessitated some measurement adjustments in order to cast CETA reports into JTPA measurements. Certain issues emerge from these translations. The first concerns the measurement criteria distinguishing adults from youth. Under JTPA, Title II-A, at least 40% of the program funds are designated for youth, defined as persons 16-21 years of age, and a maximum of 60% can be expended on adult programming. As has been noted, distinct performance measures have been defined for these separate adult and youth programming activities.

Data from programs under CETA Title IIB/C were used to estimate JTPA adult measures and models, and CETA Title IVA data were used for JTPA youth measures and models. Both age groups defined under JTPA were served under each of the two CETA programs; however, ETA factors and measures were defined on a program basis without deleting the appropriate age group. Thus youth (under 22 years of age) who participated and/or terminated under CETA Title IIB/C are included in the data used to calibrate the JTPA performance standards models for adults. Similarly, adults are included in the CETA Title IVA data used to estimate the JTPA youth performance standards. Thus, the

data for adults and youth were contaminated.

Issues of Estimation

Each of the performance standards models was fitted using ordinary least squares regression and regression results were previously summarized in this chapter.

Of interest in the adult models is the presence of a "percent youth" variable, which is not included in the performance standards worksheets distributed by ETA (see Appendix A). Defined as terminees under the age of 22 as a percent of all terminations from CETA Title IIB/C, the "percent youth" variable appears not to have a statistically significant effect ($\alpha=.05$) on the dependent variables in the models. The variable was simply deleted when the worksheets were prepared, but the models were not reestimated. This procedure poses no major statistical issue because the inclusion of an irrelevant variable does not introduce bias into either the parameter estimates or the residual variance, unless the parameters are unstable.

Regression modeling has become a common tool to support policy development and decision making (Bernet & Lumsdaine, 1975). However, conventions have not yet emerged for determining when a regression analysis has achieved accuracy sufficient to support decision making, especially in regard to social programs. Analysts evaluate regression models supporting policy decisions in terms of logical and empirical validity. Such evaluation addresses the internal validity

of the analysis, the linkage between the analysis and the substantive issue being modeled, verification of the model, and replicability (Strauch, 1975). However, even when logical structures are reasonable and acceptable and the statistical fit of the models is satisfactory, the policy decision maker must judge whether the complete modeling sufficiently represents the problem with which he or she is confronted. In the case of the performance standard models the two estimation questions being raised are questions of sufficiency and model specification.

The first question concerns whether the fitting of the models sufficiently explains the variance found in the CETA system so as to allow the decision maker to use the models with confidence. Simply stated, the first question asks whether the R^2 of ETA's regression models are sufficiently large. The R^2 and F-Ratios of ETA's models are summarized in Table 13 below.

Table 13
Multiple Correlation Coefficients and F-Ratios
of ETA Models

	R ²	F-Ratio
Adult		
EER	.4315	22.880
C/EER	.4600	23.912
AWP	.3374	16.572
Youth		
EER	.3347	17.143
PTR	.3158	15.730
C/PT	.4570	26.413

Source: CSR, Inc. (1984). Documentation of Statistical Analysis Undertaken for the Development of JTPA Title II/A PY '84 Performance Standards Model Based Adjustment Methodology (Tech. Rep. No. 1, P. A-53). Washington, DC: Author.

High levels of statistical significance are achieved with each model, and each model passes the "useful" regression test, as described in Draper and Smith's textbook (Draper & Smith, 1981).

However, each regression fails to account statistically for at least half of the variation in the respective performance measures as applied to the CETA system. Is a 46% reconstruction of variance, the best of the models, sufficiently high to use in setting state policy regarding SDA expectations and criteria for awarding incentive funding or technical assistance? The question does not have a

definitive answer; yet, it is not simply a rhetorical issue. Policymaking involves making choices in the race of uncertainty, especially in regard to alternative courses of action and the uncertain outcomes that will result from the ultimate choice. Do the ETA models reduce uncertainty sufficiently?

The problem here may be one of scale as well as risk transfer. Under JTPA, the evaluation function, complete with a reward and sanction system, has been assigned to the states. State policymakers are at risk in using the ETA models, not ETA! The models were designed as national models and were not necessarily controlled so as to assure that each state was uniformly within the confidence bounds of statistical estimation. With more variance left unexplained than explained, high level confidence intervals needed to support decision making will be so wide that one questions whether the models can lend greater objectivity than to the performance evaluation process. Although the statistical fits of the models may be sufficiently accurate for the ETA summary review, they may not be sufficient for the states as they deal with the qualitative and political risk elements in the performance standards and evaluation responsibility. The sufficiency question is given to each state to resolve when it elects to make use of the ETA models in setting performance standards and establishing incentive funding and sanction decision criteria.

Model specification, the second estimation issue, is also a sufficiency question. Model specification is concerned with two related issues: variable selection and how the variables are

represented in the model equation. When a model is properly specified, all of the relevant explanatory variables have been included and the appropriate functional form has been employed. Specification is assessed by examining the residual distribution following model estimation. a properly specified model will exhibit a residual distribution which is essentially random about the zero residual value over the range of actual values. A residual value represents the difference between an actual value on a performance measure for a given prime sponsor and the regression estimate of that value. However, when all of the relevant explanatory variables have not been included, we say that the model is misspecified. Typically, this means that the effects of some explanatory (predictor) variable remains unaccountable for and may lead to biased estimates of other variables. Even if all of the relevant variables have been included, the model may still be misspecified with regard to the functional form in which the variables appear in the equation. In such a case, the residual pattern typically does not display a constancy of variance over the range of actual values. When the residual variance is not constant over the range, the distribution is said to be heteroscedastic, with the consequence that the regression parameters are inefficient and variance estimates are biased (Maddala, 1977). With heteroscedasticity, a different functional form and/or estimating procedure needs to be used. In essence, for example, weighted least squares would be used instead of ordinary least squares.

ETA was careful and methodical in the way in which it constructed and chose the variables for the respective performance standards models. ETA exercised an appropriate and deliberate process of model construction, examining a number of issues including policy acceptability, collinearity, functional forms of variables, and alternative estimation procedures. The possible existence of heteroscedasticity was recognized and ETA attempted, for example, to deflate the effects of size using aggregate expenditures as an index of size and weighted least squares as the estimating procedure. It was concluded that "heteroscedasticity is not a concern for the performance models since the use of a weighted least squares model would not significantly alter the policy implications of the performance standards methodology" (CSR, 1984, p. 15).

The Technical Report does not directly speak to the issue of possible misspecification. In fact, the error term (e_i) presented by ETA in the technical report is of the form ($v_i + e_i$) where v_i is an unmeasured managerial component. This management effect is assumed to be the systematic component found in the residual patterns. But ETA expended its technical effort searching for the misspecification of the functional form of the models and simply assumed that any pattern that could not be corrected through a redefining of the functional form was due to managerial effects.

Issues of Equity

In the normal parlance regarding social programs in general,

and employment and training programs in particular, equity refers to the degree to which targeted population segments are actually being served. In this section, equity is used in a different context. The question here of equity is one which asks whether or not the models and their estimation bear any demonstrable bias with respect to particular geographies and/or groupings of prime sponsors (SDAs).

ETA does not seem to have addressed this question directly but started to consider it with the manner in which alternative modeling results were assessed. With alternative estimating strategies, ETA ranked the residual values and observed that the bottom 20% to 30% of prime sponsors, referring to those prime sponsors which "failed" their predicted performance levels, remained largely unchanged. That is, whether ordinary least squares or weighted least squares was used made little difference. But if the basic problem was omission of relevant variables, then the redefinition of the functional form of the equation would have little effect. That is if relevant variables were missing, then one would not expect any major differences in the rankings of the residuals.

The effects of regions on performance were not assessed by adding appropriate dummy variables to the regression equations. Thus, the effects of the misspecification weigh against agencies with low placement rates and favor those with high placement rates given the models' tendencies to overestimate the former and underestimate the latter. The irony of this bias is that ETA has stated that one of the conditions which states are required to meet

when adjusting performance standards is that the procedures be objective and equitable throughout the state (U.S. Department of Labor, ETA, 1984). ETA's models do not meet this requirement!

Comparison of ETA and Michigan Performance Standards Models

Another way of evaluating the present ETA performance standards models is to reestimate ETA's models on Michigan PY '84 data. This requires the use of those variables included in the ETA models, and the reestimation of regression weights utilizing Michigan PY '84 data. This is done to address two research questions:

1. How well do the ETA models explain performance outcomes in Michigan?
2. If ETA models are reestimated on Michigan data, will the same or distinctly different factor weights be obtained?

Table 14 shows the comparison of performance measures between ETA and Michigan models. While Michigan has higher adult placement and wage rates than the nation, it has a lower adult cost per placement than the nation. For the youth models, Michigan has a higher Youth placement rate than the nation, but it has a lower youth positive termination rate than the nation. Tables 15 and 16 present the comparison of means and standard deviations of local variables between ETA and Michigan models. They indicate that Michigan has distinctly different local variable weights than the nation as a whole.

Table 14
Comparison of Performance Measures Between
ETA and Michigan Models

Perf. Measures	Mean		Std.Dev.		Std.Dev./Mean	
	ETA	Mich.	ETA	Mich.	ETA	Mich.
Adult						
Ent. Emp. Rt.	47.02	70.02	13.78	12.08	0.29	0.17
Cost/Ent. Emp.	5801.38	3262.54	2738.66	1190.84	0.47	0.37
Avg. Wg/Plcmt	4.44	5.09	0.56	0.37	0.13	0.07
Youth						
Ent. Emp. Rt.	21.35	57.57	15.23	14.81	0.71	0.26
Pos. Term Rt.	80.23	74.91	12.73	11.09	0.16	0.15
Cost/Pos. Term.	2581.74	2584.15	1819.23	871.87	0.70	0.34

Table 15
Comparison of Local Variables Between
ETA and Michigan Adult Models

Local Var.	Mean		Std. Dev.		Std.Dev./Mean	
	ETA	Mich.	ETA	Mich.	ETA	Mich.
% Female	51.51	43.89	8.30	7.42	0.16	0.17
% 55 and over	2.19	3.41	2.24	2.34	1.02	0.69
% Black	29.65	19.53	25.89	22.03	0.87	1.13
% Hispanic	9.65	2.48	15.32	2.58	1.59	1.04
% Other Min.	5.26	2.51	8.59	3.82	1.63	1.52
% H.S. Dropout	29.29	18.75	10.22	4.57	0.35	0.24
% H.S. Grad +	57.33	80.06	13.03	4.79	0.23	0.06
% Handicapped	10.29	9.50	6.31	3.73	0.61	0.39
% Welfare	28.19	50.43	12.43	9.96	0.44	0.20
% U.C. Claimant	6.94	7.75	5.14	3.15	0.74	0.41
% Single Hd Hshld	21.27	27.20	7.31	5.20	0.34	0.19
Avg. Wks Part.	22.24	19.58	8.02	5.32	0.36	0.27
Area Avg. Wage	15.25	17.67	2.10	3.13	0.14	0.18
CY '82 Unemp Rt.	10.02	11.75	3.63	2.95	0.36	0.25

Table 16
Comparison of Local Variables Between
ETA and Michigan Youth Models

Local Var.	Mean		Std. Dev.		Std. Dev./Mean	
	ETA	Mich.	ETA	Mich.	ETA	Mich.
% Female	48.47	46.14	9.02	5.60	0.19	0.12
% 14-15	9.19	4.00	13.80	10.08	1.50	2.52
% Black	35.72	23.95	31.06	24.81	0.87	1.04
% Hispanic	10.02	2.60	17.35	2.54	1.73	0.98
% Other Min.	4.76	2.78	9.74	4.98	2.05	1.79
% H.S. Dropout	19.70	17.05	16.99	8.04	0.86	0.47
% H.S. Grad +	16.30	43.94	14.41	16.74	0.88	0.38
% U.C. Claimant	0.97	1.83	2.12	1.10	2.19	0.60
% Welfare	30.14	37.60	16.40	11.27	0.54	0.30
% Single Hd Hshld	5.59	10.95	5.81	4.66	1.04	0.43
Avg. Wks Part.	20.89	19.46	11.37	5.21	0.54	0.27
Area Avg. Wg (000)	15.25	17.64	2.12	3.11	0.14	0.17
CY '82 Unemp. Rt.	10.16	11.75	3.89	2.95	0.38	0.25

Tables 17 through 22 show the comparisons of regression coefficients between ETA models and reestimated Michigan models. Because the variables in each of the corresponding models are the same, comparisons can involve the signs of the regression weights, the numerical values of the weights, and their statistical significance levels. When the Adult Entered Employment Rate model

(AEER) is reestimated on Michigan PY '84 data, only one variable (i.e., % Welfare) proves to be statistically significant at the 0.10 level. This implies that of the 14 variables in the national AEER model, only one factor is of any use in accounting for the differences in SDA performance in Michigan. Further differences between these two models are noted if we compare the magnitude of the weights for the variables. In particular, this comparison suggests that the impacts of this significant factor on SDA performance are greater in Michigan than in the nation as a whole.

When the Adult Average Wage at Placement model (AAWP) is reestimated on Michigan PY '84 data, only two variables (i.e., % Welfare and Area Average Wage) are statistically significant at the .10 level. The Area Average Wage variable is found statistically significant in both the national and Michigan AAWP models. While the "% Welfare" variable is found statistically significant in the reestimated Michigan AAWP model, it was not statistically significant in the national AAWP model.

Three variables (i.e., % Hispanic, % U.C. Claimant, Average Weeks Part.) are found statistically significant at the .10 level in the reestimated Michigan Adult Cost per Entered Employment model (ACEE). But they were not statistically significant in the national ACEE model. It is interesting to note that these three variables have the same signs between the two sets of models.

While three variables (i.e., % Age 14-15, % U.C. Claimant, and % Single Hd of Hshld) are found statistically significant in the

reestimated Michigan Youth Entered Employment Rate model (YEER), they were not statistically significant in the national YEER model. It is interesting to note that seven of the fourteen variables reverse their signs when fit to the Michigan PY '84 data.

When the national Youth Positive Termination Rate (YPTR) model is reestimated on Michigan PY '84 data, only one variable (% Female) is found statistically significant at the 0.10 level in the Michigan YPTR model. This variable reverses its signs when it fits to the Michigan PY '84 data.

None of the fourteen variables in the national Youth Cost Per Positive Termination (YCPT) model is statistically significant when it is reestimated on Michigan PY '84 data.

Another way to compare the national and Michigan models is to examine the degree of explanatory power each possesses. This refers to the extent to which the factors included in a model explain or account for the variation in the particular performance measure. The R^2 statistic, also known as the coefficient of determination, ranges from 0 to 1.0 with larger values in the range being indicative of greater explanatory power. As shown in Table 23, the R^2 values for Michigan Adult Cost Per Entered Employment, Adult Average Wage at Placement, and Youth Entered Employment Rate models are higher than the corresponding national models. But for the remaining three models (i.e., Adult Entered Employment Rate, Youth Positive Termination Rate, and Youth Cost Per Positive Termination), the reestimated Michigan models are worse than the national models.

In summary, the variables in the ETA models account for about 80% of the variance in the Adult Cost Per Entered Employment, Adult Average Wage at Placement, and Youth Entered employment Rate models when these models are reestimated on Michigan data. But they fail to explain more than 30% of the variance in the Adult entered Employment Rate, Youth Positive Termination Rate, and Youth Cost Per Positive Termination models. In addition, different factor weights are obtained when the ETA models are reestimated on Michigan data. Therefore, the ETA models appear to be technically deficient and new models for each performance measure need to be developed. The development of Michigan JTPA IIA Performance Standards models will be the subject of discussion in Chapter V.

Table 17
Comparison of Regression Coefficients
Between ETA and Michigan Adult
Entered Employment Rate Models

Variable	ETA	Reestimated on Michigan Data
Area Wage	-0.440	-0.850
% Female	0.030	0.191
% Age 55 +	0.264	1.042
% Black	-0.100***	-0.013
% Hispanic	0.095**	0.086
% Other Minority	0.111	-1.140
% Dropout	0.067	-2.697
% High School Graduate	0.344***	-2.873
% Handicapped	-0.288**	0.565
% U.C. Claimant	0.288**	0.814
% Welfare	-0.217***	-0.765*
% Single Head Household	0.106	-0.062
Unemployment Rate	-1.200***	0.835
Length of Stay	0.000	-0.465

* Significant at .10 level

** Significant at .05 level

*** Significant at .01 level

Table 18
Comparison of Regression Coefficients Between
ETA and Michigan Adult Average
Wage at Placement Models

Variable	ETA	Reestimated on Michigan Data
Area Wage	0.118***	0.068**
% Female	-0.005	-0.018
% Age 55+	-0.016	0.001
% Black	-0.004***	0.001
% Hispanic	0.000	-0.057
% Other Minority	0.006*	-0.006
% Dropout	-0.008**	-0.029
% High School Graduate	0.001	-0.031
% Handicapped	0.006	0.002
% U.C. Claimant	0.003	0.025
% Welfare	-0.002	-0.014*
% Single Head Household	0.003	0.003
Unemployment Rate	0.000	-0.039
Length of Stay	0.000	0.004

* Significant at .10 level

** Significant at .05 level

*** Significant at .01 level

Table 19
Comparison of Regression Coefficients Between
ETA and Michigan Adult Cost Per
Entered Employment Models

Variable	ETA	Reestimated on Michigan Data
Area Wage	265.83***	148.945
% Female	76.954***	-32.648
% Age 55+	-109.638*	80.785
% Black	10.753*	18.983
% Hispanic	-10.267	-234.538***
% Other Minority	-30.845**	-51.519
% Dropout	22.191	35.703
% High School Graduate	-12.708	20.320
% Handicapped	1.655	-67.327
% U.C. Claimant	-23.740	-171.838**
% Welfare	29.211***	-0.942
% Single Head Household	-105.782***	50.749
Unemployment Rate	-1.200***	75.850
Length of Stay	126.311***	78.900*

* Significant at .10 level

** Significant at .05 level

*** Significant at .01 level

Table 20
Comparison of Regression Coefficients
Between ETA and Michigan Youth
Entered Employment Rate Models

Variable	ETA	Reestimated on Michigan Data
% Female	0.202*	-0.551
% Age 14-15	-0.062	-0.900***
% Black	-0.092***	-0.174
% Hispanic	-0.027	0.691
% Other Minority	-0.065	0.274
% Dropout	0.193***	0.314
% High School Graduate	0.367***	0.315
% U.C. Claimant	0.524	-7.456**
% Welfare	-0.125**	-0.420
% Single Head Household	-0.062	1.214**
Area Wage	0.269	-1.332
Unemployment Rate	-0.427**	-1.242
Length of Stay	0.000	-0.263

* Significant at .10 level

** Significant at .05 level

*** Significant at .01 level

Table 21
Comparison of Regression Coefficients Between
ETA and Michigan Youth Positive
Termination Rate Models

Variable	ETA	Reestimated on Michigan Data
% Female	0.212**	-1.422*
% Age 14-15	0.106**	0.301
% Black	-0.005	0.216
% Hispanic	0.026	0.567
% Other Minority	0.156**	0.848
% Dropout	-0.266***	0.009
% High School Dropout	-0.161***	0.359
% U.C. Claimant	0.000	-4.827
% Welfare	-0.111***	-0.004
% Single Head Household	0.069	0.480
Area Wage	-0.314	-1.522
Unemployment Rate	-0.499***	-0.913
Length of Stay	0.000	0.032

* Significant at .10 level

** Significant at .05 level

*** Significant at .01 level

Table 22
Comparison of Regression Coefficients Between
ETA and Michigan Youth Cost Per
Positive Termination Models

Variable	ETA	Reestimated on Michigan Data
% Female	2.317	-52.172
% Age 14-15	-7.633	3.167
% Black	1.498	22.821
% Hispanic	3.095	-108.811
% Other Minority	-8.974	-5.296
% Dropout	37.331***	3.107
% High School Graduate	37.314***	8.436
% U.C. Claimant	0.595*	294.021
% Welfare	3.550	-7.210
% Single Head Household	-34.203	18.968
Area Wage	49.767	15.105
Unemployment Rate	50.525**	-19.530
Length of Stay	80.215***	-18.500

* Significant at .10 level

** Significant at .05 level

*** Significant at .01 level

Table 23
Comparison of R² Terms and F-Ratios
Between ETA and Michigan Models

	ETA		Michigan	
	R ²	F	R ²	F
Adult				
Entered Employment Rate	.43	22.88***	.58	1.07
Cost Per Entered Employment	.56	23.91***	.83	3.74**
Average Wage at Placement	.34	16.57***	.82	3.69**
Youth				
Entered Employment Rate	.33	17.14***	.84	4.91***
Positive Termination Rate	.32	15.73***	.44	0.74
Cost Per Positive Termination	.46	26.41***	.53	1.04

* Significant at the .10 level

** Significant at the .05 level

*** Significant at the .01 level

Summary

ETA's regression-based performance standards models have been examined in this chapter. Four sets of technical issues provided the foci for the examination. First, under issues of definition, it has been shown that the choice of the terminations base for the performance measures resulted in inflated system performance rates when compared to a participant base.

Second, under issues of measurement, the focus of the examination shifted to consider the effects of ETA's use of CETA program data for estimating performance measures rather than age adjusted CETA program data. CETA II B/C data, used to estimate JTPA adult performance measures, included a significant number of youth. Consequently, the estimates of the adult performance measures under JTPA for PY '84 contain significant error. Thus, the data were contaminated.

Third, issues of estimation were considered. Two items raised serious question as to the sufficiency of the ETA models in supporting policy decisionmaking at the state level. The first was the adequacy of the variance reconstruction of the models. Each model does account for a statistically significant amount of variation, but none account for at least half of the variance of the respective performance measured. This casts doubt on the technical sufficiency of the models to support state level policy setting.

The issue of equity focused on whether the regression estimates were particularly biased relative to area and whether the ETA models were misspecified. The models' estimates showed that they favored agencies with high placement rates while overestimating agencies with low placement rates. Thus, the latter agencies "fail" the valuation proffered by the model estimates.

The final part of this section concentrates on the comparison of ETA and Michigan models. The analyses have shown that when the ETA models are reestimated on Michigan data, explanatory power of

the models is increased only for three models (i.e., Adult Cost Per Entered Employment, Adult Average Wage at Placement, and Youth Entered Employment Rate models). In addition, the magnitudes of corresponding factor weights in the national and Michigan models are often different. Some of the 14 variables in the national models also reverse their signs when fit to Michigan data. The reversals of signs indicate that the models do not involve factors that are important for explaining SDA performance in Michigan as shown by their significance level in the Michigan models.

It is clear that policy implications stemming from the use of the models may well be different if the specification errors were corrected. A properly specified model would yield different patterns of residuals, which means that the fit to specific prime sponsors (SDAs) would be different, that parameter estimates would change, that R^2 s would increase, and that the final tolerance levels would need to be revised. Such changes would substantially alter the technical elements of the performance standards policy!

A Glossary of Terms and Acronyms Used in Chapter IV

Area Average Wage: The annual average payroll for employees covered by federal and state unemployment insurance.

% Age 55+: The number of adults 55 years and older as a percent of adults who terminated.

% Age 14-15: The number of youth aged 14 to 15 as a percent of youths 14 to 21 who terminated.

% Black: The number of Black adult terminees as a percent of adults who terminated.

% Dropout: The number of adult high school dropouts as a percent of adults who terminated.

% Hispanic: The number of Hispanic adults as a percent of adults who terminated.

% H.S. Graduate: The number of adult high school graduates as a percent of adults who terminated.

% Handicapped: The number of adult handicappers as a percent of adults who terminated.

% Other Minority: The number of native American and Asian adult terminees as a percent of adults who terminated.

% Single Head of Household: The number of adult single head of households as a percent of adults who terminated.

% U.C. Claimant: The number of adult unemployment insurance claimants as a percent of adults who terminated.

% Welfare: The number of adult welfare recipients as a percent of adults who terminated.

Length of Stay: The duration of training in a job training program.

Unemployment Rate: The number of unemployed persons as a percent of civilian labor force.

CHAPTER V

DEVELOPMENT OF MICHIGAN'S JTPA TITLE IIA PERFORMANCE STANDARDS MODELS

Scope of the Chapter

In the chapter the conceptual framework, hypotheses, modeling approach, formulation of Michigan performance standards regression models, measurement and the collection of the data used for econometric modeling, equation estimation and the results of regressions are discussed. More specifically, the conceptual framework, hypotheses, modeling approach, and the formulation of Michigan performance standards regression models are elaborated in Sections V.2 through V.4 of this chapter. The sources of the basic data are enumerated, and the procedures followed in constructing a number of measures are detailed in Section V.5. Finally, the parameters of the regression equations are estimated, and the results of regressions are presented in Section V.6.

Conceptual Framework

Human Capital vs. Labor Market Screening and Segmentation Perspectives

Employment and training policies and programs have been primarily based on a traditional human capital approach to the labor markets (Ehrenberg & Smith, 1982). Those programs serving the

economically disadvantaged are based largely on neoclassical marginal productivity and human capital theories of poverty and underemployment (Becker, 1971).

These "investment in human capital" approaches argue that the economically disadvantaged have trouble obtaining jobs largely because of their low productivity levels. The argument continues that their problems can be solved most effectively by raising their on-the-job productivity and making them more competitive and efficient in the job search process. Investment in education, on-the-job training, and counseling are seen as the major solutions to the problem. Higher productivity will lead to higher wages and permanently raise the economically disadvantaged out of poverty (Gordon 1972; Kalachek 1979).

Human capital perspectives are based on a "queue" theory of the labor market in which workers are lined up on the basis of their expected on-the-job productivity defined in terms of cognitive skills and related "personal characteristics" such as work attitudes, motivation, and social skills (Taggart, 1981). These perspectives also assume that entry-level wage rates are sensitive to worker productivity improvements. In order to reduce poverty, training programs must move participants farther up the queue or improve the total stock of labor at the bottom of the queue in order to improve average wage rates and employment relations in the entry-level, unskilled jobs.

Labor market screening and segmentation perspectives point out

the limitations of human capital theories in guiding policy by shifting attention to observed differences in the "rates of return on investment" received by youth, women, minorities, and various other groups in different industry and occupational labor markets (Berg, 1981; Edwards, Gordon & Reich, 1973; Hodson, 1984; Sobel, 1982).

These perspectives begin from the assumption that workers compete for jobs slots that have fixed wage rates and employment conditions determined by the product market characteristics of industries (e.g., firm size, market stability, and technology) as well as social norms (e.g., race and gender discrimination) and institutional constraints (e.g., unions and professions, government policies and regulations). This approach assumes that human capital characteristics and wage expectations of workers have little impact on the types and number of jobs available in a labor market area. These theorists also argue that the great majority of jobs, especially in "secondary" labor markets, do not require specific, easily identifiable skills which makes it difficult for employers to identify those potential workers that will be most productive on the job. In addition, the search process for non-professional workers is extremely costly relative to the importance of the jobs to be filled. Employers are interested in reducing the number of applicants to manageable proportions, so that they can focus on those who appear sufficiently promising to merit the expense of further investigation. Therefore, employers establish hiring standards and

informal screening mechanisms that are not actual prerequisites for good job performance but are rough proxies or statistical discrimination based on previous experiences with different groups of workers, and more general social stereotypes and prejudices. These low-cost "screens" provide substantial market barriers for the economically disadvantaged (Taggert, 1981).

Human capital perspectives focus on the training and productivity of workers and aggregate demand levels in a labor market; labor market screening and segmentation theories shift our attention to systematic screening and discrimination processes for certain labor force groups, such as minorities, women, and offenders, the employment and earnings structures of industries that determine different "investment returns" for disadvantaged workers, and job training programs in a local labor market. Because these theories provide different perspectives on the labor market problems of the economically disadvantaged, some conceptual integration is proposed in the following sections to establish a framework for identifying constraints on JTPA program performance to be incorporated into Title IIA performance standards models.

A Conceptual Framework: Labor Market Constraints on JTPA Performance

For the purpose of assessing the performance of JTPA programs, this study will focus on the non-professional, entry-level labor markets, where most JTPA clients are likely to be placed. These markets can be conceptualized in three separate sectors: (1) labor

supply characteristics, (2) labor demand characteristics, and (3) the transactions market, including labor market intermediaries and related social welfare institutions (See Figure 2 below).

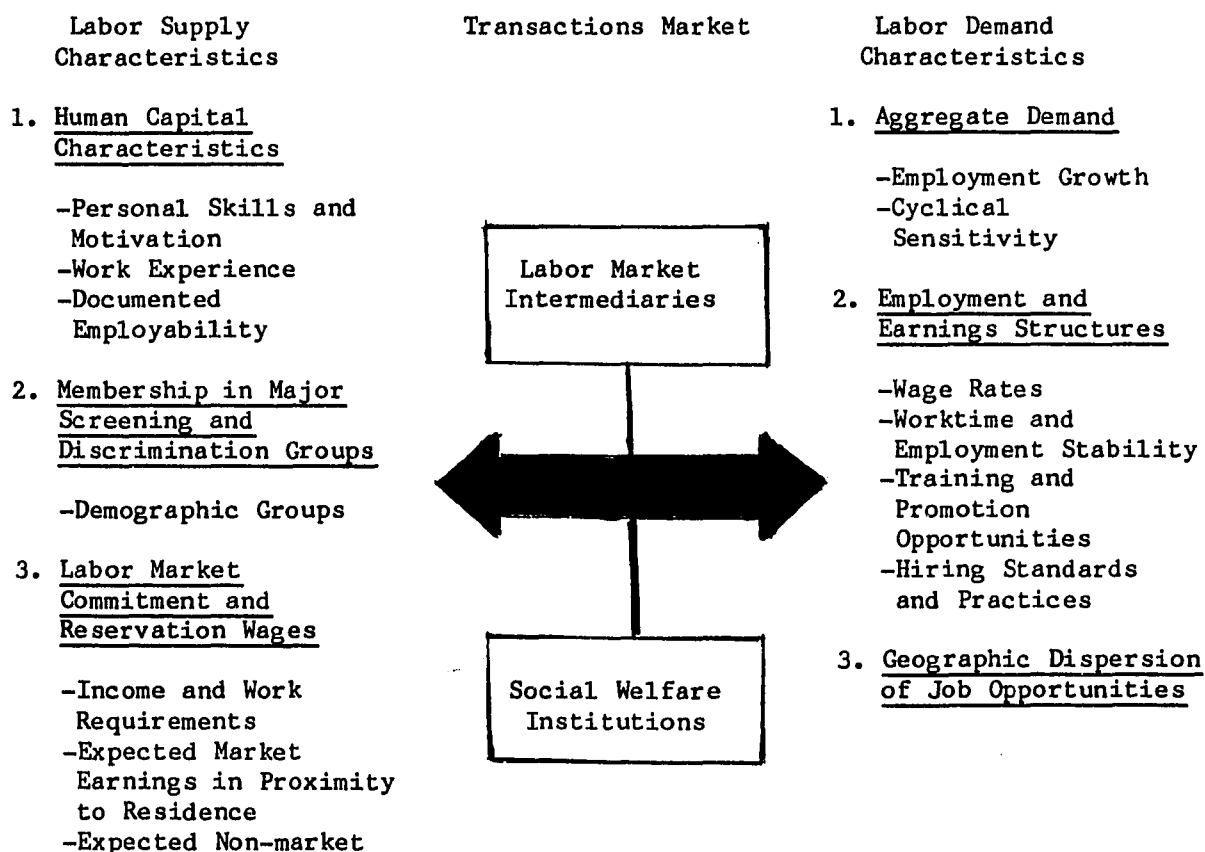


Figure 2. Labor Market Sectors and Characteristics

Labor Supply Characteristics

On the labor supply side, the individual in cooperation with the household is the basic decision-making unit. Based on neoclassical job search and labor supply theory, individuals seek to invest in themselves (i.e., participate in training programs) and attempt to sell their labor services in order to maximize income in relation to: (1) household income requirements and nonwork commitments and trade-offs, (2) expected market earnings and working conditions in proximity to residence, and (3) expected nonmarket income, especially transfer payments coming from social welfare institutions (Bowen & Finegar, 1969; Kalachek, 1979).

The likely success of individuals in the job market will be a function of two major factors: (1) their set of human capital characteristics in relation to other actual and potential labor market participants in a local labor market, in particular their "documented employability," and (2) their membership in demographic and client groups whose employment opportunities have been traditionally restricted by systematic "screening" mechanisms and other forms of labor market discrimination (Taggart, 1981).

Based on human capital and screening theories, workers and would-be workers can be ranked in a queue of "documented employability"--a combination of academic credentials, vocational training, work experience, and employer-certified competencies (Taggart, 1981). Within each level of documented employability,

workers can be further distinguished according to their membership in discriminatory demographic and client groups as well as according to their personal skills and competencies for a particular job. These latter characteristics are extremely hard for employers to determine before a worker is on the job. Although employers will have their own unique selection criteria, they will tend generally to interview and hire those at the top of the labor supply queue and then begin to work down the queue until all jobs are filled.

For workers, the decision to take a job, continue the job search and investment process, or drop out of training programs or the labor force will be dependent on earnings expectations and opportunities in comparison to a minimally acceptable wage rate, termed the "reservation wage," which is based in part on individual and household income requirements (Bowen & Finegan, 1969). It is assumed that reservation wages will be pegged to the employment and earnings patterns of major reference groups in a local labor market area and will tend to be adjusted downward in response to unsuccessful job search efforts (Kalachek, 1979). However, among the economically disadvantaged at the bottom of the "labor supply queue," labor market commitment and participation will drop off significantly as an individual's earnings expectation approaches the "welfare replacement wage," that is, the earnings level necessary to reproduce the average living standard of welfare recipients in a local area.

Labor Demand Characteristics

The effectiveness of employment and training programs for the economically disadvantaged will be constrained by these labor supply characteristics and by their relation to the structure of labor demand. As shown in Figure 2, the employment and earnings structure of a local labor market is best conceptualized as a complex bundle of wage rates and fringe benefits, available work-time and employment stability, training and promotion opportunities, hiring standards, and a variety of other working conditions. Nevertheless, because the wage rate (or expected earnings) is the most understandable information about a job, it tends to dominate decisions within the transaction market. It is used as the principal signaling device in the job search and labor force participation decisions of workers, especially the economically disadvantaged (Chamberlain, Cullen, & Lewin, 1980).

The demand for labor in a local labor market area is largely segmented into industry and occupational clusters. This segmentation is most pronounced in the managerial, technical, and professional occupations and tends to lessen as one moves down into unskilled, entry-level jobs where there is little, if any, required job-specific training and worker experience, and where there is a higher degree of interindustry and interoccupational mobility among workers (Sheets, Nord & Phelps, 1985; Thompson, 1969). In these lower-level markets, the most important constraints on employment

and training programs are: (1) the "aggregate demand" for nonprofessional, entry-level work (not the demand for separate occupations in particular industries), (2) the general quality of these jobs as indicated predominantly by overall wage rates and earnings levels, and (3) the geographic dispersion of job opportunities, especially when this dispersion constrains the access of the economically disadvantaged to a limited number of employment opportunities.

Although there is a higher degree of interindustry and inter-occupational mobility in nonprofessional, entry-level job markets, this mobility is sluggish in the short run. If a local labor market is undergoing significant structural changes (moving employment from one set of industries and occupations to another), workers will not move quickly to these new jobs on their own. New and expanding employers in these growing industries will have only limited "labor supply queues" established for their unskilled, entry-level jobs resulting in new job opportunities for some workers at the same time that other workers are being laid off in declining industries in the same local labor market. Therefore, employment growth at the industry level may create new job openings for employment and training programs even when aggregate employment levels are stable and overall unemployment is high.

The Pressures of Labor Supply and Demand

According to segmentation theory and other "job competition"

models of labor market dynamics, wage rates and employment relations in unskilled, entry-level markets are relatively insensitive to the pressures of labor supply and demand, at least in the short run. However, these pressures do have a major impact on the "employability requirements" or hiring standards that employers establish for any set of jobs (Taggart, 1981). On the one hand, if the overall labor market is slack, an employer will be able to attract more qualified workers and will tend to tighten up employability requirements and hiring preferences. On the other, in a tight labor market with shortages of qualified workers, an employer will feel the pressure to lower employability standards and hire less qualified workers at the bottom of the labor supply queue. Under these latter conditions, the economically disadvantaged with multiple labor market barriers will be more easily absorbed into the labor market.

Administrative and Program Constraints

The performance of JTPA programs is significantly constrained by: (1) the function it serves relative to other labor market intermediaries in the transactions market, (2) the administrative and funding constraints it operates under, and (3) the resources and constraints provided by these intermediaries and other social welfare institutions.

JTPA programs, like all other employment and training programs serving the economically disadvantaged, are planned, organized, and

operated within complex state and local interorganizational delivery systems involving a wide array of education, training, human service, welfare, and job placement organizations (Rogers & Whetten, 1982). Because of a wide variety of state and local differences, the various JTPA Service Delivery Areas (SDAs) will assume different functions within these interorganizational systems. Some SDAs may perform largely a "labor exchange" function and will develop a program mix with a high concentration of on-the-job training and direct placement services. In contrast, other SDAs may adopt a "training" niche with high concentrations of basic and long-term occupational skills training. In some states, state policy directives and preexisting programs, such as the federally-funded Employment Service, will constrain the choice of particular roles and functions within the transactions market. In other states, these functions will be established solely through policy directions from the local private industry council or other local decision-making bodies. In either case, different roles and functions within an interorganizational network will involve different sets of costs and potential risks that must be taken into account in any comparative evaluation of SDA performance across labor market areas.

Within the transactions market, the nonmarket income alternatives provided by social welfare institutions constitute the most significant and generalized constraint faced by employment and training programs serving the economically disadvantaged. The level of these benefits relative to the wage expectations of workers

and the employment and earnings structures of a local labor market area will have a major impact on the program labor market participation decisions of the economically disadvantaged and, as a result, the performance of employment and training programs. Therefore, the level of welfare benefits in relation to expected earnings levels should be an important consideration in any JTPA performance standards modeling effort.

General Implications for the Design of Performance Standards Models

Based on the conceptual framework proposed above, Michigan performance standards models should focus on three separate sets of factors affecting SDA performance: (1) client characteristics, (2) administrative and program characteristics, and (3) labor demand or economic characteristics. These three sets of factors should be incorporated into Michigan performance standards models under the following assumptions:

Job Availability and Aggregate Labor Demand

The performance of JTPA programs will be affected by the availability of nonprofessional, entry-level jobs within the Service Delivery Area. Job availability is a product of both aggregate employment growth and structural changes moving employment from one set of industries and occupations to another. Therefore, job availability must be assessed at two separate levels: (1) aggregate labor demand for the entire labor market area, and (2) employ-

ment growth in new and expanding industries.

Client Characteristics Under Labor Supply and Demand Parameters

The employability of JTPA clients in a local labor market area is in part a function of: (1) the characteristics of the total supply queue for unskilled, entry-level jobs, and (2) the tightness of the market. For example, the employability implications of not having a high school diploma in a local labor market area are dependent on the overall educational levels in the labor supply queue and how far employers have been forced to lower employability requirements in response to worker shortages for unskilled jobs. Therefore, client characteristics must be assessed as program constraints under aggregate labor supply and demand parameters, in particular the aggregate demand level in a local labor market area.

Client Characteristics as Cumulative Labor Market Barriers

The performance of SDAs is constrained by the degree of employability of the clients that they serve. These client constraints are best conceptualized in terms of a single, multidimensional "labor supply queue" in which clients are ranked simultaneously in terms of: (1) "documented employability" and (2) membership in demographic and client groups facing "screening" and other discriminatory barriers. Therefore, the effects of client characteristics must be measured and assessed through the major combinations of labor market barriers that move them to the bottom

of the labor supply queue.

Welfare System Constraints

The relative performance of SDAs is significantly affected by the differential constraints imposed by state welfare systems in local labor market areas. In some areas, the welfare system may provide relatively low benefits in relation to the market earnings expected from JTPA program participation, thereby providing greater opportunities for successful employment outcomes with welfare clients and related groups. In other areas, welfare benefits may exceed average earnings and discourage program participation and completion and severely constrain the performance of SDA programs. Therefore, the performance of SDAs with certain client groups can only be compared when these differential welfare benefits in relation to expected earnings are taken into account.

Hypotheses

The Job Training Partnership Act (JTPA) placed strong emphasis on short-term program effects. Thus, it relies on the use of such measures as placement rate, cost per placement, and trainees' wage rate to evaluate SDAs' performance. It also establishes performance standards for job training programs. SDAs performing above their standards are awarded incentive grants; those SDAs performing below expectations are sanctioned. Thus, the new job training system under JTPA is a performance-driven system.

There is a JTPA underlying assumption that the implementation of performance-based standards meant fewer resources would be necessary to carry out JTPA at the federal and local levels. Under CETA, the responsibility of monitoring program compliance by prime sponsors in the local communities was charged to the U.S. Department of Labor. The task of checking on thousands of different programs was overwhelming. The inability of federal bureaucrats in Washington to measure compliance adequately in these programs was prominently cited by legislators throughout the JTPA debate as a major reason for cost overruns inherent in the CETA program. To be effective, any new employment and training measure should include standards for judgment of job training program accomplishments without federal involvement. Instead of assessing many aspects of a program, federal officials could rely on a single number, the placement rate. Few resources would therefore be required to implement JTPA. It seemed apparent that the coordination of certain job training services by different governmental jurisdictions would lead to lower expenditures.

Besides navigating the complexity of targeting programs, SDAs must also meet cost and placement standards. But the JTPA legislation is ambiguous about who the target group for the program should be. The language in the act refers both to those "most in need" and "those who can benefit." These two qualifications are subject to the interpretation of state and local policy makers. Because of limited resources, SDAs will train those who qualify for

their programs and are better educated. Consequently, this would lead to higher placement rates.

CETA prime sponsors' data were used to develop ETA's performance standards models. These standards are established to evaluate SDAs' performance. But ETA's models appear to have the following technical deficiencies: estimation bias, incorrect specification, and validity problems. Therefore, implementation of such a performance standards system may result in political and legal liabilities for the State of Michigan.

In summary, the major hypotheses of this research may be stated as follows:

1. The use of ETA's performance standards models would lead to lower expenditures and higher placement rates.
2. ETA's models are based on invalid measures of Michigan's JTPA Title IIA programs.
3. The proposed Michigan performance standards regression models are better predictors of Michigan SDAs' performance than the ETA's models.

Modeling Approach

Ordinary Least Squares (OLS) technique will be used in developing Michigan performance standards models. The modeling effort will be carried out in two consecutive steps: first, the SDA-based modeling approach will be taken to develop Michigan performance standards models. Second, a client-based modeling

approach will be taken if the SDA-based modeling approach has not proven to be superior to the ETA's performance standards models.

The following procedures will be employed to detect and correct potential problems arising from multicollinearity and heteroskedasticity.

Multicollinearity

It is often noted in the literature that the problem with multicollinearity is not of existence or nonexistence but of how serious or problematic it is. If the interrelationships among the explanatory variables are strong, the estimated regression parameters will tend to have large variability. The following method will be used to detect multicollinearity in the Michigan performance standards models: an examination of the determinant of the sum-of-squares-and-cross-products ($X'X$) matrix of the explanatory variables. Detailed description of these methods can be found in Chatterjee and Price (1977), Judge, Hill, Griffiths, Lurkepohl & Lee, (1982), and Maddala (1977).

If multicollinearity is detected in the Michigan performance standards models, ridge regression will be employed to estimate regression parameters. Unlike the factor weights produced by ordinary least squares regression, the ridge estimate produced through ridge regressions are biased. However, when multicollinearity is present, these biased estimators tend to have more precision than the ordinary least squared biased estimators.

Description of the ridge regression techniques can be found in Judge et al. (1980), Gunst and Mason (1980) and Chatterjee and Price (1977).

Heteroskadasticity

One of the basic assumptions of ordinary least squares regression is that the variance of the residuals is constant across all observations. The violation of this assumption is known as heteroskadasticity and has two undesirable effects on the analysis. First, the estimates of the regression coefficients are no longer the "best" obtainable in the sense that they are less efficient (i.e., have higher variance) than alternative unbiased estimators. In addition, heteroskadasticity causes the estimated variances for these coefficients to become biased. The latter consequence can lead to misleading inferences being drawn from the ordinary least squares regression results due to its impact on hypothesis testing and confidence interval estimation.

One approach to detect heteroskadasticity is to examine the plot of the residuals against the dependent variable (i.e., the performance measure) in the regression equation. If heteroskadasticity is not present in the model, the plot should display a random scattering of points. However, if any systematic patterns appear in these graphs, it may be an indication that the data are heteroskadastic.

Two stage least squares regression will then be employed to

correct the problem when heteroskedasticity is detected.

Formulation of Michigan's JTPA Title IIA Performance Standards Models

The Michigan performance standards models will incorporate a set of linear functions. It is assumed that Michigan SDAs' performance is linearly related to client characteristics, program activity, and local economic conditions. In these models, a performance measure (e.g., adult cost per entered employment) is the dependent variable, which is assumed to be a linear function of various terminee characteristics, program activity, and local economic conditions. Such a model can be written as:

$$Y = a + b X + c Z + d P + e$$

In this model, Y is the performance measure; X is a vector of terminee characteristics; Z is a vector of local economic conditions; P is a vector of program activity; a represents the intercept, which is the expected value of the dependent variable when all the independent variables equal zero; b represents the influence of terminee characteristics on the performance measure; c represents the influence of local economic conditions on the performance measure; and d represents the influence of program activity on the performance measure. The error term, e, represents the influence of program management, and other terminee characteristics and local economic conditions that are not included as independent variables in the model.

The specification and description of Michigan performance standards regression models are illustrated as follows:

1. Adult Entered Employment Rate Model

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_{23}X_{23} + e \quad (1)$$

Where Y = Adult Entered Employment Rate = the number of Adults who entered employment at termination as a percent of adults who terminated.

X_1 = Percent of females

X_2 = Percent of terminees age 55+

X_3 = Percent of dropouts

X_4 = Percent of post high school completers

X_5 = Percent of Asian

X_6 = Percent of offenders

X_7 = Percent of black

X_8 = Percent of Hispanic

X_9 = Percent of American Indian/Alaskan Native

X_{10} = Percent of Handicapped

X_{11} = Percent of limited English Speaking terminees

X_{12} = Percent of unemployment compensation claimants

X_{13} = Percent of welfare recipients

X_{14} = Percent of single head of household

X_{15} = Employment/population ratio

X_{16} = Length of program stay

X_{17} = Adult average wage at placement

X_{18} = Average earnings in nonprofessional employment

X_{19} = Unemployment rate

X_{20} = Population density

X_{21} = Median income

X_{22} = Percent of families below poverty

X_{23} = Twenty-fifth percentile income of resident population in 1980

a = Intercept

b_1, b_2, \dots, b_{23} are regression coefficients

e = Error term

2. Adult Cost Per entered Employment Model

The adult cost per entered employment model can be written as:

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_{23}X_{23} + e \quad (2)$$

Where Y = Adult cost per entered employment = total expenditures for adults divided by the number of adults who entered employment.

The variables on the right-hand side of Equation (2) have the same definitions as those described in Equation (1).

3. Adult Average Wage at Placement Model

The adult average wage at placement model can be expressed as follows:

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_{23}X_{23} + e \quad (3)$$

Where Y = Adult average wage at placement = Average hourly wage

for all adults who entered employment at the time of termination.

The variables on the right-hand side of Equation (3) have the same definitions as those described in Equation (1).

4. Youth Entered Employment Rate Model

The Youth Entered Employment Rate model can be written as follows:

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_{23}X_{23} + e \quad (4)$$

Where Y = Youth entered employment rate = The number of youth who entered employment at termination as a percentage of youth who terminated.

X_1 = Percent of females

X_2 = Percent of youth age 14-15

X_3 = Percent of youth age 20-21

X_4 = Percent of black

X_5 = Percent of Hispanic

X_6 = Percent of American Indian/Alaskan Native

X_7 = Percent of Asian

X_8 = Percent of offenders

X_9 = Percent of students

X_{10} = Percent of dropouts

X_{11} = Percent of high school graduates

X_{12} = Percent of single head of household

X_{13} = Percent of welfare recipients

X_{14} = Percent of unemployment compensation claimant

X_{15} = Percent of limited English speaking

X_{16} = Employment/population ratio

X_{17} = Length of program stay

X_{18} = Average wage in area

X_{19} = Population density

X_{20} = Median income

X_{21} = Percent of families below poverty

X_{22} = Average earnings for nonprofessional employment

X_{23} = Unemployment rate

X_{24} = Twenty-fifth percentile income of resident
population in 1980

a = intercept

b_1, b_2, \dots, b_{23} are regression coefficients

e = error term

5. Youth Positive Termination Rate Model

The youth positive termination rate model can be written as:

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_{23}X_{23} + e \quad (5)$$

Where Y = Youth positive termination rate = The number of youth who had a positive termination (entered employment, met one of the employability enhancement criteria, or attained youth employment competencies as recognized by the local Private Industry Council) as a percentage of youth who terminated.

The variables on the right-hand side of Equation (5) have the same definitions as those described in Equation (4).

6. Youth Cost Per Positive Termination Model

The youth cost per positive termination model can be written as:

$$Y = a + b_1X_1 + b_2X_2 + \dots b_{24}X_{24} + e \quad (6)$$

Where Y = Youth cost per positive termination = Total expenditure for youth divided by the number of youth who had a positive termination.

The variables on the right-hand side of Equation (6) have the same definitions as those described in Equation (4).

Measurement and Collection of the Data

Sources and Construction of the Data

Four criteria will be used in selecting potential factors for the development of Michigan Performance Standards Models. These four criteria are:

1. Potential factors should derive from conceptions regarding labor market processes or otherwise make common sense in terms of relationships with the performance measures. This criterion is the "test" of face validity.
2. Potential factors must be measurable from available data sources. Available data sources refers to data readily accessible by each state.
3. Potential factors must be capable of being updated annually in terms of their measurement.

4. Potential Factors and their measurement definitions must offer a high degree of administrative simplicity in their use and application.

Failure to adhere to these criteria would likely result in models inadequately specified or nonoperative in the future. In addition, the Michigan modeling effort will assess client and economic factors in the existing ETA models to allow systematic comparisons. The client, economic, and management and program factors to be assessed in the modeling effort are described below.

In the PY '84 and PY '85 performance standards models developed by ETA, the effects of local economic conditions, i.e., aggregate demand, on the performance measures are represented by the local area unemployment rate and the area's average wage rate. Each of these variables has been the subject of much criticism, the former because of its vagueness in terms of measurement and interpretation, and the latter because it is nonrepresentative of the wage rates of jobs open to JTPA clients. For PY '86, two additional local economic variables have been introduced. The first is the population density of each SDA and the second is the percent of families in the SDA with incomes below the poverty line. These measures are taken from the 1980 Census of Population.

In the Michigan modeling effort, those local economic factors found in the ETA models will be retained, at least for the initial round of modeling. They may be discarded upon the specification, testing, and verification of other variables.

Local Economic Factors: Job Quality and Availability

Based on the conceptual framework described in the previous section, the Michigan models must contain economic factors that address the availability and quality of nonprofessional jobs within SDAs. Job availability must be assessed in terms of aggregate labor demand and net employment growth across all industries as well as employment growth in new and expanding industries. Job quality must be assessed in terms of expected earnings in accessible nonprofessional jobs in an SDA. The following section reviews the factors used in assessing job quality and availability.

Job Availability and Labor Demand

As mentioned above, in the PY '84 and PY '85 performance standards models, ETA used the local area unemployment rate as the major indicator of aggregate labor demand within an SDA. Previous labor market theory and research has raised a number of serious issues in the use of the unemployment rate as a measure of aggregate demand (Harrington & Sum, 1980; Shiskin, 1976). In particular, the unemployment rate does not distinguish between frictional and demand-deficient or structural unemployment. Nor does it capture the "discouraged worker" effect or more enduring differences in labor force participation rates, especially among youth and women, across local labor market areas (Levitan & Taggart, 1974).

Because of these problems, the employment-population ratio

will be used as an alternative indicator of aggregate demand (See Table 24). This is based on two assumptions about the short-term dynamics of labor demand in unskilled labor markets (Shiskin, 1976). First, during periods of declining labor demand, the reduction in employment will exceed the increase in unemployment because some people will become discouraged and drop out of the labor force. Second, during periods of growing labor demand, employment will increase more than unemployment will decrease because as workers return to their jobs, others will decide to enter or reenter the labor market in search of work. In both cases, the employment-population ratio is a more appropriate indicator of aggregate labor demand in an SDA.

As shown in Table 24, a two-year aggregate employment growth rate as well as an indicator of employment growth in expanding industries are considered in the study. These indicators are based on the assumption, which was discussed in the previous section, that job availability must be assessed both at the aggregate and industry levels.

Job Quality and Earnings

As argued in the previous section, expected earnings is the principal signaling device in the job search and labor force participation decisions of workers, especially for the economically disadvantaged. In the PY '84 and PY '85 models, ETA used "area average wage" as the major variable for measuring job quality. This

was based on ES-202 reports of the Average Annual Pay of Workers covered by State and Federal Unemployment Insurance Programs. However, there have been a number of critical issues with this measure of job quality or expected earnings. First, previous research has shown that manufacturing and service industries have different employment and wage structures that cannot be adequately captured by a statistical average even at the industry level. In particular, service industries are more likely to generate bifurcated wage distributions within a labor market area with high concentrations of high-wage and low-wage jobs. In some manufacturing or wholesale trade industries, a high average wage may result from a large concentration of high-wage semiskilled and unskilled jobs that are potentially accessible to JTPA programs. In contrast, a high average wage in health care and retail service industries may result from high concentrations of high-wage professional jobs that offset a high concentration of low-wage jobs accessible to JTPA programs. In this latter case, the average wage is biased upwards and is no longer a fair earnings standard for JTPA programs. Any wage variable based on a simple statistical average of all jobs in all industries in an SDA will not be able to distinguish between these two cases.

A second criticism of the area average wage is that this indicator give equal weight to industries and occupations in which there are no current job openings or growth potential. In some SDAs, manufacturing jobs with large employers in stagnant or

declining industries drive up the area average wage even though there are no job openings that are accessible to JTPA programs. This is a major problem in SDAs where structural changes are moving employment from high-wage manufacturing jobs to low-wage service jobs.

Because of the limitations of the area average wage approach, an attempt is made to estimate average earnings in nonprofessional jobs in an SDA. Nonprofessional employment and earnings were estimated in each 3-digit SIC industry using County Business Patterns (CP) and the Current Population survey (CPS). As shown in Table 24, this method would allow us to derive two separate indicators.

Table 24
Potential Local Economic Factors

Factor	Data Sources	Characteristic
Job Availability and Labor Demand		
1. Employment Growth Rate in Expanding Industries	ES-202	Measure of net changes in total Employment.
2. Employment Growth Rate	CBP	Measure of gross employment increase only in expanding industries.
3. Employment/Population Ratio	Lawrence Berkeley Laboratory	Measures aggregate demand for labor in an area, avoiding issues associated with unemployment such as participation and discouragement.
Job Quality and Earnings		
4. Average Earnings in Nonprofessional Employment	CBP; CPS	Measure of overall wage or earnings expectations; calculated over all industries on a 3-digit SIC basis allowing for appropriate weighting of industries by size in the local area.
5. Median Income	1980 Census	Measure of the 50th percentile of earnings distribution.
6. 25th Percentile Income	1980 Census	Measure of the lowest quartile of earnings distribution.

The PY '86 ETA modeling effort attempted to address some of the criticisms of using area average wage by assessing a 25th percentile income estimate based on 1980 Census data updated through ES-202 area average earnings. Household income data from the 1980 Census was used to obtain the income distribution in an area including the relationship between the 25th percentile earnings from the area average earnings reported in the ES-202 data. One potential problem in using this method is that the relationship between "household income" and "individual earnings" distributions may vary significantly across SDAs and thereby introduce a systematic bias into the 25th percentile income estimates. In addition, major structural changes in a local economy (e.g., manufacturing to services) may change the shape of the income distribution reflected in the 1980 Census. Despite these problems, this method represents a significant improvement and will be assessed in the Michigan modeling effort. The percentile household income from the 1980 Census (e.g., 25th, 50th) is also estimated.

Table 25 suggests the expected relationships between the factors and the performance measures. Expected relationships are denoted as either (+) positive or (-) negative (see Table 25). For instance, a positive relationship is expected between the Employment Growth Rate in the SDA and the Entered Employment Rate. This means that as the employment growth rate moves upwards, the entered employment rate is also expected to increase. It should be noted that while all expected relationships are shown in Table 25,

not all of the factors will be used in each of the performance standards models. It should also be noted that the expected relationships indicated in Table 25 are based on a labor supply point of view. As the average earnings in nonprofessional employment increases, JTPA clients should be more willing to participate in the labor force and accept a placement; thus, a positive relationship can be expected. From a demand point of view, however, the opposite relationship can be argued.

Table 25

Expected Relationships Between Local Economic Factors
and SDA Performance Measures

Potential Local Economic Factor	<u>Adult Measures</u>			<u>Youth Measures</u>		
	AEER	<u>Cost</u> AEE	Ave Wage at Place.	YEER	YPTR	<u>Cost</u> YPT
1. Employment Growth Rate	+	-	+	+	+	-
2. Employment Growth Rate in Expanding Industries	+	-	+	+	+	-
3. Employment/ Population Ratio	+	-	+	+	+	-
4. Ave. Earnings in Non-Pro- fessional Employment	+	-	+	+	+	-
5. 50th Percentile Earnings	+	-	+	+	+	-
6. 25th Percentile Earnings	+	-	+	+	+	-

Client Characteristics

The purpose of this section is to present a set of potential client characteristics for the Michigan performance standards models that reflect important subpopulations of JTPA participants. In composing this set of factors, particular attention was given to the labor supply characteristics embodied in the conceptual framework.

Based on the conceptual framework discussed above, another important consideration is the identification of potentially important "interaction" effects among the client characteristics. Interaction effects refer to the joint influences of factors that are not captured by their independent effects. For example, the true impact of serving a high proportion of black females may be greater than the impact indicated in the individual weights for Percent Black and Percent Female in the performance standards model. The ability to construct factors representing these interaction effects is a distinct advantage the Michigan modeling effort has over the national effort.

All of the factors described below will be constructed from information contained on the Michigan Department of Labor (MDOL)'s Management Information System (MIS). The Michigan MIS system has been closely monitored by the state since July, 1984. In the majority of cases, the data items needed to construct the factors are currently required reporting items on the JTPA Annual Status Report (JASR). As a result, major problems with regard to the quality, availability, or comparability of this data on the state

MIS files are not anticipated.

Table 26 displays the list of single characteristic client factors identified for the adult models. The corresponding list for the youth models is found in Table 27. In both of these tables, the entries denote the expected relationship between the client characteristic and the performance standard a minus sign (-) denotes a negative relationship and a plus sign (+) denotes a positive relationship. For example, a minus sign for Percent Female under the Entered Employment Rate heading signals the expectation that there will be a negative relationship between these two variables, i.e., the higher the proportion of female terminees, the lower the entered employment rate.

The decisions regarding which "interaction" factors to explore in the models are based largely on the labor supply characteristics found salient in the conceptual framework (see Figure 2). The interaction factors that will be explored first in the adult and youth models are presented in Table 28. The format of these tables is identical to those presented earlier with the table entries representing expected relationships. As shown in Table 28 the major interaction effects involve characteristics that have served as systematic screening mechanisms in local labor markets. Special attention will also be given to multiple labor market barriers held by welfare recipients, limited English speaking clients, and rural residents. Finally, as indicated in the first section, the effects of all client factors will be explored in labor supply/demand

parameters, in particular, aggregate demand indicators (e.g., unemployment rate, employment-population ratio and employment growth).

Table 26

Expected Relationship Between Client Characteristics
and Adult Performance Measures

Factor	Entered Employment Rate	Cost Per Entered Employment	Average Wage at Placement
1. % Female	-	+	-
2. % Black	-	+	-
3. % Hispanic	-	+	-
4. % Alaskan/Am. Indian	-	+	-
5. % Asian/Pac. Islander	-	+	-
6. % 55 years +	-	+	-
7. % Dropout	-	+	-
8. % High School Grad.	+	-	+
9. % Handicapped	-	+	-
10. % Offenders	-	+	-
11. % Welfare Recipients	-	+	-
12. % UC Claimants	-	+	-

Table 26---continued

Factor	Entered Employment Rate	Cost Per Entered Employment	Average Wage at Placement
13. % Limited Eng. Speaking	-	+	-
14. % Veterans	-	+	-
15. % Single Household Heads	-	+	-

- denotes negative relationship
+ denotes positive relationship

Table 27

Expected Relationship Between Client Characteristics
and Youth Performance Measures

Factor	Entered Employment Rate	Positive Termination Rate	Cost per Positive Termination
1. % Female	-	-	+
2. % Black	-	-	+
3. % Hispanic	-	-	+
4. % Alaskan/Am Indian	-	-	+
5. % Asian/Pac. Islander	-	-	+
6. % 14-15 years old	-	-	+
7. % 20-21 years old	+	+	-
8. % Dropout	-	-	+
9. % Student	-	-	+
10. % High School Grad	+	+	-
11. % Handicapped	-	-	+
12. % Offenders	-	-	+
13. % Welfare Recipients	-	-	+
14. % UC Claimants	-	-	+
15. % Limited Eng. Speaking	-	-	+
16. % Single Household Heads	-	-	+

- denotes negative relationship
+ denotes positive relationship

Table 28

Expected Relationship Between Example Interaction Factors
and Youth and Adult Performance Measures

Factor	Pos. Term./ Entered Emp. Rate	Cost per Pos. Term./Entered Employment	Average Wage at Placement
1. Female Single Household Head	-	+	-
2. Female Youth Welfare Recipient	-	+	-
3. Black with:			
Female	-	+	-
Handicapped	-	+	-
Welfare Recipient	-	+	-
Offender	-	+	-
Education	-	+	-
4. Dropouts with:			
Female	-	+	-
Handicapped	-	+	-
Welfare Recipient	-	+	-
Offender	-	+	-
Black	-	+	-

Table 28--continued

Factor	Pos. Term./ Entered Rate	Cost per Pos. Term./Entered Employment	Average Wage at Placement
5. Black Youth Dropouts	-	+	-
6. Limited Eng. Speaking Hispanic with:			
Female	-	+	-
Welfare Recipient	-	+	-

- denotes negative relationship
+ denotes positive relationship

Management and program factors were excluded from the current ETA models for two major reasons. First, a stated purpose of the ETA models has been to adjust only for those factors over which an SDA has no direct control. Most management and program variables are assumed to be under the control of SDAs. Second, ETA faced serious data collection constraints and felt that additional reporting requirements by states and SDAs would be inappropriate and impractical. These modeling decisions and data collection constraints have combined to place some serious limitations on current and future ETA performance standards modeling efforts. In particular, they (1) undercut the ability to isolate the effects of client and economic factors in the model; (2) prevent the incorporation of state policy objectives into the models; (3)

prevent the introduction of management factors that SDAs feel are outside their control (e.g., funding fluctuation, SDA size); and (4) take away the potential for developing diagnostic capabilities through the models.

A methodological approach is taken that would permit management and program effects to be estimated by the regression models but would allow the state discretion in determining whether the weights for these factors would be used in calculating SDA performance expectations. In effect, this approach is designed to improve the estimates of the effects of client and economic factors, and allow the state some flexibility in determining what management and program factors should and should not be adjusted for in evaluating SDA performance. This approach should also provide some useful information to the state and SDAs in diagnosing strengths and weaknesses in their programs.

The modeling of management and program factors has been approached from the perspective that there is not one best way to organize and operate an SDA. Particular management strategies and program structures adopted by SDAs will have different effects on program outcomes depending on the environmental conditions that they face, especially those that are largely beyond their control. It is assumed that administrative and program variables are best assessed in the context of two overriding environmental constraints: (1) program scale or size and (2) the strength of the local economy. Management factors will have different effects on

program performance depending on environmental conditions faced by all SDAs. For example, differences in program mix, on one hand, may not have any effect in large programs in strong, growing economies. On the other hand, other types of management factors such as funding fluctuation may be of paramount importance in these environmental settings.

One can argue that the most important management factor in predicting program success is the program mix that SDAs choose. The current ETA models include a variable measuring "length of program stay" to adjust for the level of services provided to JTPA clients. But this variable was much too general and did not effectively control for SDAs wanting to provide longer-term basic and vocational skills training. The measurement of program mix is difficult because of differences in service definitions across states and SDAs. However, based on the review of MIS definitions, we conclude that seven broad service categories have been identified: (1) classroom training (vocational), (2) classroom training (other), (3) on-the-job training, (4) placement (including job search assistance), (5) work experience, (6) support services, and (7) other. These seven variables (e.g., duration of training in the vocational classroom training) are used in Michigan Performance Standards models.

In summary, the data on client characteristics, local economic conditions, and program management factors mentioned above are used to develop Michigan JTPA Title IIA Performance Standards models.

The estimated structure and results of regressions for Michigan's adult and youth models are discussed in the next section.

Regression Estimation and Result

This section presents the estimated structure and results of regressions for Michigan adult and youth performance standards models. The major variables used to construct Michigan JTPA Performance Standards models are the required reporting items on JTPA Annual Status Reports (JASR). These reports are shown in Tables B1 through B26 in Appendix B.

Table 29 shows descriptive statistics of Michigan JTPA Title IIA PY 1984 performance measures. Two sets of descriptive statistics for local variables are included in Tables 30 and 31. Each of the adult and youth performance standards models was estimated using ordinary least squares. Michigan's final models for Program Year 1984 are summarized in Tables 32 and 33. Regression coefficients, F-Ratios and R^2 are contained in these two tables. Each of these models is statistically significant with R^2 values ranging from a low of 0.51 to a high of 0.94.

The analysis, evaluation and validation of these models will be elaborated in Chapter VI.

Table 29
Descriptive Statistics of Performance Measures

Variable	Mean	Standard Deviation	Minimum	Maximum
Adult				
Entered Emp. Rate	70.02	12.08	41.4	97.0
Cost/Entered Emp.	3262.54	1190.84	1051.0	6070.0
Avg. Wage at Place.	5.09	0.37	4.4	5.6
Youth				
Entered Emp. Rate	57.57	14.81	22.5	90.0
Positive Term Rate	74.91	11.09	50.2	93.6
Cost/Pos. Term.	2584.15	871.87	1233.0	4367.0

Table 30
Means, Standard Deviations and Ranges of
PY 1984 Local Variables: Adult Models

Variable	Mean	Standard Deviation	Minimum	Maximum
% Black	19.54	22.07	0.00	89.91
% Hispanic	2.48	2.61	0.00	10.80
% H.S. Graduate	80.00	4.98	69.16	86.20
% Female	43.90	7.41	26.17	57.64
% Welfare	50.40	9.94	30.12	69.78
% Offender	9.71	5.88	0.96	24.59
% Limited English	0.70	0.58	0.00	2.21
% U.C. Exhaustees	14.05	19.27	0.00	80.73
25th Percentile Inc.	968.00	271.00	576.00	1547.00
Area Average Wage (in 1000's)	18.72	3.43	13.00	24.50
Average Weeks in Voc. Training	21.71	6.61	9.16	41.76
Average Weeks in Work Experience	8.56	11.58	0.00	52.29
Length of Program Stay	20.00	5.29	13.14	33.30
Pop. Density (in 1000's)	0.61	1.05	0.01	3.80
Unemployment Rate	11.07	2.22	6.90	17.1

Table 31
Means, Standard Deviations and Ranges of
PY 1984 Local Variables: Youth Models

Variable	Mean	Standard Deviation	Minimum	Maximum
% U.C. Claimant	1.78	1.04	0.41	4.52
% Rural	39.62	41.86	0.00	100.00
% Unemployed	49.78	17.42	19.08	82.62
% Age 14-15	4.08	10.13	0.00	40.69
% Not LOOK	10.00	4.70	0.00	16.21
% INTER 13	11.10	10.62	0.00	35.94
% Act4	9.03	13.44	0.00	50.00
% Act6	17.76	21.84	0.00	71.18
% Act7	4.00	7.66	0.00	31.39
Area Avg. Wage	18.72	3.43	13.00	24.50
% Offender	6.59	4.79	0.76	18.81
% Black	23.93	24.76	0.00	94.63
% Female	46.06	5.58	34.76	62.23
% Age 20-21	30.23	10.00	13.55	46.68
% H.S. Grad.	36.68	14.05	13.64	60.69
Pop. Density (in 1000s)	0.61	1.05	0.01	3.80
% Hispanic	2.62	2.58	0.00	8.10

Table 32
Regression Results for PY 1984 Michigan
Adult Program Models

Variable	Ent. Emp. Rate Model	Cost/Ent. Emp. Model	Avg. Wage Place. Model
% Black	-0.19	36.07***	-0.00
% Hispanic	0.18		-0.03**
25th Percentile Inc.	-0.00		0.00***
% H.S. & Beyond	0.12		
% Female	0.11		-0.03***
% Welfare	-0.65**	53.33	
% INTER34	0.63	-159.64	
Area Average Wage		145.26***	
Average Weeks in Voc. Training		39.01***	-0.01***
Average Weeks in Work Employment		34.09**	
Length of Stay		130.94***	0.02**
% Lim. English Speaking		-560.28***	
Pop. Density			0.17***
Unemployment Rate			-0.05**
% U.C. Exhaustees			-0.01**

Table 32--continued

Variable	Ent. Emp. Rate Model	Cost/Ent. Emp. Model	Avg. Wage Place. Model
R ²	0.53	0.94	0.89
F	8.04***	31.87***	16.95***

* Significant at the .10 level

** Significant at the .05 level

*** Significant at the .01 level

Table 33
Regression Results for Michigan
PY 1984 Youth Program Models

Variable	Ent. Emp. Rate Model	Pos. Term. Rate Model	Cost/Pos. Term. Model
% U.C. Claimant	-3.74	-4.80	
% Rural	-0.26***		
% Unemployed	0.08		
% Age 14-15	-0.48		8.96
% Not LOOK	1.41***		
% INTER13	-0.73**		
% Act4	-0.18		
% Act6	-0.15		
% Act7	-0.11		
Avg. Area Wage	-1.35		
% Offender		0.80*	
% Black		0.17	13.96**
% Female		-1.35***	-80.65
% Age 20-21		-0.97***	43.24*
% H.S. Graduates		0.85***	
Pop. Density			355.09*
% Hispanic			-126.10*

Table 33--continued

Variable	Ent. Emp. Rate Model	Pos. Term. Rate Model	Cost/Pos. Term. Model
R ²	0.85	0.51	0.57
F	11.09***	4.52**	5.77***

* Significant at the .10 level

** Significant at the .05 level

*** Significant at the .01 level

A Glossary of Acronyms and Terms Used in Chapter V

% Act4: The number of work employment youth as a percent of youth who terminated.

% Act6: The number of youth terminees receiving services (e.g., preemployment skills training) as a percent of the total number of youth terminees.

% Act7: The number of youth with support services (e.g., transportation service) as a percent of the total number of youth terminees.

% Age 14-15: The number of youth terminees age 14 to 15 as a percent of youth age 14-21 who terminated.

% Age 20-21: The number of youth terminees age 20 to 21 as a percent of youth age 14 to 21 who terminated.

% Black: The number of black terminees as a percent of total terminations.

% CodeDay1: The number of occupational skill training terminees as a percent of total terminees.

% CodeDay4: The number of work employment terminees as a percent of total adult terminees.

% Female: The number of female terminees as a percent of total terminees.

% H.S. Graduates: The number of high school graduate terminees as a percent of total terminees.

% Hispanic: The number of Hispanic terminees as a percent of total terminations.

% INTER13: The percent of male terminees multiplied by the percent of black terminees.

% INTER34: The percent of male terminees multiplied by the percent of offenders.

% Limited English: The number of limited English speaking terminees as a percent of total terminations.

% NotLook: The number of terminees who are not in the labor force as a percent of total terminations.

% Offender: The number of offenders as a percent of adults who terminated.

% Rural: The number of rural resident terminees as a percent of total terminations.

% U.C. Exhaustees: The number of unemployment insurance exhaustees as a percent of adults who terminated.

% U.C. Claimant: The number of unemployment insurance claimants as a percent of adults who terminated.

% Unemployed: The number of unemployed persons as a percent of adults who terminated.

% Welfare: The number of welfare recipients as a percent of adults who terminated.

Avg. Area Wage: The Average annual pay of workers covered by Federal and State Unemployment Insurance programs.

25th Percentile Inc.: The 25th percentile income of the resident

population in 1980 in a local area.

Length of Program Stay: The duration of training in JTPA programs.

Pop. Density: The number of population per square mile in 1000s.

CHAPTER VI

EVALUATION AND VALIDATION OF MICHIGAN JTPA TITLE IIA PERFORMANCE STANDARDS REGRESSION MODELS

A schematic of modeling process used in the study is shown in Figure 3. More specifically, Chapter IV concentrated on the discussion of ETA models, reestimation of ETA models on Program Year 1984 (PY '84) Michigan data, and evaluation of reestimated ETA models; and Chapter V presented the development of Michigan JTPA Title IIA performance standards models. These Michigan models were referred to as Michigan models I in the later comparative evaluation of performance standards models.

This Chapter elaborates on the following areas: (1) model evaluation criteria are established and utilized; (2) Michigan models I are reestimated on Program Year 1985 (PY '85) Michigan data; (3) reestimated Michigan models I are assessed; (4) PY '85 Michigan data are also used to develop Michigan models II; and (5) Michigan models II are also evaluated.

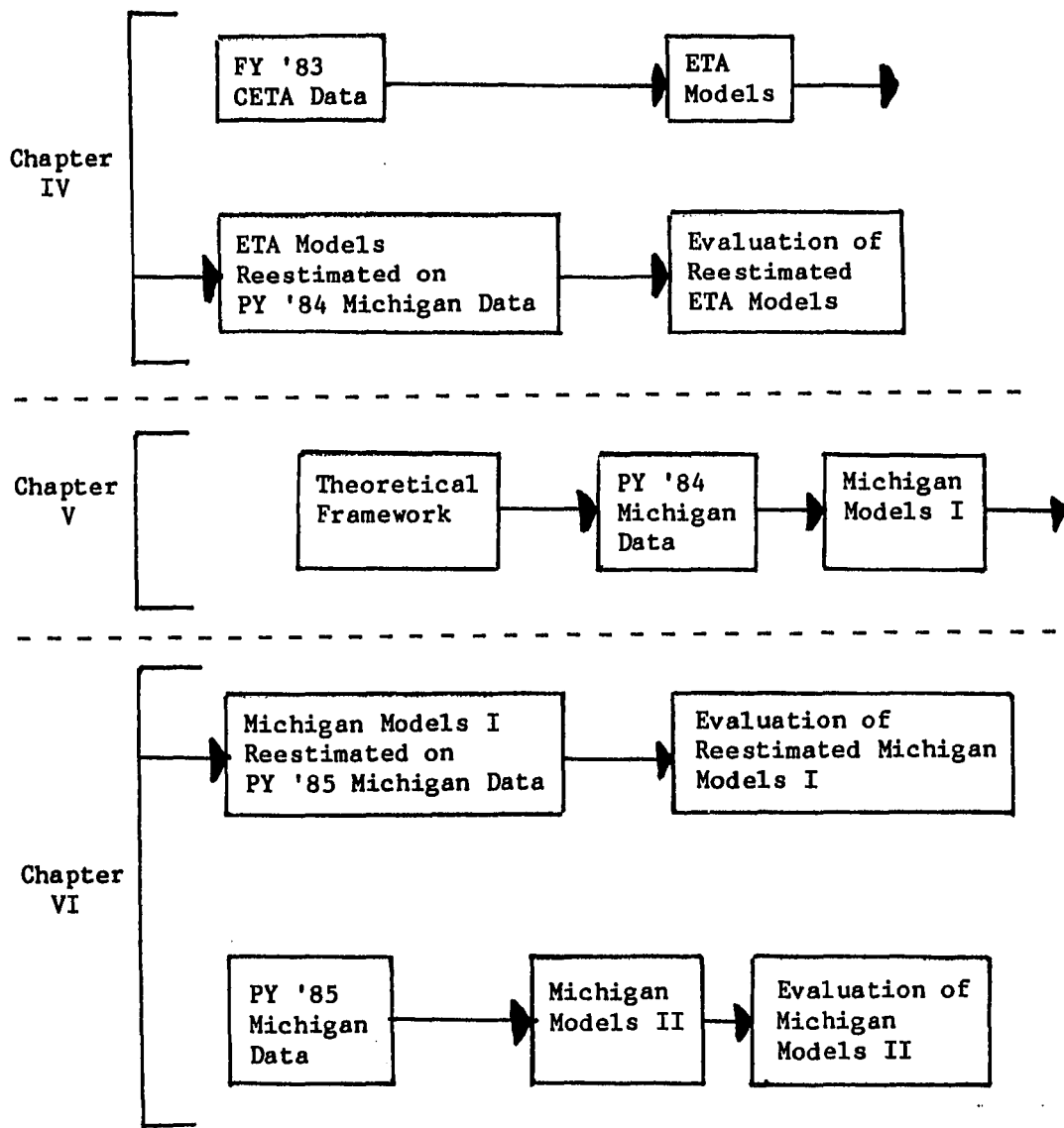


Figure 3. A Schematic of Modeling Process

Model Evaluation Criteria

The following criteria are used to evaluate Michigan JTPA Title IIA performance standards regression models:

1. High explanatory power, as seen in its ability to predict out-of-sample results. A model with higher predictive power is needed in the allocation of rewards and sanctions by the state.

2. Stability is defined as meaning that the sign of regression coefficients captured in a model remains the same between two or more years of estimation.

3. Face validity is defined as meaning that a model makes common sense regarding the inclusion of factors considered as important in their influence on performance.

4. Lack of multicollinearity. Multicollinearity is defined as meaning that there is a high correlation among explanatory factors in the regression model.

5. Lack of heteroscedasticity. Heteroscedasticity is measured by the variance of the residuals. If the variance of the residuals is not constant across all observations, it is called heteroscedastic.

Evaluation of Michigan Models I

The evaluation criteria discussed in the preceding section are utilized in the model evaluation. More specifically, statistical measures such as R^2 , F-Ratios, and t-statistics are used; the

magnitude and significance of regression coefficients are analyzed; and the relationship between a performance measure and an independent variable is also examined.

PY 1985 Michigan Data

The major variables used to reestimate Michigan JTPA Title IIA performance standards models are the required reporting items on PY '85 JTPA Annual Status Reports. These reports are included in Tables C1 through C26 in Appendix C.

Table 34 presents minimum, maximum, means, standard deviations, and the ratio of standard deviation to mean, for Michigan JTPA Title IIA PY 1985 performance measures. Two sets of descriptive statistics for local variables are also shown in Tables 35 and 36.

Table 34
Descriptive Statistics of PY 1985
Michigan Performance Measures

Variable	Mean	Standard Deviation	Minimum	Maximum	Standard* Dev/Mean
Adult					
Ent. Emp. Rate	72.45	11.31	44.76	92.87	0.15
Cost/Ent. Emp.	2864.88	957.03	1158.73	5238.89	0.33
Avg. Wg/Plcmnt	5.13	0.49	4.45	6.63	0.10
Youth					
Ent. Emp. Rate	51.87	14.07	28.77	88.39	0.27
Pos. Term. Rate	81.89	6.54	69.47	94.31	0.08
Cost/Pos. Term.	2339.46	845.71	1170.66	4927.07	0.36

* Denotes the Ratio of Standard Deviation to Mean

NOTE: The N is 26

Table 35
Descriptive Statistics of PY 1985 Michigan
Local Variables: Adult Models

Variable	Mean	Standard Deviation	Minimum	Maximum	Standard* Dev/Mean
% Female	46.76	8.11	22.60	63.02	0.17
% Age 55 +	3.91	2.44	1.25	9.39	0.62
% Black	19.77	22.19	0.00	93.03	1.12
% Hispanic	2.71	2.66	0.00	10.62	0.98
% Indian	2.69	6.72	0.16	35.19	2.50
% Asian	0.63	0.53	0.00	1.74	0.84
% Dropout	20.49	5.23	13.77	32.95	0.26
% Limited English	0.92	0.90	0.00	3.48	0.98
% Handicap	10.36	4.75	3.85	23.25	0.46
% UC Claimant	7.13	2.04	2.05	11.01	0.29
% Welfare	46.89	11.36	29.53	70.01	0.24
Area Avg Wage	18700.00	3400.00	13000.00	24500.00	0.18
Unemp. Rate	10.74	3.21	5.80	19.30	0.30
Wks of Part.	22.60	6.60	9.00	37.00	0.29
Pop. Dens. (1000s)	0.61	1.05	0.01	3.80	1.72

Table 35--continued

Variable	Mean	Standard Deviation	Minimum	Maximum	Standard* Dev/Mean
25th Percentile Inc	967.00	271.00	576.00	1550.00	0.28
Median Income	1790.00	432.00	1092.00	2590.00	0.24
% Poverty Family	8.40	2.48	4.10	11.80	0.12
Av. Earn. - NP	5746.00	2876.00	1130.00	9430.00	0.50

* Denotes the Ratio of Standard Deviation to Mean

NOTE: The N is 26

Table 36
Descriptive Statistics of PY 1985
Michigan Local Variables:
Youth Models

Variable	Mean	Standard Deviation	Minimum	Maximum	Standard* Dev/Mean
% Female	47.41	4.75	40.40	61.20	0.10
% Age 14-15	5.03	9.86	0.00	34.33	1.96
% Black	25.52	25.73	0.00	96.00	1.01
% Hispanic	3.13	2.86	0.00	8.92	0.91
% Indian	2.93	6.89	0.00	3.56	2.35
% Asian	0.61	0.78	0.00	3.17	1.28
% Dropouts	19.93	9.19	5.97	43.26	0.46
% H.S. Grad.	41.18	14.32	14.65	64.72	0.35
% Handicap	16.74	10.66	0.67	47.63	0.64
% Welfare	37.27	13.11	20.56	67.69	0.35
% Single Hd. Hshld	9.76	3.35	3.60	15.88	0.34
Area Avg. Wage	18.72	3.43	13.00	24.50	0.18
Unemp. Rate	10.74	3.21	5.80	19.30	0.30
Wks of Part.	20.46	6.69	11.00	36.00	0.33
Pop. Dens. (1000s)	0.61	1.05	0.01	3.80	1.72

Table 36--continued

Variable	Mean	Standard Deviation	Minimum	Maximum	Standard* Dev/Mean
25th Percentile Inc.	967.00	271.00	576.00	1550.00	0.28
Median Income	1790.00	432.00	1092.00	2590.00	0.24
% Poverty Family	8.40	2.48	4.10	11.80	0.12
Avg. Earn. - NP	5746	2876	1130	9430	0.50

* Denotes the Ratio of Standard Deviation to Mean

NOTE: The N is 26

Comparison of PY '84 and PY '85 Michigan Data

It is useful at this time to look at the changes in the model variable between PY '84 and PY '85 before one begins to evaluate Michigan models I.

Table 37 shows the comparison of mean performance measures between PY '84 and PY '85 Michigan Adult models. It indicates that adult entered employment and youth positive termination rates for PY '85 are substantially higher than PY '84 figures. Adult cost per entered employment and youth cost per positive termination for PY '85 are, on the other hand, much lower than their PY '84 values.

Table 38 also compares the mean values of local variables between PY '84 and PY '85 Michigan adult models. It indicates that

local variables for PY '85 have different values from their PY '84 figures. Similarly, Table 39 shows that the mean values of local variables for PY '85 are also different from their PY '84 figures.

Table 37

Comparison of Mean Performance Measures Between
PY 1984 and PY 1985 Michigan Models

Performance Measures	PY '84	PY '85
Adult Entered Employment Rate	70.02	72.45
Adult Cost per Entered Employment	3262.54	2864.88
Adult Average Wage at Placement	5.09	5.13
Youth Entered Employment Rate	57.57	51.87
Youth Cost Per Positive Termination	2584.15	2339.46
Youth Positive Termination Rate	74.91	81.89

Table 38

Comparison of Mean Values of Local Variables Between
PY 1984 and PY 1985 Michigan Adult Models

Variable	PY '84	PY '85
% Female	43.90	46.76
% Age 55 +	3.36	3.91
% Black	19.54	19.77
% Hispanic	2.48	2.71
% Indian	2.00	2.69
% Asian	0.52	0.63
% Dropout	18.77	20.49
% Limited English	0.70	0.92
% Handicap	9.46	10.36
% Welfare	50.40	46.89
Area Average Wage	18720.00	18700.00
Unemployment Rate	11.07	10.74
Weeks of Participation	20.00	22.60
Population Density (1000s)	0.61	0.61
25th Percentile Inc	967.00	967.00
Median Income	1790.00	1790.00
% Poverty Family	8.40	8.40
Average Earnings - NP	5746.00	5746.00

Table 39
Comparison of Mean Values of Local Variables Between
PY 1984 and PY 1985 Michigan Youth Models

Variable	PY '84	PY '85
% Female	46.06	47.41
% Age 14-15	4.08	5.03
% Black	23.93	25.52
% Hispanic	2.62	3.13
% Dropouts	16.97	19.93
% High School Graduate	36.68	41.18
% Welfare	37.57	37.27
% Single Head of Household	10.91	9.76
Area Average Wage	18.72	18.72
Unemployment Rate	11.07	10.74
Weeks of Participation	19.50	20.46
Population Density (1000s)	0.61	0.61
25th Percentile Inc	967.00	967.00
Median Income	1790.00	1790.00
% Poverty Family	8.40	8.40
Average Earnings - NP	5746.00	5746.00

Reestimating Michigan's Models I on PY '85 Data

A first step in the evaluation of Michigan models I is to reestimate these models on PY '85 data. Thus, Michigan JTPA Title IIA performance standards models I is reestimated on PY '85 data. Because the variables in each of the corresponding models are the same, the comparisons involve the signs of the regression weights, the numerical values of the weights, and their statistical significance levels.

Stability Issue

As shown in Table 40, when the Adult Entered Employment Rate model (AEER) is reestimated on PY '85 Michigan data, three variables (i.e., % Welfare, % Black, % Male X % Offender) are found to be statistically significant at the 0.01 level. The signs of these variables are also consistent between PY '84 and PY '85. Thus, the Michigan Adult Entered Employment Rate model has shown a stable relationship between PY '84 and PY '85.

Table 41 presents a comparison of regression results between PY 1984 and PY 1985 Adult Cost per Entered Employment Models. While the PY '84 models show that there are five variables to be statistically significant at the 0.01 level, its reestimated model on PY '85 data shows that there are two variables (% Black, and Weeks of Participation) to be statistically significant at the 0.01 level. The signs of these two significant variables are consistent

between Program Year 1984 and Program Year 1985. But the signs of three insignificant variables (Average weeks in vocational training, average weeks in work employment, and % limited English speaking) have shown an inconsistent relationship between PY '84 and PY '85.

Table 40
Comparison of Regression Results on the Adult
Entered Employment Rate Model

Variable	Michigan Models I	Michigan Models I Reestimated on PY '85 data
% Welfare	-0.65**	-0.36***
% Black	-0.19	-0.23***
% INTGR34 ^a	0.63	0.51***
R ²	0.52	0.42
F	8.04***	28.96***

^a denotes % male x % offender
 * Significant at .10 level
 ** Significant at .05 level
 *** Significant at .01 level

Table 41
Comparison of Regression Results on the Adult
Cost per Entered Employment Model

Variable	Michigan Model I	Michigan Model I Reestimated on PY '85 Data
% Black	36.07***	21.24***
% Welfare	53.33	9.94
% Inter34	-159.64	-26.85
Area Average Wage	145.26***	38.40
Avg. Wks in Training	39.01***	-18.61
Avg. Wks in Work Employment	34.09**	-18.61
Length of Stay	130.94	63.77***
% Lim. English Speaking	-560.28***	1.67
R ²	0.94	0.40
F	31.87***	5.18***

* Significant at .10 level

** Significant at .05 level

*** Significant at .01 level

Table 42 presents a comparison of regression results between PY 1984 and PY 1985 Adult Average Wage at Placement models. PY '84 model shows that eight variables are found to be statistically significant at the 0.05 level, while five variables are found to be statistically significant at the 0.05 level in the reestimated PY '84 model. Five explanatory variables (% Black, 25 Percentile Income, %

Female, population density, and % UC exhaustees) also have shown a consistent sign between PY '84 and PY '85 models. But two insignificant variables (Average weeks in vocational training, % UC exhaustees) have shown an inconsistent relationship between PY '84 and PY '85.

Table 43 presents a comparison of regression results between PY 1984 and PY 1985 Youth Entered Employment Rate models. While three variables (% rural, % not in the labor force, and % Male x % Black) are found to be statistically significant at the 0.05 level in the PY '84 Youth Entered Employment Rate model, five variables (% unemployed, % Age 14-15, % not in the labor force, % Act6, and % Act7) are found to be statistically significant at the 0.10 level in the reestimated PY '84 model. Two of these significant variables (% unemployed, % not in the labor force) have sign reversals between PY '84 and PY '85 models. In addition, two insignificant variables (% UC claimant, % Male X % Black) also have sign reversals between PY '84 and PY '85. It appears that the PY '84 Youth Entered Employment Rate model is not stable.

Table 44 presents a comparison of regression results between PY 1984 and PY 1985 Youth Positive Termination Rate models. While four variables appear to be statistically significant in the PY '84 model, none of these variables was significant in the PY '85 model. In addition, three variables (% Black, % Female, % HS graduate) have sign reversals between PY '84 and PY '85 models.

Table 45 presents a comparison of regression results between PY

1984 and PY 1985 Youth Cost per Positive Termination models. While four variables are found to be statistically significant at the 0.10 level in the PY '84 model, only one variable is found to be statistically significant at the 0.10 level in the PY '85 model. In addition, one variable (% Age 14-15) shows a sign reversal between PY '84 and PY '85 models.

In summary, while Adult Entered Employment Rate, Adult Cost Per Entered Employment, and Adult Average Wage at Placement models show a consistent and stable relationship between PY '84 and PY '85 models, Youth Entered Employment Rate, Youth Positive Termination Rate, and Youth Cost Per Positive Termination models appear to have an unstable and inconsistent relationship between PY '84 and PY '85 models. Therefore, Michigan models I have not satisfied the stability requirement.

Face Validity

All of the factors included in Michigan models I are important variables in their influence on JTPA performance. Therefore, it appears that these models have met the face validity criterion.

Explanatory Power

While Michigan models I have higher predictive power than the ETA models, most of the reestimated Michigan models I have lower predictive power than ETA models (see Table 46). Thus, it appears that these reestimated Michigan models I are inferior to ETA models.

Multicollinearity

If there is a high correlation between explanatory variables, it is called multicollinearity. The correlation matrices for Michigan Adult and Youth Models I are shown in Appendix E. To test the significance of the correlation coefficient between two independent variables in Michigan models I, the t-test is used (Hopkins & Glass, 1978). The results of statistical tests at the 1% level of significance indicate that:

1. There appears to be a significant correlation between percent high school graduates and percent age 20-21 in the Youth Positive Termination Rate model.
2. There appears to be a significant correlation between % Female and % Black in both the Youth Cost per Positive Termination and Youth Positive Termination Rate models.
3. There appears to be a significant correlation between % Black and % Welfare in the Adult Entered Employment Rate Model.
4. There appears to be a significant correlation between % Black and Average Weeks in Work Employment programs in the Adult Cost per Entered Employment Model. In addition, a high correlation also exists between % Black and Area Average Wage in the same model.
5. There appears to be a significant correlation between % Black and % Female in the Adult Average Wage at Placement model.

Heteroscedasticity

To test the significance of heteroscedasticity, a Goldfield-Quandt test (Goldfield & Quandt, 1980) was performed for Michigan models I. The results of Goldfield-Quandt tests at the 1% level of significance show that there do not appear to be any significant heteroscedasticity problems in Michigan models I.

Evaluation Summary of Michigan Models I

In summary, Michigan models I have met both the face validity and high predictive power criteria. But the reestimated Michigan models I did show an unstable relationship between PY '84 and PY '85. In addition, Michigan models I appear to have a multicollinearity problem. Therefore, a new set of Michigan adult and youth models will be developed and evaluated. These new models will be elaborated upon in the next section.

Table 42
Comparison of Regression Results on the Adult
Average Wage at Placement Model

Variable	Michigan Model I	Michigan Model I Reestimated on PY '85 Data
% Black	-0.00	-0.00**
% Hispanic	-0.03**	-0.01
25th Percentile Income	0.00***	0.00***
% Female	-0.03***	-0.03***
Avg. Wks in Voc. Training	-0.01***	0.00
Length of Stay	0.02**	0.00
Population Density	0.17***	0.19***
Unemployment Rate	-0.05**	-0.01
% UC Exhaustees	-0.01**	0.01**
R ²	0.89	0.43
F	16.95***	9.78***

* Significant at .10 level

** Significant at .05 level

*** Significant at .01 level

Table 43
Comparison of Regression Results on the
Youth Entered Employment Rate Model

Variable	Michigan Model I	Michigan Model I Reestimated on PY '85 Data
% U.C. Claimant	-3.74	1.09
% Rural	-0.26***	-0.03
% Unemployed	0.08	-0.48*
% Age 14-15	-0.48	-0.55***
% Not Look	1.41***	-0.54**
% Inter13 ^a	-0.73**	0.04
% Act4	-0.18	-0.03
% Act6	-0.15	-0.16***
% Act 7	-0.11	-0.15***
Average Area Wage	-1.35	-0.36
R ²	0.85	0.47
F	11.09***	10.29***

^a denotes % male x % black
 * Significant at 0.10 level
 ** Significant at 0.05 level
 *** Significant at 0.01 level

Table 44
Comparison of Regression Results on the
Youth Positive Termination Rate Model

Variable	Michigan Model I	Michigan Model I Reestimated on PY '85 data
% U.C. Claimant	-4.80	-0.62
% Offender	0.80*	0.04
% Black	0.17	-0.09
% Female	-1.35***	0.16
% Age 20-21	-0.97***	-0.01
% H.S. Graduates	0.85***	-0.08
R ²	0.53	0.05
F	4.52**	1.23

* Significant at 0.10 level

** Significant at 0.05 level

*** Significant at 0.01 level

Table 45
Comparison of Regression Results on the Youth Cost
Per Positive Termination Model

Variable	Michigan Model I	Michigan Model I Reestimated on PY '85 Data
% Age 14-15	8.96	-5.77
% Black	13.96**	6.93*
% Female	-80.65	-3.88
% Age 20-21	43.24*	9.33
Population Density	355.09*	12.76
% Hispanic	-126.10*	-13.18
R ²	0.52	0.05
F	5.77***	1.06

* Significant at .10 level

** Significant at .05 level

*** Significant at .01 level

Table 46
Comparison of R² Between ETA Models
and Michigan Models I

Model	ETA Models	ETA Models Reestimated on PY '84 MI Data	Michigan Models I	MI Mod I Reestimated on PY '85 Data
Adult Ent Emp Rate F Statistics	0.43 (22.88)**	0.58 (1.07)	0.52 (8.04)***	0.40 (28.96)***
Adult Cost per Ent Emp F Statistics	0.56 (23.91)***	0.83 (3.74)**	0.94 (31.87)***	0.40 (5.18)***
Adult Average Wage at Placement F Statistics	0.34 (16.57)***	0.82 (3.69)*	0.89 (16.95)***	0.43 (9.78)***
Youth Ent Emp Rate F Statistics	0.33 (17.14)***	0.84 (4.91)***	0.85 (11.09)***	0.47 (10.29)***
Youth Pos Term Rate F Statistics	0.32 (15.73)***	0.44 (0.74)	0.53 (4.52)**	0.05 (1.23)
Youth Cost per Pos Termination F Statistics	0.46 (26.41)***	0.53 (1.04)	0.52 (5.77)***	0.05 (1.06)

() Numbers in the parentheses refer to F Statistics
 * Significance at .10 level
 ** Significance at .05 level
 *** Significance at .01 level

Development of Michigan Models II

New Michigan performance standards models for each performance measure are also developed using PY '85 Michigan data. These models will be referred to as Michigan Models II in the following

comparative evaluation of performance standards models. The results of these regressions are summarized in Tables 47 and 48. Statistical measures including R^2 , F-ratios, and regression coefficients are also contained in these tables. Each of these models is found to be statistically significant with R^2 ranging from 0.50 to 0.83. Evaluation of these models will be discussed in the next section.

Table 47
Regression Results for Michigan PY 1985
Adult Program Models

Variable	Entered Emp. Rate Model	Cost/Entered Employ. Model	Avg. Wage at Place. Model
% Female	-0.21	36.11**	-0.02***
% Age 55 +	-0.07	-51.29	
% Black	0.01	3.62	0.00
% Dropout	-0.40	19.29	-0.02**
% Welfare	-0.36**	8.67	-0.03***
Avg. Area Wage	-1.77**	16.45	0.04*
Unemp. Rate	-1.30*	52.41	
Length of Stay	0.10	45.15**	
% Handicap		-71.23**	-0.03**
Avg. Earnings - NP		-0.16**	
% Hispanic			-0.06***
R ²	0.64	0.73	0.83
F	3.83**	4.12**	13.00***

*** Significant at .01 level

** Significant at .05 level

* Significant at .10 level

Table 48
Regression Results for Michigan PY 1985
Youth Program Models

Variable	Entered Emp. Rate Model	Pos. Term Rate Model	Cost/Pos. Term. Model
% Female	0.22	0.06	-0.02**
% Age 14-15	-0.99***	0.08	-0.00
% Black	-0.03	0.05	0.01
% Welfare	-0.26	-0.39**	0.05
Unemp. Rate	0.49		-0.02
Length of Stay	0.43		0.00
% Asian	6.29*	2.84*	
25th Percentile Inc.		-0.02***	
% Handicap			-0.04***
% Single Head Hshld			-0.03***
% Dropout		0.40**	-0.02
R ²	0.54	0.50	0.77
F	2.98*	2.56*	6.02***

*** Significant at .01 level

** Significant at .05 level

* Significant at .10 level

Evaluation of Michigan Models II

Michigan Models II are developed and subsequently evaluated, according to the previously specified criteria, as follows:

Explanatory Power

Table 49 presents a comparison of R^2 among alternative models. It shows that Michigan models I are superior to ETA models. When Michigan models I are reestimated on PY '85 data, the reestimated Michigan models I tend to indicate a lower predictive power than Michigan models II. Thus, Michigan models II appear to be superior to the reestimated Michigan models I.

Face Validity

All of the factors included in Michigan Models II are important variables in their influence on JTPA performance. Therefore, it appears that these models have met the face validity criterion.

Table 49

Comparison of R² Among Alternative Models

Model	ETA Models	ETA Models Reest. on PY '84 MI Data	Michigan Models I	MI Mod I Reest. on PY '85 Data	Michigan Models II
Adult Ent Emp Rate F	0.43 (22.88)***	0.58 (1.07)	0.52 (8.04)***	0.40 (28.96)***	0.64 (3.83)**
Adult Cost per Ent Emp F	0.56 (23.91)***	0.83 (3.74)**	0.94 (31.87)***	0.40 (5.18)***	0.73 (4.12)**
Adult Avg. Wage at Placement F	0.34 (16.57)***	0.82 (3.69)*	0.89 (16.95)***	0.43 (9.78)***	0.83 (13.00)***
Youth Ent Emp Rate F	0.33 (17.14)***	0.84 (4.91)***	0.85 (11.09)***	0.47 (10.29)***	0.54 (2.98)*
Youth Pos Term Rate F	0.32 (15.73)***	0.44 (0.74)	0.53 (4.52)**	0.05 (1.23)	0.50 (2.56)*
Youth Cost per Pos Term F	0.46 (26.41)***	0.53 (1.04)	0.52 (5.77)**	0.05 (1.06)	0.77 (6.02)***

() Numbers in the parentheses refer to F statistics

* Significant at .10 level

** Significant at .05 level

*** Significant at .01 level

Multicollinearity

The correlation matrices for Michigan Adult and Youth Models II are shown in Appendix E. To test the significance of the correlation coefficient between two explanatory variables in Michigan models II, the t-test is used (Hopkins & Glass, 1978). The results of statistical tests at the 1 percent level of significance show that:

1. There appears to be a significant correlation between % Dropout and % Welfare in the Adult Entered Employment Rate model.
2. There appears to be a significant correlation between % Black and Area Average Wage in the Adult Cost per Entered Employment Rate model.
3. There appears to be a significant correlation between % Black and % Welfare in the Youth Entered Employment Rate, Youth Positive Termination Rate, and Youth Cost per Positive Termination models.

The % Black variable in the above four models (i.e., Adult Cost per Entered Employment Rate, Youth Entered Employment Rate, Youth Positive Termination Rate, and Youth Cost per Positive Termination models) is not considered significant at the .15 level. Therefore, it is determined that the % Black variable should be deleted from the above regression equations and three new models are reestimated. The results of these regressions are shown in Table 50 below:

Table 50
Regression Results for PY 1985
Michigan Reestimated Models

Variable/Statistics	Adult Cost/ Ent Emp	Youth Ent Emp Rate	Youth Pos Term Rate
% Female	36.76*	0.15	0.15
% Age 55 +	-56.77		
% Dropout	20.85		
% Welfare	10.92	-0.30	-0.33**
Avg. Area Wage	31.28		
Unemp. Rate	56.26	0.57	
Length of Stay	45.52**	0.43	
% Handicap	-71.46**		
Avg. Earnings - NP	-0.17**		
% Age 14-15		-0.98**	0.07
% Asian		5.98*	3.38**
25th Percentile Inc			-0.02***
% Dropout			0.39**
R ²	0.73	0.54	0.49
F	4.83***	3.65***	3.01**

* Significant at .10 level

** Significant at .05 level

*** Significant at .01 level

Heteroscedasticity

Figures 4 through 9 show residual plots of all six performance standards models. The variance of the residuals appears to be constant across all observations. In addition, Goldfield-Quandt tests were performed for Michigan models II. The results of statistical tests at the 1% level of significance indicate that there do not appear to be any significant heteroscedasticity problems in Michigan models II.

The Relationship Between the Factor and the Performance Measure

Table 51 shows the results of regressions when only those significant variables included in Michigan Models II are used to reestimate the model equations. The relationship between the factor and the performance measure in these six final models can be illustrated as follows:

Adult Entered Employment Rate Model

There is a negative relationship between the Adult Entered Employment Rate and % Welfare. This shows that the Adult Entered Employment Rate declines as the % Welfare rises. Similarly, both Area Average Wage and Unemployment Rate also have a negative relationship with the Adult Entered Employment Rate. This means that it is more difficult for manpower program terminees to find a job when local unemployment rate and area wage rates are high.

Adult Cost per Entered Employment Model

Both Duration of Training and % Female variables have a positive relationship with the Adult Cost per Entered Employment. This means that Adult Cost per Placement increases as the length of training and % Female increase. Area Average Wage and % Handicap have, however, a negative relationship with Adult Cost per Entered Employment. This indicates that Adult Cost per Placement decreases when % Handicap and the Average earnings for non-professionals increase.

Adult Average Wage at Placement Model

All of the six significant variables in the Adult Average Wage at Placement model have a negative relationship with Adult Average Wage at Placement. This means that Adult Average Wage at Placement decreases when % Female, % Handicap, % Dropout, % Welfare, % Hispanic, and Area Average Wage increase.

Youth Entered Employment Rate Model

The variable % Age 14-15 has a negative relationship with Youth Entered Employment Rate. This means that Youth Entered Employment Rate decreases as the % Age 14-15 increases.

Youth Positive Termination Rate Model

Youth Positive Termination Rate has a negative relationship with both % Welfare and 25th Percentile Income in a local area.

This means that Youth Positive Termination Rate decreases when % Welfare and 25th Percentile Income increase. The variable % Dropout has, however, a positive relationship with Youth Positive Termination Rate. This is an unexpected relationship and may be due to the inconsistent definitions of Positive Termination Rate used by local manpower agencies.

Youth Cost Per Positive Termination Model

All of the three significant variables in the Youth Cost per Positive Termination Model have a positive relationship with Youth Cost per Positive Termination. This means that Youth Cost per Positive Termination increases as these three variables (i.e., % Female, % Handicap, and % Single Head of Household) increase.

Evaluation Summary of Michigan Models II

In summary, Michigan models II have met the validity and high predictive power criteria. They also do not appear to have a multicollinearity or heteroscedasticity problem. Thus, they are superior to ETA and Reestimated Michigan models I.

Table 51
Regression Results for PY 1985
Final Michigan Models II

Variable	Adult Entered Emp. Rate	Adult Cost/ Entered Employ.	Adult Ave. Wage at Placement	Youth Entered Employ. Rate	Youth Positive Term. Rate	Youth Cost/ Positive Termination
% Female		40.18**	-0.02***			118.00***
% Handicap		-95.94***	-0.03**			49.63***
% Dropout			-0.02**		0.39**	
% Welfare	-0.48***		-0.02***		-0.32***	
% Hispanic			-0.05***			
% Age 14-15				-0.07***		
% Asian				0.38	3.14**	
% Single Head						72.55**
Avg. Wage	-2.13***		-0.05***			
Unemp. Rate	-1.49**					
Length of Stay		37.30*				
Ave. Earnings		-0.17***				
Inc 25th					-0.02***	
R ²	0.58	0.66	0.83	0.28	0.48	0.53
F	10.31***	10.13***	15.22***	4.51**	4.76***	8.35***

* Significant at .10 level
** Significant at .05 level
*** Significant at .01 level

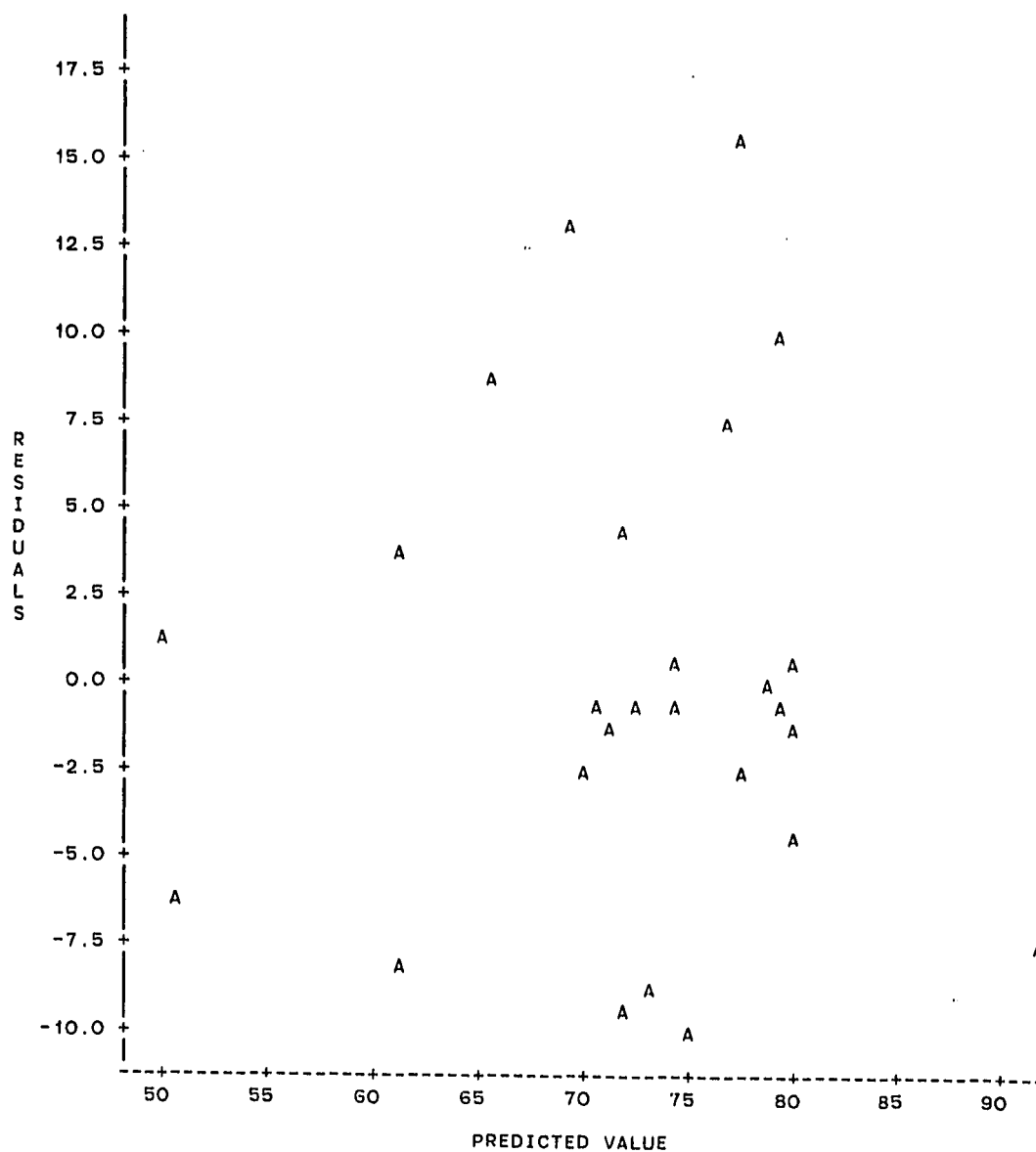


Figure 4. Plots of Residual vs. Predicted Values for Adult Entered Employment Rate Model

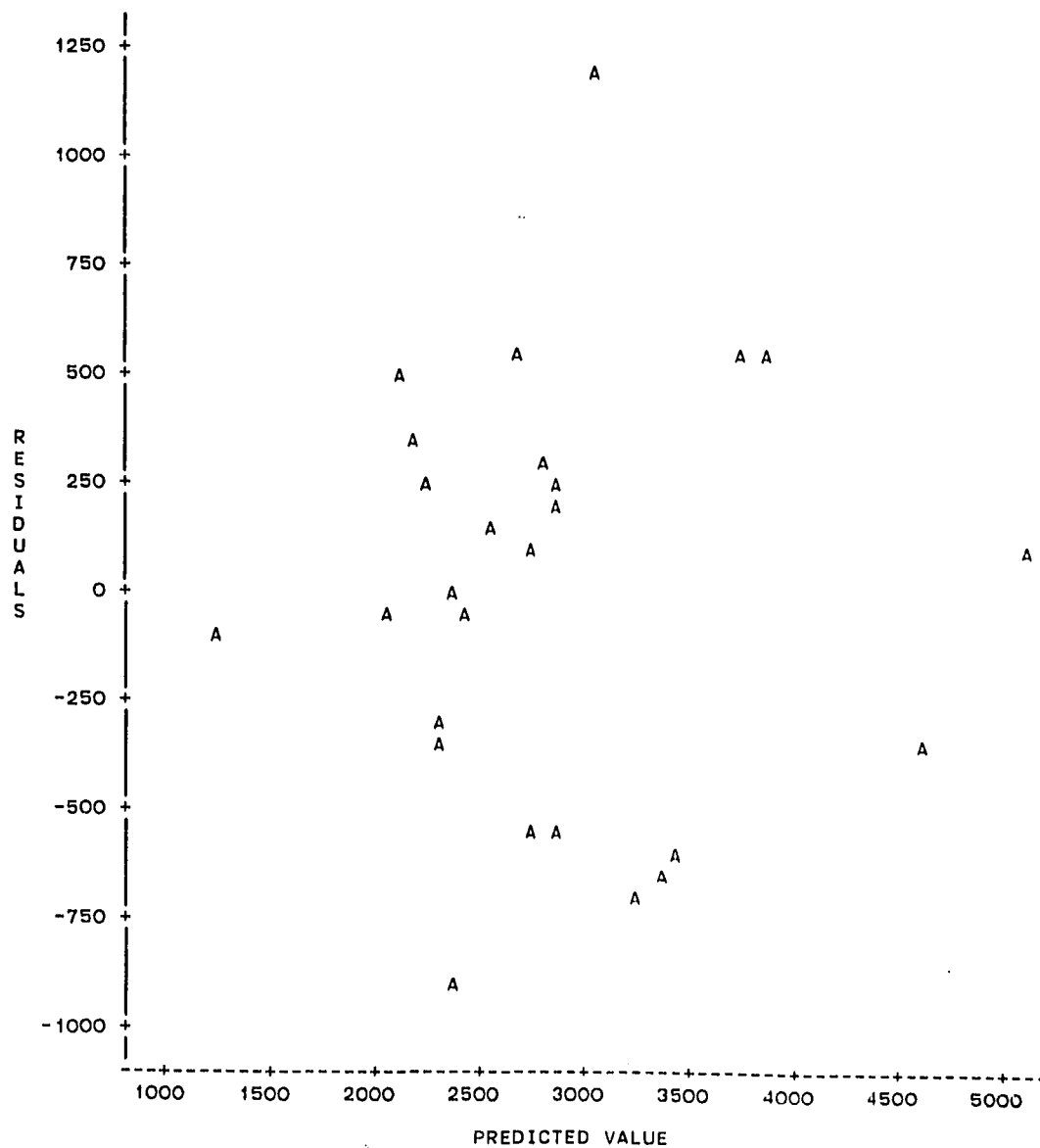


Figure 5. Plots of Residual vs. Predicted Values for Adult Cost per Entered Employment Model

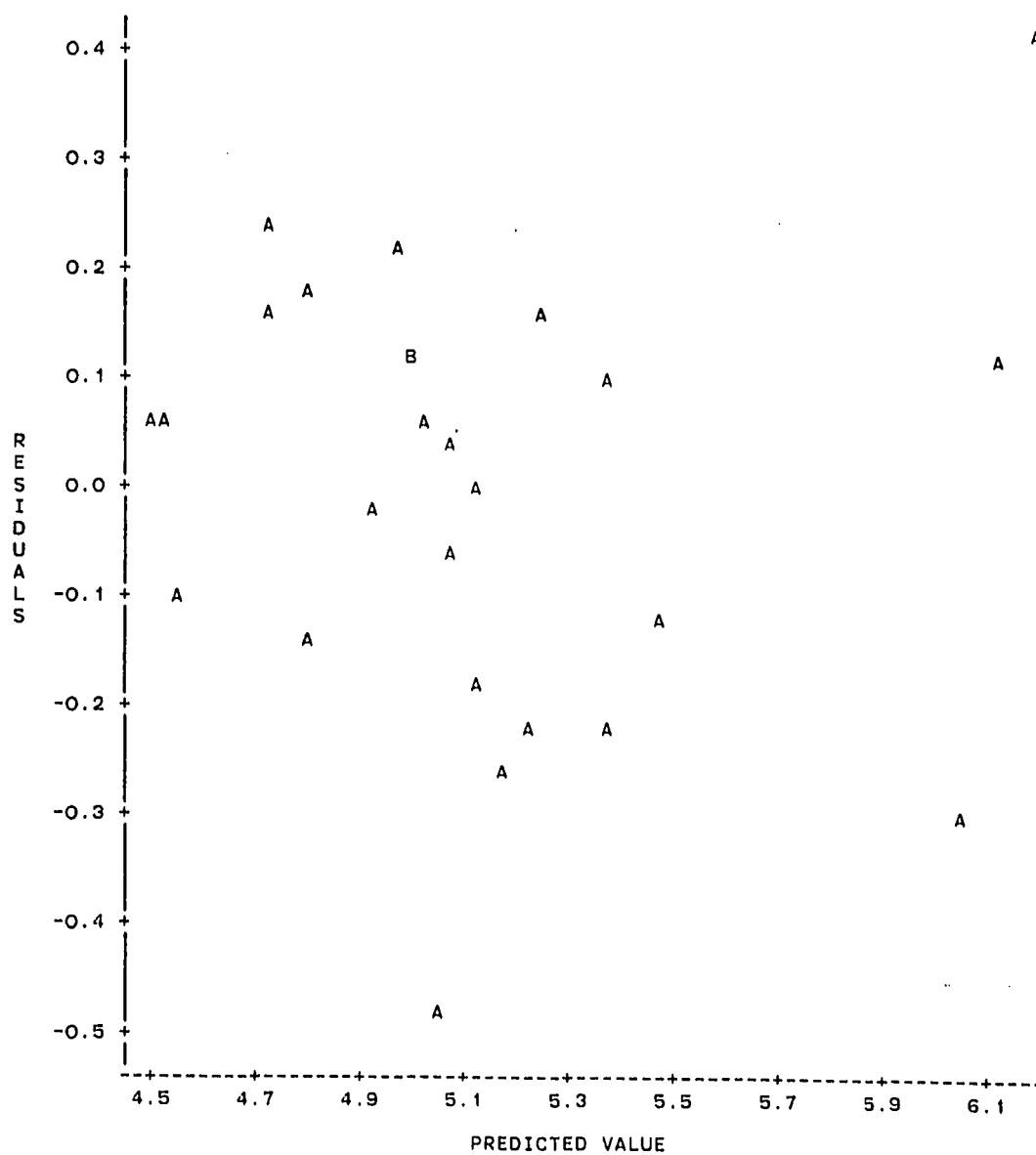


Figure 6. Plots of Residual vs. Predicted Values for Adult Average Wage at Placement Model

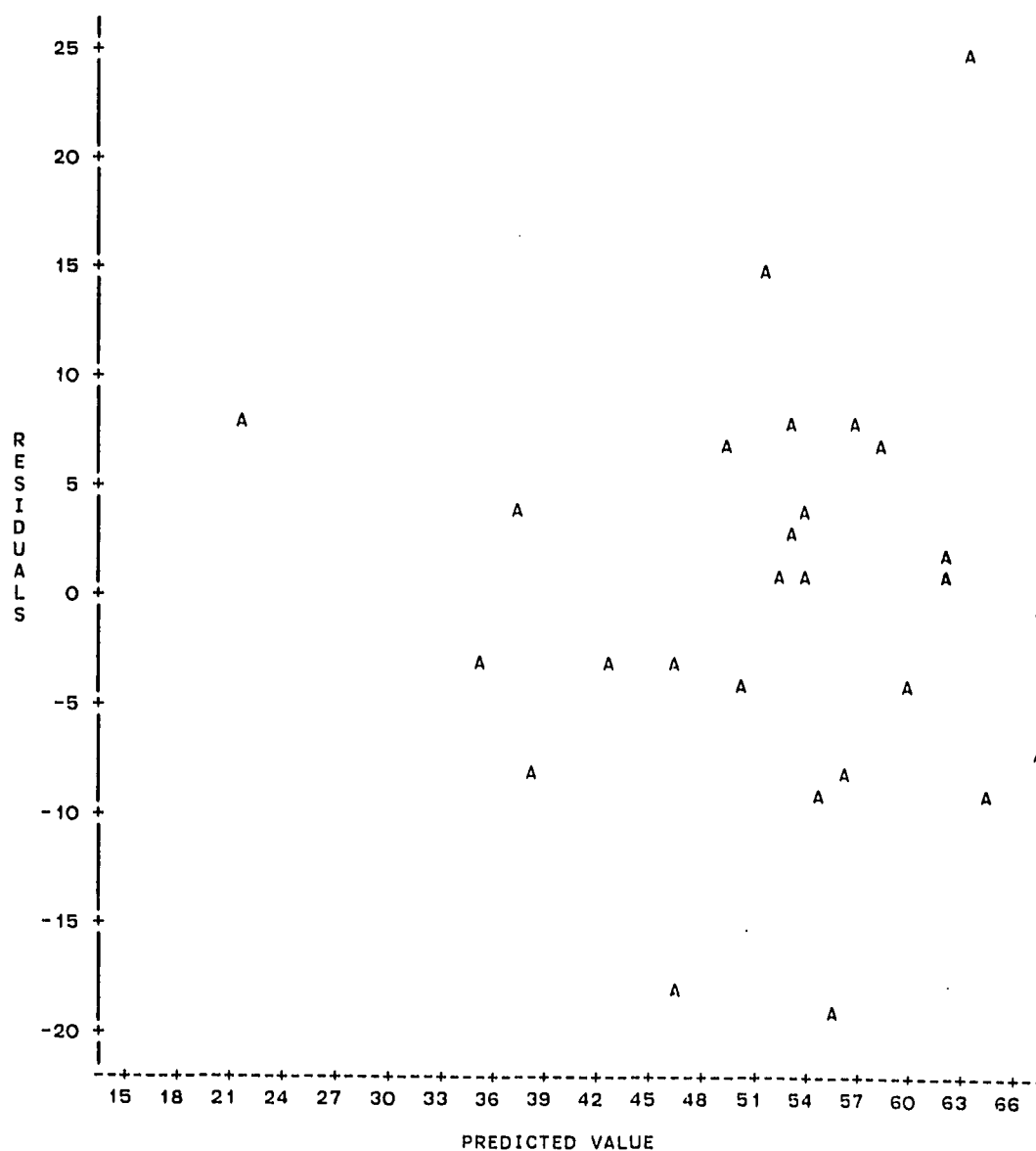


Figure 7. Plots of Residual vs. Predicted Values for Youth Entered Employment Rate Model

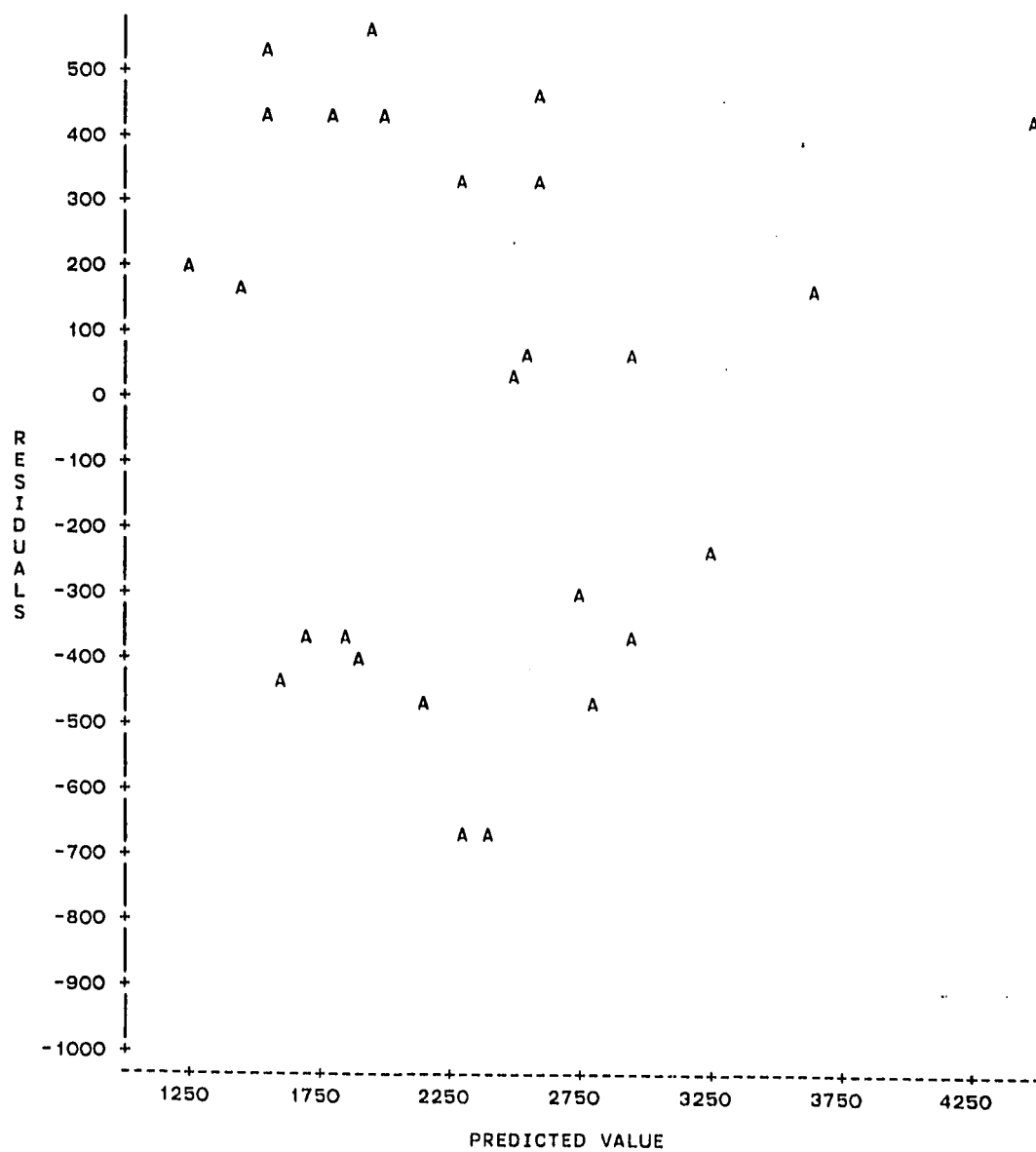


Figure 8. Plots of Residual vs. Predicted Values for Youth Cost per Positive Termination Model

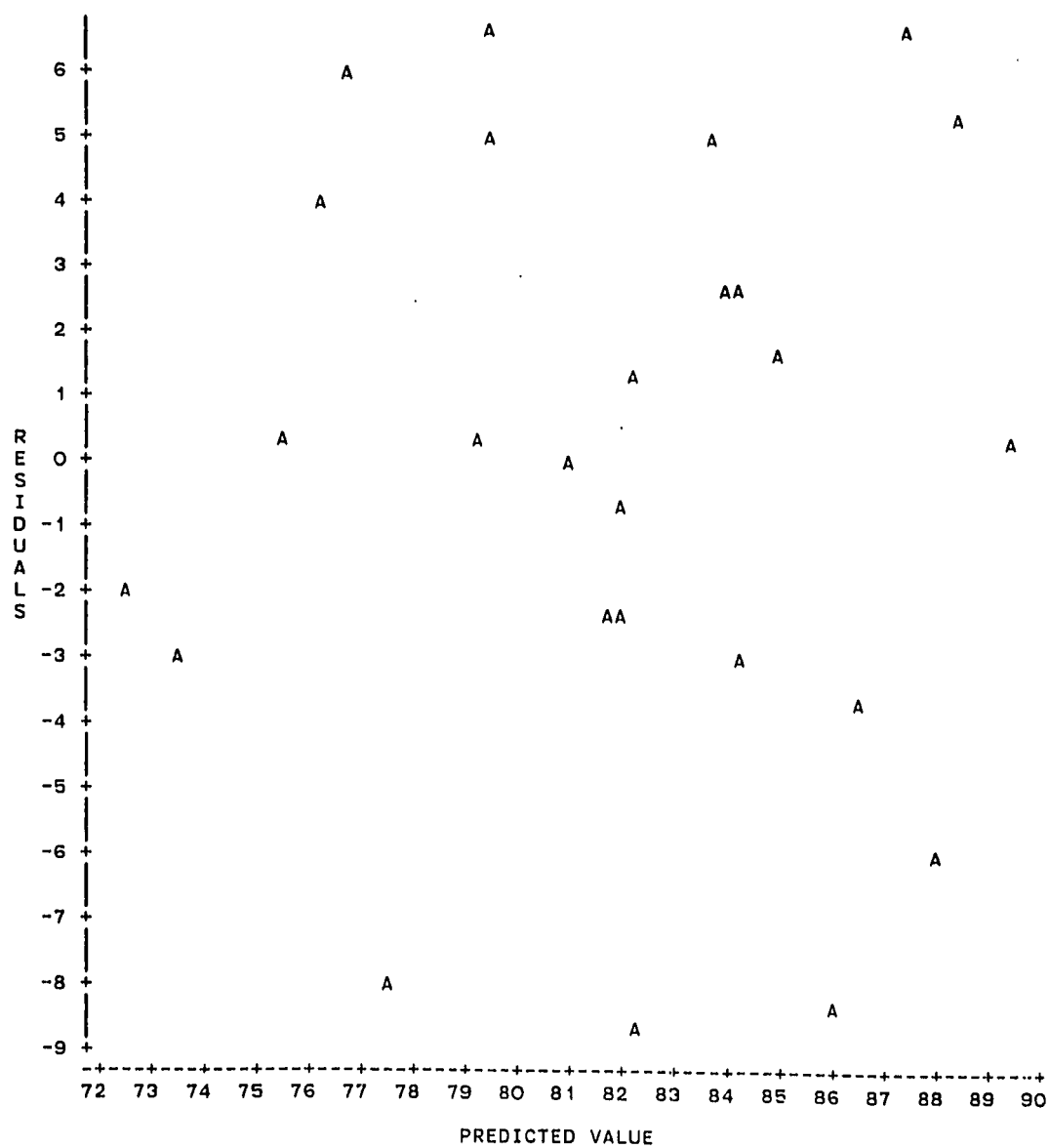


Figure 9. Plots of Residual vs. Predicted Values for

CHAPTER VII

SUMMARY AND CONCLUSIONS

Summary

The purpose of this study has been to make some contribution towards an understanding of the impact of the USDOL's performance standards models and their policy implications. This study engages in the development of methodologies which can be used to predict Michigan SDAs' performance. The major objective of the study has been to design, construct, evaluate, and document working short-run econometric models which would be available for policy analysis and ex ante forecasting.

Chapter I reviewed the present USDOL JTPA Title IIA performance standards regression models, including the technical properties of the models, their policy implications, and possible political and legal liabilities for the State of Michigan. The consequences of job training programs may have important effects on participants and the manpower service delivery system--hence, this study of the relationship between program activities and their consequences.

In Chapter II the review of selected economic literature, federal employment and training policies, and evaluation research on job training provided historical perspectives on the theory and applications of labor economics. Most job training theorists focused solely on the effects of skill enhancement or removal of

institutional barriers. Such an approach is of limited utility in assessing the incidence and duration of unemployment faced by demographic groups since it fails to recognize the separate and the interactive impacts of supply, demand, and institutional structures on unemployment. The findings in the study reflected such differential impacts.

A review of Michigan's job training programs for the period of 1983 to 1986 was conducted in Chapter III. Such a review furnished a range of options against which future manpower policies can be developed. For example, while JTPA entered employment rates were far above the levels recorded under the CETA programs, JTPA cost per placement showed a much lower figure than during the CETA years. This reflects, in part, the higher selectivity of the JTPA programs because of the mandates required by federal performance standards (i.e., cost per placement, and placement rate) which caused SDAs to enroll more high school graduates and applicants with satisfactory work histories or skills into the program under JTPA than CETA.

The evaluation of the present ETA's JTPA Title IIA performance standards regression models was conducted in Chapter IV. More specifically, four sets of technical issues were assessed: the issues of definition, measurement, estimation and equity. In addition, ETA's models were reestimated on PY '84 Michigan data.

Only one of the fourteen variables in the ETA models was found to be statistically significant at the 0.05 level when they were reestimated on PY '84 Michigan data. They also failed to explain

more than 40 percent of the variance in the reestimated ETA models. Therefore, the ETA models appeared to be technically weak and new Michigan models need to be developed.

Chapter V brought together the theoretical and data components of the study. More specifically, it elaborated on the theoretical framework, hypotheses, modeling approach, the formulation of Michigan performance standards models, measurement and collection of the data used for econometric modeling, regression estimation and results.

An econometric technique called ordinary least squares (OLS) was used to develop Michigan performance standards models. SDA was used as the unit of analysis in the development of Michigan performance standards models.

It was assumed that the performance of Michigan SDAs was linearly related to client characteristics, program activity, and local economic conditions. Structured regression equations were thus formulated to include these client, program, and economic variables. The federal JTPA Annual Status Reports were used to construct Michigan performance standards models. In addition, 1980 Census of Population and 1986 Current Population Survey data were also incorporated in the model development. The estimated structure and results of regressions for Michigan models were presented in Chapter V.

Chapter VI evaluated Michigan JTPA Title IIA performance standards regression models developed in Chapter V. More

specifically, the following tasks were undertaken: evaluation criteria were established and utilized; PY '85 Michigan data were used to validate Michigan models; and Michigan performance standards models were evaluated.

The following evaluation criteria were used to evaluate JTPA Title IIA performance standards models: (a) high explanatory power, (b) stability, (c) face validity, (d) lack of heteroscedasticity, and (e) lack of multicollinearity. Statistical measures such as R^2 , F-ratios, and t-statistics were used; the magnitude and significance of regression coefficients were analyzed; and the relationship between a performance measure and an independent variable was examined.

Michigan models developed in Chapter V were referred to as Michigan Models I. When Michigan Models I were reestimated on PY '85 Michigan data, the results of the regressions were mixed. Adult entered employment rate, adult cost per entered employment, and adult average wage at placement models showed a consistent and stable relationship between PY '84 and PY '85, while youth entered employment rate, youth positive termination rate and youth cost per positive termination models appeared to have an unstable and inconsistent relationship between PY '84 and PY '85. Therefore, a new set of Michigan performance standards models was developed and referred to as Michigan Models II.

In summary, a comparison of alternative models showed the following results:

1. Michigan Models I were superior to ETA models.
2. Michigan Models II were superior to Reestimated Michigan Models I as well as ETA models.
3. Michigan Models II met the face validity criterion.
4. Multicollinearity did not appear to be a problem in Michigan Models II.
5. Heteroscedasticity did not appear to be a problem in Michigan Models II.

Conclusions

To ensure those most in need of training were being served, U.S. Congress directed the U.S. Department of Labor (USDOL) to establish national performance standards for all JTPA components except for summer youth employment programs to measure the "increased employment and earnings of participants and the reduction in welfare dependency," with actual performance criteria developed by USDOL differing for each JTPA component. However, to achieve reported success, USDOL puts a strong emphasis on the performance standards, to the exclusion of using other means to improve program quality. To reach these performance goals, local manpower administrators tend to serve those most likely to obtain jobs without training and exclude those individuals who need long-term training and support services.

As reported in Chapter III of the study, the consequences of the higher selectivity of job training enrollees led to lower

expenditures and higher placement rates of JTPA programs. The performance standards also result in the reduction in the duration of training. Some received only job search assistance activities. These activities are designed to assist individuals to apply for and/or obtain a job; they do not provide any job training and generally are geared toward the most job-ready. Thus, the present USDOL JTPA performance standards system has undermined the mission of JTPA.

Michigan performance standards models II were developed based on the use of client, program, and economic variables collected in Michigan. The results of this modeling effort showed that Michigan performance standards Models II performed well in predicting Michigan SDAs' performance. It was also concluded that Michigan performance standards models II may have practical applicability to other states as well. The same set of variables was also obtained by other states for federal reporting purposes.

The results of this Michigan modeling effort were considered in the study to be sufficiently promising to encourage further work and development in the area of ex ante forecasting and policy analysis. The results presented, however, also suggest a successful initial validation already with respect to the models selected, the data compiled, and the structure estimated in the study. As such, the study's major objective of providing a working short-run Michigan performance standards models has been realized.

Limitations of the Study

The Michigan performance standards models presented in the study have been based on data from a given program year. There is considerable sampling variability which can result in changes in regression weights from year to year. Combining data from Program Year 1984 and Program Year 1985 can reduce sampling variability and thus reduce the changes in the weights from year to year.

The Michigan JTPA data also have a definitional problem because SDAs use different criteria in defining positive terminations. Consequently, youth positive termination rate and youth cost per positive termination may not be consistent measures of SDA performance. Thus, models for these two measures are likely to result in relatively poor prediction of SDA performance.

Service Delivery Area is used as the unit of analysis, and 26 SDAs are included in the study. Better estimates of models would be obtained if individual terminee data were available.

Future Research Directions

It is appropriate to close this study by suggesting possible directions for future research if this work is to be sustained and supplemented. The following suggestions are judged to be the most pertinent at this time.

1. The models should be maintained. Econometric models are effective vehicles of analysis only when the information contained

in them is kept up to date.

2. Further evaluation and validation of the Michigan models should be undertaken. The evaluation would result in increased experience with and confidence in the procedure being used and the results being generated.

3. An effort is needed to provide better and more up-to-date data to regional planners and researchers. Analysis of public policy will become more effective only when the information used in the study is kept up to date.

4. The performance of the youth positive termination rate model falls behind the other models. The data and modeling difficulties inherent in these shortcomings merit closer attention.

APPENDIX A

**U.S. DEPARTMENT OF LABOR, EMPLOYMENT AND
TRAINING ADMINISTRATION, PY 1984 JTPA
PERFORMANCE STANDARDS WORKSHEETS**

LIST OF TABLES

A1.	PY 1984 JTPA Performance Standards Worksheet, Adult Entered Employment Rate.	200
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Table A1

PY 1984 JTPA Performance Standards Worksheet Performance
Measure -- Adult Entered Employment Rate
Service Delivery Area Name:

F. LOCAL FACTORS	G. SDA FACTOR VALUES	H. NATL. AVG. FACTOR VALUES	I. DIFFERENCE (G MINUS H)	J. WEIGHTS	K. EFFECT OF LOCAL FACTOR ON PERFORM. EXPECTATIONS (I TIMES J)
1. % Female		51.5		.03	
2. % 55 years old and over		2.2		.26	
3. % Black		29.7		-.10	
4. % Hispanic		9.7		.09	
5. % Other Minority		5.3		.11	
6. % Dropout		29.3		.07	
7. % High School Grad & Above		57.3		.34	
8. % Handicapped		10.3		-.29	
9. % UC Claimant		6.9		.29	
10. % Welfare Recipient		28.2		-.22	
11. % Single Head of Household		21.3		.11	
12. Average Wage for Area (000)		15.2		-.44	
13. Unemployment Rate		10.0		-1.20	
TOTAL					
L. NATIONAL DEPARTURE POINT (National Mean Performance Level)	47.0%				
M. Model-Adjusted Performance Level (K + L)					
N. Tolerance Level Adjustment	+ 7.8%				
O. Governor's Adjustment					
P. SDA Performance Standard					

Source: U.S. Department of Labor, Employment and Training Administration, 1984. Guide for Setting JTPA Performance Standards for PY '84, Washington, DC: Author.

Table A2

PY 1984 JTPA Performance Standards Worksheet Performance
Measure -- Adult Cost Per Entered Employment
Service Delivery Area Name:

F. LOCAL FACTORS	G. SDA FACTOR VALUES	H. NATL. AVG. FACTOR VALUES	I. DIFFERENCE (G MINUS H)	J. WEIGHTS	K. EFFECT OF LOCAL FACTOR ON PERFORM. EXPECTATIONS (I TIMES J)
1. % Female		51.5		82.80	
2. % 55 years old and over		2.2		-117.97	
3. % Black		29.7		11.57	
4. % Hispanic		9.7		-11.05	
5. % Other Minority		5.3		-33.18	
6. % Dropout		29.3		23.88	
7. % High School Grad & Above		57.3		-13.68	
8. % Handicapped		10.3		1.78	
9. % UC Claimant		6.9		-25.54	
10. % Welfare Recipient		28.2		31.43	
11. % Single Head of Household		21.3		-113.82	
12. Average Wage for Area (000)		15.2		286.03	
13. Unemployment Rate		10.0		245.54	
14. Average Weeks Participated		22.2		135.91	
TOTAL					
L. NATIONAL DEPARTURE POINT (National Mean Performance Level) \$6,242.28					
M. Model-Adjusted Performance Level (K + L)					
N. Tolerance Level Adjustment	+12.8%				
O. Governor's Adjustment					
P. SDA Performance Standard					

Source: U.S. Department of Labor, Employment and Training Administration, 1984. Guide for Setting JTPA Performance Standards for PY '84, Washington, DC: Author.

Table A3

PY 1984 JTPA Performance Standards Worksheet Performance
Measure -- Adult Average Wage at Placement
Service Delivery Area Name:

F. LOCAL FACTORS	G. SDA FACTOR VALUES	H. NATL. AVG. FACTOR VALUES	I. DIFFERENCE (G MINUS H)	J. WEIGHTS	K. EFFECT OF LOCAL FACTOR ON PERFORM. EXPECTATIONS (I TIMES J)
1. % Female		51.5		-.005	
2. % 55 years old and over		2.2		-.016	
3. % Black		29.7		-.004	
4. % Hispanic		9.7		.000	
5. % Other Minority		5.3		.006	
6. % Dropout		29.3		-.008	
7. % High School Grad & Above		57.3		.001	
8. % Handicapped		10.3		.006	
9. % UC Claimant		6.9		.003	
10. % Welfare Recipient		28.2		-.002	
11. % Single Head of Household		21.3		.003	
12. Average Wage for Area (000)		15.2		.118	
TOTAL					
L. NATIONAL DEPARTURE POINT (National Mean Performance Level)	\$4.44				
M. Model-Adjusted Performance Level (K + L)					
N. Tolerance Level Adjustment	+ 3.5%				
O. Governor's Adjustment					
P. SDA Performance Standard					

Source: U.S. Department of Labor, Employment and Training Administration, 1984. Guide for Setting JTPA Performance Standards for PY '84, Washington, DC: Author.

Table A4

PY 1984 JTPA Performance Standards Worksheet Performance
Measure -- Youth Entered Employment Rate
Service Delivery Area Name:

F. LOCAL FACTORS	G. SDA FACTOR VALUES	H. NATL. AVG. FACTOR VALUES	I. DIFFERENCE (G MINUS H)	J. WEIGHTS	K. EFFECT OF LOCAL FACTOR ON PERFORM. EXPECTATIONS (I TIMES J)
1. % Female		48.5		.20	
2. % 14-15 years old		9.2		-.06	
3. % Black		35.7		-.09	
4. % Hispanic		10.0		-.03	
5. % Other Minority		4.8		-.06	
6. % Dropout		19.7		.19	
7. % High School Grad & Above		16.3		.37	
8. % UC Claimant		1.0		.52	
9. % Welfare Recipient		30.1		-.13	
10. % Single Head of Household		5.6		-.06	
11. Average Wage for Area (000)		15.2		.27	
12. Unemployment Rate		10.0		-.43	
TOTAL					
L. NATIONAL DEPARTURE POINT (National Mean Performance Level)	21.4%				
M. Model-Adjusted Performance Level (K + L)					
N. Tolerance Level Adjustment	+ 19.1%				
O. Governor's Adjustment					
P. SDA Performance Standard					

Source: U.S. Department of Labor, Employment and Training Administration, 1984. Guide for Setting JTPA Performance Standards for PY '84, Washington, DC: Author.

Table A5

PY 1984 JTPA Performance Standards Worksheet Performance
Measure -- Youth Cost Per Positive Termination
Service Delivery Area Name:

F. LOCAL FACTORS	G. SDA FACTOR VALUES	H. NATL. AVG. FACTOR VALUES	I. DIFFERENCE (G MINUS H)	J. WEIGHTS	K. EFFECT OF LOCAL FACTOR ON PERFORM. EXPECTATIONS (I TIMES J)
1. % Female		48.5		2.50	
2. % 14-15 years old		9.2		-8.21	
3. % Black		35.7		1.61	
4. % Hispanic		10.0		3.34	
5. % Other Minority		4.8		-9.65	
6. % Dropout		19.7		40.17	
7. % High School Grad & Above		16.3		40.15	
8. % UC Claimant		1.0		-44.98	
9. % Welfare Recipient		30.1		3.82	
10. % Single Head of Household		5.6		-36.80	
11. Average Wage for Area (000)		15.2		53.46	
12. Unemployment Rate		10.0		54.36	
13. Average Weeks Participated		20.9		86.31	
TOTAL					
L. NATIONAL DEPARTURE POINT (National Mean Performance Level) \$2,710.16					
M. Model-Adjusted Performance Level (K + L)					
N. Tolerance Level Adjustment	+ 18.2%				
O. Governor's Adjustment					
P. SDA Performance Standard					

Source: U.S. Department of Labor, Employment and Training Administration, 1984. Guide for Setting JTPA Performance Standards for PY '84, Washington, DC: Author.

Table A6

PY 1984 JTPA Performance Standards Worksheet Performance
Measure -- Youth Positive Termination Rate
Service Delivery Area Name:

F. LOCAL FACTORS	G. SDA FACTOR VALUES	H. NATL. AVG. FACTOR VALUES	I. DIFFERENCE (G MINUS H)	J. WEIGHTS	K. EFFECT OF LOCAL FACTOR ON PERFORM. EXPECTATIONS (I TIMES J)
1. % Female		48.5		.21	
2. % 14-15 years old		9.2		.11	
3. % Black		35.7		.00	
4. % Hispanic		10.0		.03	
5. % Other Minority		4.8		.16	
6. % Dropout		19.7		-.27	
7. % High School Grad & Above		16.3		-.16	
8. % UC Claimant		1.0		.59	
9. % Welfare Recipient		30.1		-.11	
10. % Single Head of Household		5.6		-.07	
11. Average Wage for Area (000)		15.2		-.31	
12. Unemployment Rate		10.0		-.50	
TOTAL					
L. NATIONAL DEPARTURE POINT (National Mean Performance Level)	80.2%				
M. Model-Adjusted Performance Level (K + L)					
N. Tolerance Level Adjustment	+ 4.3%				
O. Governor's Adjustment					
P. SDA Performance Standard					

Source: U.S. Department of Labor, Employment and Training Administration, 1984. Guide for Setting JTPA Performance Standards for PY '84, Washington, DC: Author.

Table A7

PY 1984 JTPA Performance Standards Worksheet Performance
 Measure -- Adult Welfare Entered Employment Rate
 Service Delivery Area Name:

1. Model-Adjusted Performance Level for the Adult Entered Employment Rate	_____
2. SDA (State) Welfare Entered Employment Rate Ratio	_____
3. Welfare Entered Employment Rate	_____
M. Model-Adjusted Performance Level	_____
N. Tolerance Level Adjustment + 7.8%	_____
O. Governor's Adjustment	_____
P. SDA Performance Standard	_____

Source: U.S. Department of Labor, Employment and Training Administration, 1984. Guide for Setting JTPA Performance Standards for PY '84, Washington, DC: Author.

APPENDIX B
MICHIGAN PY '84 JTPA ANNUAL STATUS REPORTS

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TABLE B1

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 1

	Total Adults	Adults (Welfare)	Youth
Total Terminations	470	213	465
1. Entered Unsub. Employment	335	124	180
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	1
2. Youth Employability Enhance.	-	-	166
A. Entered Non-IIA Training	-	-	1
B. Returned to Full Time School	-	-	0
C. Completed Program Objectives	-	-	117
D. Completed Major Level of Ed	-	-	48
3. Attained Youth Competencies	-	-	35
4. Other Terminations	135	89	119
Male	229	92	258
Female	241	121	207
Age 14-15	-	-	148
Age 16-21	-	-	317
Age 22-54	465	212	-
Age 55 and over	5	1	-
Dropouts	109	57	35
Students	3	2	342
High School and Up	358	154	88
Head of House with Child	152	91	26
Race - White	440	194	402
Race - Black	9	6	11
Race - Hispanic	18	11	37
Race - Am. Indian-Alaskan Nat.	1	1	8
Race - Asian-Pacific Islander	2	1	7
Limited English Speaking	3	2	8
Handicapped	66	19	230
Unemployment Comp. Claimant	29	2	9
Unemployed	358	182	102
Welfare Recipient	213	213	97
Length of Prog. Stay (wks)	21	20	30
Adult Av. Wage at Placement	5.14	4.70	-
Adult Entered Employment	335	124	-
Welfare Entered Employment	124	124	-
Youth Enter Employment	-	-	180
Youth Positive Termination	-	-	381

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B2

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 2

	Total Adults	Adults (Welfare)	Youth
Total Terminations	247	135	210
1. Entered Unsub. Employment	177	88	101
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	0
2. Youth Employability Enhance.	-	-	50
A. Entered Non-IIA Training	-	-	5
B. Returned to Full Time School	-	-	8
C. Completed Program Objectives	-	-	20
D. Completed Major Level of Ed	-	-	17
3. Attained Youth Competencies	-	-	0
4. Other Terminations	70	47	59
Male	167	94	116
Female	80	41	94
Age 14-15	-	-	34
Age 16-21	-	-	176
Age 22-54	243	134	-
Age 55 and over	4	1	-
Dropouts	70	40	45
Students	5	3	112
High School and Up	172	92	53
Head of House with Child	75	42	21
Race - White	239	129	207
Race - Black	0	0	0
Race - Hispanic	3	2	1
Race - Am. Indian-Alaskan Nat.	5	4	1
Race - Asian-Pacific Islander	0	0	1
Limited English Speaking	0	0	0
Handicapped	20	9	17
Unemployment Comp. Claimant	10	1	4
Unemployed	189	112	94
Welfare Recipient	135	135	97
Length of Prog. Stay (wks)	19	18	20
Adult Av. Wage at Placement	4.59	4.45	-
Adult Entered Employment	177	88	-
Welfare Entered Employment	88	88	-
Youth Enter Employment	-	-	101
Youth Positive Termination	-	-	151

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B3

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 3

	Total Adults	Adults (Welfare)	Youth
Total Terminations	839	558	358
1. Entered Unsub. Employment	383	237	194
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	3
2. Youth Employability Enhance.	-	-	1
A. Entered Non-IIA Training	-	-	1
B. Returned to Full Time School	-	-	0
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	0
3. Attained Youth Competencies	-	-	8
4. Other Terminations	456	321	163
Male	490	307	161
Female	349	251	197
Age 14-15	-	-	0
Age 16-21	-	-	358
Age 22-54	808	545	-
Age 55 and over	31	13	-
Dropouts	195	143	67
Students	2	1	152
High School and Up	642	414	139
Head of House with Child	213	172	48
Race - White	610	408	230
Race - Black	203	133	114
Race - Hispanic	15	10	2
Race - Am. Indian-Alaskan Nat.	6	5	2
Race - Asian-Pacific Islander	5	2	0
Limited English Speaking	3	0	1
Handicapped	58	20	20
Unemployment Comp. Claimant	61	9	3
Unemployed	817	541	216
Welfare Recipient	558	558	193
Length of Prog. Stay (wks)	16	16	16
Adult Av. Wage at Placement	5.23	5.09	-
Adult Entered Employment	383	237	-
Welfare Entered Employment	237	237	-
Youth Enter Employment	-	-	194
Youth Positive Termination	-	-	203

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B4

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 4

	Total Adults	Adults (Welfare)	Youth
Total Terminations	1176	767	852
1. Entered Unsub. Employment	652	405	485
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	2
2. Youth Employability Enhance.	-	-	101
A. Entered Non-IIA Training	-	-	0
B. Returned to Full Time School	-	-	4
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	97
3. Attained Youth Competencies	-	-	36
4. Other Terminations	524	362	266
Male	647	372	478
Female	529	395	374
Age 14-15	-	-	2
Age 16-21	-	-	850
Age 22-54	1154	765	-
Age 55 and over	22	2	-
Dropouts	228	153	124
Students	23	14	351
High School and Up	925	600	377
Head of House with Child	367	298	149
Race - White	582	330	433
Race - Black	453	361	336
Race - Hispanic	127	70	69
Race - Am. Indian-Alaskan Nat.	4	0	6
Race - Asian-Pacific Islander	10	6	8
Limited English Speaking	26	16	7
Handicapped	83	36	122
Unemployment Comp. Claimant	50	4	12
Unemployed	895	609	480
Welfare Recipient	767	767	429
Length of Prog. Stay (wks)	19	20	19
Adult Av. Wage at Placement	4.40	4.22	-
Adult Entered Employment	652	405	-
Welfare Entered Employment	405	405	-
Youth Enter Employment	-	-	485
Youth Positive Termination	-	-	622

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B5

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 5

	Total Adults	Adults (Welfare)	Youth
Total Terminations	800	462	418
1. Entered Unsub. Employment	413	214	215
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	4
2. Youth Employability Enhance.	-	-	45
A. Entered Non-IIA Training	-	-	11
B. Returned to Full Time School	-	-	6
C. Completed Program Objectives	-	-	1
D. Completed Major Level of Ed	-	-	27
3. Attained Youth Competencies	-	-	0
4. Other Terminations	387	248	158
Male	400	205	210
Female	400	257	208
Age 14-15	-	-	0
Age 16-21	-	-	418
Age 22-54	785	458	-
Age 55 and over	15	4	-
Dropouts	135	83	53
Students	3	1	217
High School and Up	662	378	148
Head of House with Child	265	193	51
Race - White	540	295	185
Race - Black	235	153	217
Race - Hispanic	12	7	9
Race - Am. Indian-Alaskan Nat.	12	6	4
Race - Asian-Pacific Islander	1	1	3
Limited English Speaking	4	3	0
Handicapped	58	15	54
Unemployment Comp. Claimant	63	8	5
Unemployed	451	244	161
Welfare Recipient	462	462	194
Length of Prog. Stay (wks)	16	17	10
Adult Av. Wage at Placement	4.93	4.71	-
Adult Entered Employment	413	214	-
Welfare Entered Employment	214	214	-
Youth Enter Employment	-	-	215
Youth Positive Termination	-	-	260

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B6

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 6

	Total Adults	Adults (Welfare)	Youth
Total Terminations	522	218	395
1. Entered Unsub. Employment	363	148	252
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	15
2. Youth Employability Enhance.	-	-	8
A. Entered Non-IIA Training	-	-	1
B. Returned to Full Time School	-	-	1
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	6
3. Attained Youth Competencies	-	-	46
4. Other Terminations	159	70	135
Male	319	126	204
Female	203	92	191
Age 14-15	-	-	3
Age 16-21	-	-	392
Age 22-54	473	214	-
Age 55 and over	49	4	-
Dropouts	71	26	16
Students	8	4	142
High School and Up	443	188	237
Head of House with Child	109	63	49
Race - White	495	202	380
Race - Black	3	1	0
Race - Hispanic	3	2	1
Race - Am. Indian-Alaskan Nat.	20	12	12
Race - Asian-Pacific Islander	1	1	1
Limited English Speaking	0	0	1
Handicapped	66	24	64
Unemployment Comp. Claimant	43	3	13
Unemployed	419	191	140
Welfare Recipient	218	218	96
Length of Prog. Stay (wks)	26	25	24
Adult Av. Wage at Placement	5.22	5.09	-
Adult Entered Employment	363	148	-
Welfare Entered Employment	148	148	-
Youth Enter Employment	-	-	252
Youth Positive Termination	-	-	306

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B7

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 7

	Total Adults	Adults (Welfare)	Youth
Total Terminations	2398	1472	2567
1. Entered Unsub. Employment	1329	759	1120
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	7
2. Youth Employability Enhance.	-	-	160
A. Entered Non-IIA Training	-	-	125
B. Returned to Full Time School	-	-	8
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	27
3. Attained Youth Competencies	-	-	701
4. Other Terminations	1043	694	1287
Male	1028	513	969
Female	1370	959	1598
Age 14-15	-	-	0
Age 16-21	-	-	2567
Age 22-54	2350	1462	-
Age 55 and over	48	10	-
Dropouts	418	260	469
Students	3	1	658
High School and Up	1977	1211	1440
Head of House with Child	896	707	473
Race - White	137	65	61
Race - Black	2156	1356	2429
Race - Hispanic	93	45	73
Race - Am. Indian-Alaskan Nat.	3	2	1
Race - Asian-Pacific Islander	9	4	3
Limited English Speaking	26	14	8
Handicapped	68	36	13
Unemployment Comp. Claimant	60	2	29
Unemployed	1988	1304	1504
Welfare Recipient	1472	1472	1548
Length of Prog. Stay (wks)	17	18	16
Adult Av. Wage at Placement	4.91	4.91	-
Adult Entered Employment	1329	759	-
Welfare Entered Employment	759	759	-
Youth Enter Employment	-	-	1120
Youth Positive Termination	-	-	1981

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B8

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 8

	Total Adults	Adults (Welfare)	Youth
Total Terminations	789	348	374
1. Entered Unsub. Employment	621	245	256
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	2
2. Youth Employability Enhance.	-	-	0
A. Entered Non-IIA Training	-	-	0
B. Returned to Full Time School	-	-	0
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	0
3. Attained Youth Competencies	-	-	0
4. Other Terminations	168	103	118
Male	476	184	221
Female	313	164	153
Age 14-15	-	-	0
Age 16-21	-	-	374
Age 22-54	777	348	-
Age 55 and over	12	-	-
Dropouts	115	53	55
Students	7	3	93
High School and Up	667	292	226
Head of House with Child	173	105	39
Race - White	700	307	326
Race - Black	74	39	43
Race - Hispanic	13	2	3
Race - Am. Indian-Alaskan Nat.	-	-	2
Race - Asian-Pacific Islander	2	0	0
Limited English Speaking	3	1	0
Handicapped	42	10	50
Unemployment Comp. Claimant	75	4	7
Unemployed	698	313	309
Welfare Recipient	348	348	94
Length of Prog. Stay (wks)	15	18	12
Adult Av. Wage at Placement	5.64	5.33	-
Adult Entered Employment	621	245	-
Welfare Entered Employment	244	244	-
Youth Enter Employment	-	-	256
Youth Positive Termination	-	-	256

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B9

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 9

	Total Adults	Adults (Welfare)	Youth
Total Terminations	242	115	250
1. Entered Unsub. Employment	181	77	143
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	2
2. Youth Employability Enhance.	-	-	38
A. Entered Non-IIA Training	-	-	0
B. Returned to Full Time School	-	-	25
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	13
3. Attained Youth Competencies	-	-	25
4. Other Terminations	61	38	69
Male	133	64	144
Female	109	51	106
Age 14-15	-	-	0
Age 16-21	-	-	250
Age 22-54	218	108	-
Age 55 and over	24	7	-
Dropouts	44	21	45
Students	1	-	154
High School and Up	197	94	51
Head of House with Child	43	29	12
Race - White	192	88	180
Race - Black	0	0	3
Race - Hispanic	2	2	1
Race - Am. Indian-Alaskan Nat.	46	25	65
Race - Asian-Pacific Islander	2	0	1
Limited English Speaking	1	1	0
Handicapped	21	8	21
Unemployment Comp. Claimant	25	4	3
Unemployed	206	108	135
Welfare Recipient	115	115	94
Length of Prog. Stay (wks)	14	19	19
Adult Av. Wage at Placement	4.43	4.38	-
Adult Entered Employment	181	77	-
Welfare Entered Employment	77	77	-
Youth Enter Employment	-	-	143
Youth Positive Termination	-	-	206

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B10

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 10

	Total Adults	Adults (Welfare)	Youth
Total Terminations	1125	785	1202
1. Entered Unsub. Employment	466	313	395
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	5
2. Youth Employability Enhance.	-	-	1
A. Entered Non-IIA Training	-	-	0
B. Returned to Full Time School	-	-	0
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	1
3. Attained Youth Competencies	-	-	472
4. Other Terminations	659	472	806
Male	573	379	637
Female	552	406	565
Age 14-15	-	-	0
Age 16-21	-	-	1202
Age 22-54	1101	778	-
Age 55 and over	24	7	-
Dropouts	340	244	386
Students	4	4	621
High School and Up	781	537	195
Head of House with Child	365	302	84
Race - White	422	273	376
Race - Black	674	490	798
Race - Hispanic	21	17	17
Race - Am. Indian-Alaskan Nat.	6	4	7
Race - Asian-Pacific Islander	2	1	4
Limited English Speaking	1	1	1
Handicapped	65	34	189
Unemployment Comp. Claimant	49	5	11
Unemployed	918	643	336
Welfare Recipient	785	785	725
Length of Prog. Stay (wks)	13	13	16
Adult Av. Wage at Placement	4.72	4.72	-
Adult Entered Employment	466	313	-
Welfare Entered Employment	312	312	-
Youth Enter Employment	-	-	395
Youth Positive Termination	-	-	868

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B11

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 11

	Total Adults	Adults (Welfare)	Youth
Total Terminations	673	292	569
1. Entered Unsub. Employment	659	284	511
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	11
2. Youth Employability Enhance.	-	-	8
A. Entered Non-IIA Training	-	-	8
B. Returned to Full Time School	-	-	0
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	0
3. Attained Youth Competencies	-	-	14
4. Other Terminations	14	8	50
Male	352	131	311
Female	321	161	258
Age 14-15	-	-	0
Age 16-21	-	-	569
Age 22-54	639	291	-
Age 55 and over	34	1	-
Dropouts	151	71	109
Students	6	5	138
High School and Up	516	216	322
Head of House with Child	206	122	112
Race - White	637	277	545
Race - Black	5	3	8
Race - Hispanic	21	7	15
Race - Am. Indian-Alaskan Nat.	9	5	1
Race - Asian-Pacific Islander	1	0	0
Limited English Speaking	6	2	0
Handicapped	47	15	35
Unemployment Comp. Claimant	73	5	6
Unemployed	574	253	391
Welfare Recipient	292	292	174
Length of Prog. Stay (wks)	15	19	19
Adult Av. Wage at Placement	4.87	4.60	-
Adult Entered Employment	659	284	-
Welfare Entered Employment	283	283	-
Youth Enter Employment	-	-	511
Youth Positive Termination	-	-	533

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B12

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 12

	Total Adults	Adults (Welfare)	Youth
Total Terminations	519	284	164
1. Entered Unsub. Employment	410	214	99
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	1
2. Youth Employability Enhance.	-	-	0
A. Entered Non-IIA Training	-	-	0
B. Returned to Full Time School	-	-	0
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	0
3. Attained Youth Competencies	-	-	36
4. Other Terminations	109	70	65
Male	362	178	107
Female	157	106	57
Age 14-15	-	-	0
Age 16-21	-	-	164
Age 22-54	509	281	-
Age 55 and over	10	3	-
Dropouts	102	54	43
Students	2	2	30
High School and Up	415	228	91
Head of House with Child	119	90	13
Race - White	433	226	135
Race - Black	60	41	14
Race - Hispanic	18	13	13
Race - Am. Indian-Alaskan Nat.	3	2	1
Race - Asian-Pacific Islander	5	2	1
Limited English Speaking	0	0	2
Handicapped	42	16	14
Unemployment Comp. Claimant	44	6	5
Unemployed	431	239	101
Welfare Recipient	284	284	64
Length of Prog. Stay (wks)	24	24	18
Adult Av. Wage at Placement	5.63	5.25	-
Adult Entered Employment	410	214	-
Welfare Entered Employment	214	214	-
Youth Enter Employment	-	-	99
Youth Positive Termination	-	-	135

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B13

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 13

	Total Adults	Adults (Welfare)	Youth
Total Terminations	947	513	407
1. Entered Unsub. Employment	621	295	255
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	2
2. Youth Employability Enhance.	-	-	9
A. Entered Non-IIA Training	-	-	0
B. Returned to Full Time School	-	-	1
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	8
3. Attained Youth Competencies	-	-	11
4. Other Terminations	325	218	143
Male	525	282	219
Female	422	231	188
Age 14-15	-	-	0
Age 16-21	-	-	407
Age 22-54	928	508	-
Age 55 and over	19	5	-
Dropouts	216	135	71
Students	10	9	64
High School and Up	721	369	272
Head of House with Child	248	176	37
Race - White	917	496	386
Race - Black	0	0	0
Race - Hispanic	18	10	13
Race - Am. Indian-Alaskan Nat.	12	7	7
Race - Asian-Pacific Islander	0	0	0
Limited English Speaking	4	3	1
Handicapped	80	29	26
Unemployment Comp. Claimant	64	9	16
Unemployed	594	305	279
Welfare Recipient	513	513	124
Length of Prog. Stay (wks)	19	29	16
Adult Av. Wage at Placement	4.96	4.86	-
Adult Entered Employment	621	295	-
Welfare Entered Employment	292	292	-
Youth Enter Employment	-	-	255
Youth Positive Termination	-	-	275

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B14

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 14

	Total Adults	Adults (Welfare)	Youth
Total Terminations	677	384	490
1. Entered Unsub. Employment	505	271	306
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	3
2. Youth Employability Enhance.	-	-	12
A. Entered Non-IIA Training	-	-	5
B. Returned to Full Time School	-	-	2
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	5
3. Attained Youth Competencies	-	-	43
4. Other Terminations	172	113	172
Male	348	172	245
Female	329	212	245
Age 14-15	-	-	0
Age 16-21	-	-	490
Age 22-54	640	381	-
Age 55 and over	37	3	-
Dropouts	87	53	91
Students	14	8	253
High School and Up	576	323	146
Head of House with Child	209	169	66
Race - White	505	265	263
Race - Black	156	109	216
Race - Hispanic	6	4	3
Race - Am. Indian-Alaskan Nat.	4	3	2
Race - Asian-Pacific Islander	6	3	6
Limited English Speaking	5	5	2
Handicapped	70	28	42
Unemployment Comp. Claimant	56	6	2
Unemployed	583	357	210
Welfare Recipient	384	384	268
Length of Prog. Stay (wks)	19	20	23
Adult Av. Wage at Placement	5.04	5.04	-
Adult Entered Employment	505	271	-
Welfare Entered Employment	269	269	-
Youth Enter Employment	-	-	306
Youth Positive Termination	-	-	361

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B15

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 15

	Total Adults	Adults (Welfare)	Youth
Total Terminations	1007	539	609
1. Entered Unsub. Employment	751	355	336
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	4
2. Youth Employability Enhance.	-	-	29
A. Entered Non-IIA Training	-	-	3
B. Returned to Full Time School	-	-	1
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	25
3. Attained Youth Competencies	-	-	150
4. Other Terminations	256	184	244
Male	528	263	339
Female	479	276	270
Age 14-15	-	-	3
Age 16-21	-	-	606
Age 22-54	988	533	-
Age 55 and over	19	6	-
Dropouts	223	144	79
Students	5	4	326
High School and Up	779	391	204
Head of House with Child	270	184	60
Race - White	560	258	324
Race - Black	377	250	231
Race - Hispanic	45	18	24
Race - Am. Indian-Alaskan Nat.	16	8	9
Race - Asian-Pacific Islander	9	5	21
Limited English Speaking	16	9	14
Handicapped	155	54	158
Unemployment Comp. Claimant	71	4	7
Unemployed	917	521	268
Welfare Recipient	539	539	216
Length of Prog. Stay (wks)	16	17	16
Adult Av. Wage at Placement	5.02	4.82	-
Adult Entered Employment	751	355	-
Welfare Entered Employment	354	354	-
Youth Enter Employment	-	-	336
Youth Positive Termination	-	-	515

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B16

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 16

	Total Adults	Adults (Welfare)	Youth
Total Terminations	333	131	434
1. Entered Unsub. Employment	256	89	98
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	3
2. Youth Employability Enhance.	-	-	182
A. Entered Non-IIA Training	-	-	2
B. Returned to Full Time School	-	-	3
C. Completed Program Objectives	-	-	177
D. Completed Major Level of Ed	-	-	0
3. Attained Youth Competencies	-	-	96
4. Other Terminations	77	42	154
Male	188	63	253
Female	145	68	181
Age 14-15	-	-	176
Age 16-21	-	-	258
Age 22-54	327	131	-
Age 55 and over	6	0	-
Dropouts	45	18	14
Students	2	0	325
High School and Up	286	113	95
Head of House with Child	76	49	30
Race - White	314	120	371
Race - Black	14	8	41
Race - Hispanic	2	1	15
Race - Am. Indian-Alaskan Nat.	3	2	4
Race - Asian-Pacific Islander	0	0	3
Limited English Speaking	3	1	0
Handicapped	39	15	80
Unemployment Comp. Claimant	32	2	3
Unemployed	259	107	83
Welfare Recipient	131	131	150
Length of Prog. Stay (wks)	27	26	13
Adult Av. Wage at Placement	4.82	4.41	-
Adult Entered Employment	256	89	-
Welfare Entered Employment	89	89	-
Youth Enter Employment	-	-	98
Youth Positive Termination	-	-	376

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B17

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 17

	Total Adults	Adults (Welfare)	Youth
Total Terminations	2021	901	1127
1. Entered Unsub. Employment	1513	622	708
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	8
2. Youth Employability Enhance.	-	-	35
A. Entered Non-IIA Training	-	-	9
B. Returned to Full Time School	-	-	13
C. Completed Program Objectives	-	-	3
D. Completed Major Level of Ed	-	-	10
3. Attained Youth Competencies	-	-	265
4. Other Terminations	507	278	384
Male	1267	527	630
Female	754	374	497
Age 14-15	-	-	31
Age 16-21	-	-	1096
Age 22-54	1965	895	-
Age 55 and over	56	6	-
Dropouts	404	208	226
Students	55	32	409
High School and Up	1562	661	492
Head of House with Child	346	231	83
Race - White	1196	522	689
Race - Black	572	256	318
Race - Hispanic	194	89	81
Race - Am. Indian-Alaskan Nat.	43	27	15
Race - Asian-Pacific Islander	16	7	24
Limited English Speaking	23	12	9
Handicapped	242	94	176
Unemployment Comp. Claimant	112	6	15
Unemployed	1754	803	697
Welfare Recipient	901	901	383
Length of Prog. Stay (wks)	15	15	16
Adult Av. Wage at Placement	4.98	5.12	-
Adult Entered Employment	1513	622	-
Welfare Entered Employment	620	620	-
Youth Enter Employment	-	-	708
Youth Positive Termination	-	-	1008

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B18

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 18

	Total Adults	Adults (Welfare)	Youth
Total Terminations	422	221	326
1. Entered Unsub. Employment	339	166	188
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	0
2. Youth Employability Enhance.	-	-	22
A. Entered Non-IIA Training	-	-	16
B. Returned to Full Time School	-	-	4
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	2
3. Attained Youth Competencies	-	-	66
4. Other Terminations	83	55	116
Male	210	101	189
Female	212	120	137
Age 14-15	-	-	5
Age 16-21	-	-	321
Age 22-54	393	215	-
Age 55 and over	29	6	-
Dropouts	71	44	41
Students	8	6	203
High School and Up	343	171	82
Head of House with Child	120	84	17
Race - White	305	146	208
Race - Black	111	72	111
Race - Hispanic	1	0	3
Race - Am. Indian-Alaskan Nat.	2	2	1
Race - Asian-Pacific Islander	3	1	3
Limited English Speaking	6	4	4
Handicapped	50	18	130
Unemployment Comp. Claimant	25	1	4
Unemployed	315	171	118
Welfare Recipient	221	221	105
Length of Prog. Stay (wks)	28	27	21
Adult Av. Wage at Placement	5.13	5.20	-
Adult Entered Employment	339	166	-
Welfare Entered Employment	166	166	-
Youth Enter Employment	-	-	188
Youth Positive Termination	-	-	276

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B19

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 19

	Total Adults	Adults (Welfare)	Youth
Total Terminations	2182	930	841
1. Entered Unsub. Employment	1516	592	539
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	10
2. Youth Employability Enhance.	-	-	17
A. Entered Non-IIA Training	-	-	0
B. Returned to Full Time School	-	-	1
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	16
3. Attained Youth Competencies	-	-	24
4. Other Terminations	665	338	285
Male	1280	479	525
Female	902	451	316
Age 14-15	-	-	2
Age 16-21	-	-	839
Age 22-54	2105	920	-
Age 55 and over	77	10	-
Dropouts	486	242	327
Students	7	1	54
High School and Up	1689	687	460
Head of House with Child	624	371	126
Race - White	1927	779	738
Race - Black	186	118	88
Race - Hispanic	26	11	9
Race - Am. Indian-Alaskan Nat.	26	16	3
Race - Asian-Pacific Islander	17	6	3
Limited English Speaking	18	6	1
Handicapped	205	60	112
Unemployment Comp. Claimant	189	8	38
Unemployed	1271	478	460
Welfare Recipient	930	930	257
Length of Prog. Stay (wks)	25	27	27
Adult Av. Wage at Placement	5.69	5.48	-
Adult Entered Employment	1516	592	-
Welfare Entered Employment	592	592	-
Youth Enter Employment	-	-	539
Youth Positive Termination	-	-	580

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B20

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 20

	Total Adults	Adults (Welfare)	Youth
Total Terminations	666	354	282
1. Entered Unsub. Employment	479	240	217
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	7
2. Youth Employability Enhance.	-	-	1
A. Entered Non-IIA Training	-	-	0
B. Returned to Full Time School	-	-	0
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	1
3. Attained Youth Competencies	-	-	7
4. Other Terminations	187	114	64
Male	380	175	159
Female	286	179	123
Age 14-15	-	-	0
Age 16-21	-	-	282
Age 22-54	639	353	-
Age 55 and over	27	1	-
Dropouts	94	57	44
Students	11	6	80
High School and Up	561	291	158
Head of House with Child	175	139	27
Race - White	469	236	182
Race - Black	160	104	78
Race - Hispanic	21	5	13
Race - Am. Indian-Alaskan Nat.	13	8	8
Race - Asian-Pacific Islander	3	1	1
Limited English Speaking	8	2	0
Handicapped	134	39	29
Unemployment Comp. Claimant	41	2	4
Unemployed	160	50	58
Welfare Recipient	354	354	96
Length of Prog. Stay (wks)	20	19	20
Adult Av. Wage at Placement	5.01	4.86	-
Adult Entered Employment	479	240	-
Welfare Entered Employment	240	240	-
Youth Enter Employment	-	-	217
Youth Positive Termination	-	-	225

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B21

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 21

	Total Adults	Adults (Welfare)	Youth
Total Terminations	385	229	432
1. Entered Unsub. Employment	273	150	155
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	6
2. Youth Employability Enhance.	-	-	15
A. Entered Non-IIA Training	-	-	2
B. Returned to Full Time School	-	-	10
C. Completed Program Objectives	-	-	1
D. Completed Major Level of Ed	-	-	2
3. Attained Youth Competencies	-	-	47
4. Other Terminations	112	79	262
Male	228	122	246
Female	157	107	186
Age 14-15	-	-	30
Age 16-21	-	-	402
Age 22-54	380	229	-
Age 55 and over	5	0	-
Dropouts	71	49	40
Students	-	-	294
High School and Up	314	180	98
Head of House with Child	86	68	16
Race - White	381	228	419
Race - Black	1	0	1
Race - Hispanic	0	0	2
Race - Am. Indian-Alaskan Nat.	3	1	6
Race - Asian-Pacific Islander	0	0	4
Limited English Speaking	0	0	2
Handicapped	34	16	97
Unemployment Comp. Claimant	23	5	7
Unemployed	329	211	112
Welfare Recipient	229	229	139
Length of Prog. Stay (wks)	26	26	28
Adult Av. Wage at Placement	4.72	4.58	-
Adult Entered Employment	273	150	-
Welfare Entered Employment	150	150	-
Youth Enter Employment	-	-	155
Youth Positive Termination	-	-	217

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B22

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 22

	Total Adults	Adults (Welfare)	Youth
Total Terminations	960	472	493
1. Entered Unsub. Employment	702	311	275
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	7
2. Youth Employability Enhance.	-	-	66
A. Entered Non-IIA Training	-	-	3
B. Returned to Full Time School	-	-	14
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	49
3. Attained Youth Competencies	-	-	9
4. Other Terminations	258	161	152
Male	591	269	266
Female	369	203	227
Age 14-15	-	-	1
Age 16-21	-	-	492
Age 22-54	939	465	-
Age 55 and over	21	7	-
Dropouts	168	99	117
Students	3	2	111
High School and Up	789	371	265
Head of House with Child	208	140	41
Race - White	930	453	470
Race - Black	4	1	4
Race - Hispanic	7	4	3
Race - Am. Indian-Alaskan Nat.	16	11	12
Race - Asian-Pacific Islander	3	3	4
Limited English Speaking	1	0	1
Handicapped	133	44	59
Unemployment Comp. Claimant	105	13	13
Unemployed	641	331	262
Welfare Recipient	472	472	175
Length of Prog. Stay (wks)	28	25	24
Adult Av. Wage at Placement	5.03	4.92	-
Adult Entered Employment	702	311	-
Welfare Entered Employment	309	309	-
Youth Enter Employment	-	-	275
Youth Positive Termination	-	-	350

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B23

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 23

	Total Adults	Adults (Welfare)	Youth
Total Terminations	1289	506	601
1. Entered Unsub. Employment	782	271	350
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	2
2. Youth Employability Enhance.	-	-	10
A. Entered Non-IIA Training	-	-	2
B. Returned to Full Time School	-	-	7
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	1
3. Attained Youth Competencies	-	-	10
4. Other Terminations	507	235	241
Male	546	171	307
Female	743	335	294
Age 14-15	-	-	7
Age 16-21	-	-	594
Age 22-54	1245	497	-
Age 55 and over	44	9	-
Dropouts	161	96	124
Students	18	11	97
High School and Up	1110	399	380
Head of House with Child	399	251	45
Race - White	1105	434	429
Race - Black	147	63	163
Race - Hispanic	14	2	1
Race - Am. Indian-Alaskan Nat.	5	3	2
Race - Asian-Pacific Islander	18	4	6
Limited English Speaking	17	6	1
Handicapped	106	17	77
Unemployment Comp. Claimant	116	4	16
Unemployed	972	381	406
Welfare Recipient	506	506	132
Length of Prog. Stay (wks)	19	20	20
Adult Av. Wage at Placement	5.25	4.98	-
Adult Entered Employment	782	271	-
Welfare Entered Employment	271	271	-
Youth Enter Employment	-	-	350
Youth Positive Termination	-	-	370

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B24

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 24

	Total Adults	Adults (Welfare)	Youth
Total Terminations	511	259	197
1. Entered Unsub. Employment	371	182	158
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	3
2. Youth Employability Enhance.	-	-	1
A. Entered Non-IIA Training	-	-	1
B. Returned to Full Time School	-	-	0
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	0
3. Attained Youth Competencies	-	-	0
4. Other Terminations	140	77	38
Male	276	117	98
Female	235	142	99
Age 14-15	-	-	1
Age 16-21	-	-	196
Age 22-54	497	255	-
Age 55 and over	14	4	-
Dropouts	96	58	33
Students	2	2	67
High School and Up	413	199	97
Head of House with Child	167	118	35
Race - White	293	129	103
Race - Black	192	119	87
Race - Hispanic	14	7	4
Race - Am. Indian-Alaskan Nat.	2	0	1
Race - Asian-Pacific Islander	10	4	2
Limited English Speaking	3	2	1
Handicapped	53	11	25
Unemployment Comp. Claimant	42	1	1
Unemployed	395	205	140
Welfare Recipient	259	259	89
Length of Prog. Stay (wks)	14	15	12
Adult Av. Wage at Placement	5.18	4.88	-
Adult Entered Employment	371	182	-
Welfare Entered Employment	180	180	-
Youth Enter Employment	-	-	158
Youth Positive Termination	-	-	159

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B25

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 25

	Total Adults	Adults (Welfare)	Youth
Total Terminations	1109	368	693
1. Entered Unsub. Employment	810	227	394
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	0
2. Youth Employability Enhance.	-	-	5
A. Entered Non-IIA Training	-	-	0
B. Returned to Full Time School	-	-	5
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	0
3. Attained Youth Competencies	-	-	0
4. Other Terminations	298	141	294
Male	572	128	315
Female	537	240	378
Age 14-15	-	-	0
Age 16-21	-	-	693
Age 22-54	1077	366	-
Age 55 and over	32	2	-
Dropouts	173	72	126
Students	2	1	88
High School and Up	934	295	479
Head of House with Child	377	199	139
Race - White	611	134	340
Race - Black	450	224	339
Race - Hispanic	36	9	9
Race - Am. Indian-Alaskan Nat.	5	0	2
Race - Asian-Pacific Islander	7	1	3
Limited English Speaking	14	0	2
Handicapped	53	9	39
Unemployment Comp. Claimant	70	2	18
Unemployed	600	186	373
Welfare Recipient	368	368	202
Length of Prog. Stay (wks)	14	15	14
Adult Av. Wage at Placement	5.68	4.93	-
Adult Entered Employment	820	227	-
Welfare Entered Employment	227	227	-
Youth Enter Employment	-	-	394
Youth Positive Termination	-	-	399

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

TABLE B26

Annual Status Report
Report Period: July, 1983 to June, 1984

Service Delivery Area: 26

	Total Adults	Adults (Welfare)	Youth
Total Terminations	405	122	252
1. Entered Unsub. Employment	320	99	149
A. Entered Apprentice Program	-	-	1
B. Entered Armed Forces	-	-	2
2. Youth Employability Enhance.	-	-	1
A. Entered Non-IIA Training	-	-	0
B. Returned to Full Time School	-	-	1
C. Completed Program Objectives	-	-	0
D. Completed Major Level of Ed	-	-	0
3. Attained Youth Competencies	-	-	54
4. Other Terminations	85	23	102
Male	299	73	135
Female	106	49	117
Age 14-15	-	-	5
Age 16-21	-	-	247
Age 22-54	387	122	-
Age 55 and over	18	0	-
Dropouts	55	23	14
Students	1	1	109
High School and Up	349	98	129
Head of House with Child	99	39	27
Race - White	372	113	242
Race - Black	0	0	0
Race - Hispanic	1	0	0
Race - Am. Indian-Alaskan Nat.	32	9	10
Race - Asian-Pacific Islander	0	0	0
Limited English Speaking	0	0	0
Handicapped	28	8	17
Unemployment Comp. Claimant	77	1	5
Unemployed	235	64	161
Welfare Recipient	122	122	80
Length of Prog. Stay (wks)	33	30	30
Adult Av. Wage at Placement	5.66	5.20	-
Adult Entered Employment	320	99	-
Welfare Entered Employment	99	99	-
Youth Enter Employment	-	-	149
Youth Positive Termination	-	-	204

Source: Michigan Department of Labor, JTPA PY '84 Annual Status Report, Lansing, MI: Author.

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MICHIGAN PY '85 JTPA ANNUAL STATUS REPORTS

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TABLE C1

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 1

	Total Adults	Adults (Welfare)	Youth
Total Terminations	429	146	525
1. Entered Unsub. Employment	328	102	174
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	1
2. Youth Employability Enhance.	-	-	139
A. Entered Non-IIA Training	-	-	0
B. Returned to Full Time School	-	-	5
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	24
3. Attained Youth Competencies	-	-	-
4. Other Terminations	101	44	212
Male	223	62	309
Female	206	84	216
Age 14-15	-	-	177
Age 16-21	-	-	348
Age 22-54	418	146	-
Age 55 and over	11	0	-
Dropouts	117	51	78
Students	4	3	334
High School and Up	308	92	113
Head of House with Child	126	66	32
Race - White	385	133	425
Race - Black	10	3	10
Race - Hispanic	21	6	48
Race - Am. Indian-Alaskan Nat.	6	1	32
Race - Asian-Pacific Islander	7	3	10
Limited English Speaking	11	4	14
Handicapped	57	12	249
Unemployment Comp. Claimant	42	119	7
Unemployed	350	-	141
Welfare Recipient	-	-	124
Length of Prog. Stay (wks)	24	24	25
Adult Av. Wage at Placement	5.17	5.14	-

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C2

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 2

	Total Adults	Adults (Welfare)	Youth
Total Terminations	298	156	249
1. Entered Unsub. Employment	224	110	124
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	2
2. Youth Employability Enhance.	-	-	62
A. Entered Non-IIA Training	-	-	3
B. Returned to Full Time School	-	-	48
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	11
3. Attained Youth Competencies	-	-	-
4. Other Terminations	74	46	63
Male	183	91	132
Female	115	65	117
Age 14-15	-	-	36
Age 16-21	-	-	213
Age 22-54	286	156	-
Age 55 and over	12	0	-
Dropouts	75	44	60
Students	3	3	101
High School and Up	220	109	88
Head of House with Child	66	47	25
Race - White	288	152	244
Race - Black	3	0	0
Race - Hispanic	4	3	1
Race - Am. Indian-Alaskan Nat.	2	1	4
Race - Asian-Pacific Islander	1	0	0
Limited English Speaking	1	0	1
Handicapped	13	6	26
Unemployment Comp. Claimant	15	-	4
Unemployed	252	143	128
Welfare Recipient	-	-	109
Length of Prog. Stay (wks)	22	21	17
Adult Av. Wage at Placement	4.46	4.35	3.77

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C3

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 3

	Total Adults	Adults (Welfare)	Youth
Total Terminations	897	629	568
1. Entered Unsub. Employment	577	379	224
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	2
2. Youth Employability Enhance.	-	-	19
A. Entered Non-IIA Training	-	-	6
B. Returned to Full Time School	-	-	12
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	1
3. Attained Youth Competencies	-	-	-
4. Other Terminations	324	250	325
Male	456	293	301
Female	441	336	267
Age 14-15	-	-	12
Age 16-21	-	-	556
Age 22-54	857	609	-
Age 55 and over	40	20	-
Dropouts	242	176	146
Students	1	1	198
High School and up	654	452	224
Head of House with Child	284	249	51
Race - White	618	401	345
Race - Black	242	206	204
Race - Hispanic	12	7	9
Race - Am. Indian-Alaskan Nat.	23	14	9
Race - Asian-Pacific Islander	2	1	1
Limited English Speaking	3	1	8
Handicapped	71	38	84
Unemployment Comp. Claimant	48	-	8
Unemployed	887	625	274
Welfare Recipient	-	-	324
Length of Prog. Stay (wks)	18	18	12
Adult Av. Wage at Placement	4.55	4.35	3.91

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C4

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 4

	Total Adults	Adults (Welfare)	Youth
Total Terminations	998	568	898
1. Entered Unsub. Employment	525	269	485
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	4
2. Youth Employability Enhance.	-	-	60
A. Entered Non-IIA Training	-	-	7
B. Returned to Full Time School	-	-	2
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	51
3. Attained Youth Competencies	-	-	-
4. Other Terminations	473	299	353
Male	479	220	485
Female	519	348	413
Age 14-15	-	-	8
Age 16-21	-	-	890
Age 22-54	924	557	-
Age 55 and over	74	11	-
Dropouts	249	131	159
Students	28	16	326
High School and up	721	421	413
Head of House with Child	305	247	136
Race - White	487	250	420
Race - Black	390	262	406
Race - Hispanic	107	50	67
Race - Am. Indian-Alaskan Nat.	6	2	1
Race - Asian-Pacific Islander	8	4	4
Limited English Speaking	26	11	5
Handicapped	72	18	130
Unemployment Comp. Claimant	32	-	6
Unemployed	780	486	502
Welfare Recipient	-	-	445
Length of Prog. Stay (wks)	22	26	25
Adult Av. Wage at Placement	4.52	4.37	3.58

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C5

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 5

	Total Adults	Adults (Welfare)	Youth
Total Terminations	841	492	418
1. Entered Unsub. Employment	578	320	243
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	1
2. Youth Employability Enhance.	-	-	1
A. Entered Non-IIA Training	-	-	0
B. Returned to Full Time School	-	-	0
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	-
3. Attained Youth Competencies	-	-	-
4. Other Terminations	263	172	174
Male	413	225	195
Female	428	267	223
Age 14-15	-	-	3
Age 16-21	-	-	415
Age 22-54	826	488	-
Age 55 and over	15	4	-
Dropouts	184	120	51
Students	2	1	234
High School and up	655	371	133
Head of House with Child	261	180	39
Race - White	564	321	211
Race - Black	230	150	188
Race - Hispanic	35	18	13
Race - Am. Indian-Alaskan Nat.	9	2	5
Race - Asian-Pacific Islander	3	1	1
Limited English Speaking	3	0	1
Handicapped	38	12	50
Unemployment Comp. Claimant	57	-	6
Unemployed	552	331	147
Welfare Recipient	-	-	213
Length of Prog. Stay (wks)	23	23	19
Adult Av. Wage at Placement	4.90	4.73	3.68

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C6

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 6

	Total Adults	Adults (Welfare)	Youth
Total Terminations	648	227	473
1. Entered Unsub. Employment	526	162	264
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	9
2. Youth Employability Enhance.	-	-	19
A. Entered Non-IIA Training	-	-	5
B. Returned to Full Time School	-	-	1
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	12
3. Attained Youth Competencies	-	-	-
4. Other Terminations	122	65	190
Male	348	119	251
Female	300	108	222
Age 14-15	-	-	13
Age 16-21	-	-	460
Age 22-54	591	214	-
Age 55 and over	57	13	-
Dropouts	102	42	39
Students	13	6	190
High School and up	533	179	244
Head of House with Child	153	82	43
Race - White	597	205	434
Race - Black	11	8	6
Race - Hispanic	8	1	1
Race - Am. Indian-Alaskan Nat.	31	12	31
Race - Asian-Pacific Islander	1	1	1
Limited English Speaking	8	3	2
Handicapped	86	34	72
Unemployment Comp. Claimant	43	-	8
Unemployed	459	173	161
Welfare Recipient	-	-	105
Length of Prog. Stay (wks)	33	39	34
Adult Av. Wage at Placement	5.17	4.94	4.02

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C7

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 7

	Total Adults	Adults (Welfare)	Youth
Total Terminations	2915	1842	3040
1. Entered Unsub. Employment	1471	839	1298
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	3
2. Youth Employability Enhance.	-	-	114
A. Entered Non-IIA Training	-	-	15
B. Returned to Full Time School	-	-	5
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	94
3. Attained Youth Competencies	-	-	-
4. Other Terminations	1444	1003	1628
Male	1248	636	1199
Female	1667	1206	1841
Age 14-15	-	-	58
Age 16-21	-	-	2982
Age 22-54	2831	1829	-
Age 55 and over	84	13	-
Dropouts	852	571	1313
Students	10	3	696
High School and up	2053	1268	1031
Head of House with Child	989	862	502
Race - White	119	56	46
Race - Black	2702	1752	2917
Race - Hispanic	86	32	68
Race - Am. Indian-Alaskan Nat.	3	0	2
Race - Asian-Pacific Islander	5	2	7
Limited English Speaking	22	12	9
Handicapped	114	62	16
Unemployment Comp. Claimant	62	-	24
Unemployed	2689	1785	2312
Welfare Recipient	-	-	2079
Length of Prog. Stay (wks)	21	23	18
Adult Av. Wage at Placement	4.66	4.66	3.92

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C8

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 8

	Total Adults	Adults (Welfare)	Youth
Total Terminations	1171	412	916
1. Entered Unsub. Employment	887	274	561
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	1
2. Youth Employability Enhance.	-	-	0
A. Entered Non-IIA Training	-	-	-
B. Returned to Full Time School	-	-	-
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	-
3. Attained Youth Competencies	-	-	-
4. Other Terminations	284	138	355
Male	709	193	491
Female	462	219	425
Age 14-15	-	-	4
Age 16-21	-	-	912
Age 22-54	1150	409	-
Age 55 and over	21	3	-
Dropouts	187	77	90
Students	5	1	364
High School and up	979	334	462
Head of House with Child	212	148	49
Race - White	1002	338	775
Race - Black	133	62	116
Race - Hispanic	23	10	22
Race - Am. Indian-Alaskan Nat.	5	1	2
Race - Asian-Pacific Islander	8	1	1
Limited English Speaking	3	1	3
Handicapped	50	8	174
Unemployment Comp. Claimant	84	-	11
Unemployed	1010	361	757
Welfare Recipient	-	-	186
Length of Prog. Stay (wks)	16	22	13
Adult Av. Wage at Placement	5.76	5.38	4.20

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C9

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 9

	Total Adults	Adults (Welfare)	Youth
Total Terminations	217	100	254
1. Entered Unsub. Employment	163	74	97
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	1
2. Youth Employability Enhance.	-	-	47
A. Entered Non-IIA Training	-	-	0
B. Returned to Full Time School	-	-	38
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	9
3. Attained Youth Competencies	-	-	-
4. Other Terminations	54	26	110
Male	85	39	129
Female	132	61	125
Age 14-15	-	-	1
Age 16-21	-	-	253
Age 22-54	198	97	-
Age 55 and over	19	3	-
Dropouts	49	24	78
Students	-	-	123
High School and up	168	76	53
Head of House with Child	58	39	31
Race - White	139	54	157
Race - Black	1	1	0
Race - Hispanic	-	-	5
Race - Am. Indian-Alaskan Nat.	77	45	92
Race - Asian-Pacific Islander	-	-	-
Limited English Speaking	-	-	-
Handicapped	32	16	35
Unemployment Comp. Claimant	15	-	5
Unemployed	169	82	145
Welfare Recipient	-	-	118
Length of Prog. Stay (wks)	14	14	19
Adult Av. Wage at Placement	4.43	4.48	3.84

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C10

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 10

	Total Adults	Adults (Welfare)	Youth
Total Terminations	1198	730	1145
1. Entered Unsub. Employment	533	280	325
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	1
2. Youth Employability Enhance.	-	-	4
A. Entered Non-IIA Training	-	-	3
B. Returned to Full Time School	-	-	1
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	-
3. Attained Youth Competencies	-	-	-
4. Other Terminations	665	450	816
Male	630	327	595
Female	568	403	550
Age 14-15	-	-	8
Age 16-21	-	-	1137
Age 22-54	1172	724	-
Age 55 and over	26	6	-
Dropouts	394	264	364
Students	3	3	613
High School and up	801	463	168
Head of House with Child	362	309	73
Race - White	441	234	399
Race - Black	717	476	703
Race - Hispanic	17	11	30
Race - Am. Indian-Alaskan Nat.	20	8	10
Race - Asian-Pacific Islander	3	1	3
Limited English Speaking	5	2	5
Handicapped	88	25	250
Unemployment Comp. Claimant	72	-	11
Unemployed	771	448	261
Welfare Recipient	-	-	608
Length of Prog. Stay (wks)	10	11	15
Adult Av. Wage at Placement	5.15	5.00	3.84

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C11

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 11

	Total Adults	Adults (Welfare)	Youth
Total Terminations	954	375	620
1. Entered Unsub. Employment	886	335	548
A. Entered Apprentice Program	-	-	1
B. Entered Armed Forces	-	-	14
2. Youth Employability Enhance.	-	-	6
A. Entered Non-IIA Training	-	-	1
B. Returned to Full Time School	-	-	-
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	5
3. Attained Youth Competencies	-	-	-
4. Other Terminations	68	40	66
Male	514	189	326
Female	440	186	294
Age 14-15	-	-	4
Age 16-21	-	-	616
Age 22-54	913	368	-
Age 55 and over	41	7	-
Dropouts	201	87	148
Students	6	4	98
High School and up	747	284	374
Head of House with Child	248	132	66
Race - White	910	357	581
Race - Black	4	1	5
Race - Hispanic	25	12	18
Race - Am. Indian-Alaskan Nat.	11	5	12
Race - Asian-Pacific Islander	4	0	4
Limited English Speaking	5	1	4
Handicapped	78	26	45
Unemployment Comp. Claimant	105	-	18
Unemployed	791	312	458
Welfare Recipient	-	-	166
Length of Prog. Stay (wks)	22	27	27
Adult Av. Wage at Placement	5.00	4.81	4.12

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C12

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 12

	Total Adults	Adults (Welfare)	Youth
Total Terminations	715	348	344
1. Entered Unsub. Employment	514	226	183
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	5
2. Youth Employability Enhance.	-	-	-
A. Entered Non-IIA Training	-	-	-
B. Returned to Full Time School	-	-	-
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	-
3. Attained Youth Competencies	-	-	-
4. Other Terminations	201	122	161
Male	390	157	180
Female	325	191	164
Age 14-15	-	-	3
Age 16-21	-	-	341
Age 22-54	696	345	-
Age 55 and over	19	3	-
Dropouts	135	65	103
Students	9	6	54
High School and up	571	277	187
Head of House with Child	187	134	35
Race - White	595	274	246
Race - Black	85	52	74
Race - Hispanic	29	17	23
Race - Am. Indian-Alaskan Nat.	2	2	0
Race - Asian-Pacific Islander	4	3	1
Limited English Speaking	2	2	1
Handicapped	65	18	22
Unemployment Comp. Claimant	64	-	3
Unemployed	597	312	249
Welfare Recipient	-	-	153
Length of Prog. Stay (wks)	25	29	23
Adult Av. Wage at Placement	5.14	4.98	4.69

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C13

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 13

	Total Adults	Adults (Welfare)	Youth
Total Terminations	522	267	279
1. Entered Unsub. Employment	317	145	136
A. Entered Apprentice Program	-	-	-
B. Entered Armed Forces	-	-	-
2. Youth Employability Enhance.	-	-	6
A. Entered Non-IIA Training	-	-	-
B. Returned to Full Time School	-	-	6
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	-
3. Attained Youth Competencies	-	-	-
4. Other Terminations	205	122	137
Male	246	126	142
Female	276	141	137
Age 14-15	-	-	1
Age 16-21	-	-	278
Age 22-54	475	258	-
Age 55 and over	47	9	-
Dropouts	131	63	60
Students	7	3	58
High School and up	384	201	161
Head of House with Child	135	92	25
Race - White	502	257	268
Race - Black	3	1	1
Race - Hispanic	10	7	5
Race - Am. Indian-Alaskan Nat.	4	1	4
Race - Asian-Pacific Islander	3	1	1
Limited English Speaking	7	3	1
Handicapped	34	10	33
Unemployment Comp. Claimant	26	-	9
Unemployed	363	174	170
Welfare Recipient	-	-	96
Length of Prog. Stay (wks)	23	28	17
Adult Av. Wage at Placement	4.54	4.27	3.89

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C14

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 14

	Total Adults	Adults (Welfare)	Youth
Total Terminations	524	330	507
1. Entered Unsub. Employment	401	238	197
A. Entered Apprentice Program	-	-	1
B. Entered Armed Forces	-	-	1
2. Youth Employability Enhance.	-	-	26
A. Entered Non-LIA Training	-	-	14
B. Returned to Full Time School	-	-	7
C. Completed Program Objectives	-	-	5
D. Completed Major Level of Ed	-	-	-
3. Attained Youth Competencies	-	-	-
4. Other Terminations	123	92	184
Male	286	174	262
Female	238	156	245
Age 14-15	-	-	0
Age 16-21	-	-	507
Age 22-54	499	327	-
Age 55 and over	25	3	-
Dropouts	78	52	156
Students	8	7	216
High School and up	438	271	135
Head of House with Child	160	126	72
Race - White	380	214	267
Race - Black	123	103	223
Race - Hispanic	10	7	10
Race - Am. Indian-Alaskan Nat.	7	4	3
Race - Asian-Pacific Islander	4	2	4
Limited English Speaking	3	0	0
Handicapped	63	23	74
Unemployment Comp. Claimant	44	-	6
Unemployed	461	299	284
Welfare Recipient	-	-	282
Length of Prog. Stay (wks)	21	22	28
Adult Av. Wage at Placement	4.90	4.54	3.75

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C15

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 15

	Total Adults	Adults (Welfare)	Youth
Total Terminations	823	322	581
1. Entered Unsub. Employment	643	211	350
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	3
2. Youth Employability Enhance.	-	-	46
A. Entered Non-IIA Training	-	-	10
B. Returned to Full Time School	-	-	27
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	9
3. Attained Youth Competencies	-	-	-
4. Other Terminations	180	111	185
Male	393	124	345
Female	430	198	236
Age 14-15	-	-	12
Age 16-21	-	-	569
Age 22-54	808	321	-
Age 55 and over	15	1	-
Dropouts	134	75	82
Students	7	6	269
High School and up	682	241	230
Head of House with Child	300	165	85
Race - White	459	148	272
Race - Black	297	150	244
Race - Hispanic	50	17	39
Race - Am. Indian-Alaskan Nat.	9	5	7
Race - Asian-Pacific Islander	8	2	19
Limited English Speaking	12	4	16
Handicapped	143	43	118
Unemployment Comp. Claimant	74	-	5
Unemployed	659	287	227
Welfare Recipient	-	-	187
Length of Prog. Stay (wks)	19	22	16
Adult Av. Wage at Placement	5.10	4.78	3.98

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C16

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 16

	Total Adults	Adults (Welfare)	Youth
Total Terminations	357	160	396
1. Entered Unsub. Employment	294	122	113
A. Entered Apprentice Program	-	-	-
B. Entered Armed Forces	-	-	-
2. Youth Employability Enhance.	-	-	138
A. Entered Non-IIA Training	-	-	-
B. Returned to Full Time School	-	-	1
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	-
3. Attained Youth Competencies	-	-	-
4. Other Terminations	63	38	145
Male	198	73	226
Female	159	87	170
Age 14-15	-	-	139
Age 16-21	-	-	257
Age 22-54	346	159	-
Age 55 and over	11	1	-
Dropouts	55	19	24
Students	2	2	264
High School and up	300	139	108
Head of House with Child	102	67	25
Race - White	330	144	335
Race - Black	17	11	35
Race - Hispanic	6	3	15
Race - Am. Indian-Alaskan Nat.	3	2	9
Race - Asian-Pacific Islander	1	0	2
Limited English Speaking	-	-	2
Handicapped	43	12	73
Unemployment Comp. Claimant	30	-	4
Unemployed	272	122	99
Welfare Recipient	-	-	130
Length of Prog. Stay (wks)	30	33	16
Adult Av. Wage at Placement	4.92	4.80	3.85

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C17

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 17

	Total Adults	Adults (Welfare)	Youth
Total Terminations	1840	688	1131
1. Entered Unsub. Employment	1559	575	735
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	6
2. Youth Employability Enhance.	-	-	16
A. Entered Non-IIA Training	-	-	7
B. Returned to Full Time School	-	-	8
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	1
3. Attained Youth Competencies	-	-	-
4. Other Terminations	281	113	380
Male	1220	386	662
Female	620	302	469
Age 14-15	-	-	22
Age 16-21	-	-	1109
Age 22-54	1806	682	-
Age 55 and over	34	6	-
Dropouts	370	144	322
Students	22	8	346
High School and up	1448	536	463
Head of House with Child	259	156	43
Race - White	1112	420	684
Race - Black	479	180	302
Race - Hispanic	176	59	104
Race - Am. Indian-Alaskan Nat.	58	26	12
Race - Asian-Pacific Islander	15	3	29
Limited English Speaking	22	5	8
Handicapped	432	131	210
Unemployment Comp. Claimant	80	-	12
Unemployed	1560	625	707
Welfare Recipient	-	-	386
Length of Prog. Stay (wks)	9	10	14
Adult Av. Wage at Placement	4.95	5.00	3.88

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C18

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 18

	Total Adults	Adults (Welfare)	Youth
Total Terminations	233	87	175
1. Entered Unsub. Employment	212	76	95
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	2
2. Youth Employability Enhance.	-	-	19
A. Entered Non-IIA Training	-	-	2
B. Returned to Full Time School	-	-	1
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	-
3. Attained Youth Competencies	-	-	-
4. Other Terminations	21	11	61
Male	131	36	95
Female	102	51	80
Age 14-15	-	-	3
Age 16-21	-	-	172
Age 22-54	214	85	-
Age 55 and over	19	2	-
Dropouts	44	22	22
Students	4	1	100
High School and up	185	64	53
Head of House with Child	53	28	10
Race - White	177	62	125
Race - Black	48	22	44
Race - Hispanic	2	1	2
Race - Am. Indian-Alaskan Nat.	1	0	2
Race - Asian-Pacific Islander	5	2	2
Limited English Speaking	9	4	2
Handicapped	42	13	72
Unemployment Comp. Claimant	11	-	4
Unemployed	163	71	55
Welfare Recipient	-	-	38
Length of Prog. Stay (wks)	26	35	21
Adult Av. Wage at Placement	5.19	4.99	4.01

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C19

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 19

	Total Adults	Adults (Welfare)	Youth
Total Terminations	2403	929	1752
1. Entered Unsub. Employment	1672	553	569
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	4
2. Youth Employability Enhance.	-	-	143
A. Entered Non-IIA Training	-	-	4
B. Returned to Full Time School	-	-	9
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	83
3. Attained Youth Competencies	-	-	-
4. Other Terminations	731	376	1040
Male	1319	386	1032
Female	1084	543	720
Age 14-15	-	-	346
Age 16-21	-	-	1406
Age 22-54	2292	917	-
Age 55 and over	111	12	-
Dropouts	581	269	524
Students	13	5	762
High School and up	1809	655	466
Head of House with Child	799	505	172
Race - White	2142	812	1532
Race - Black	192	90	191
Race - Hispanic	25	10	17
Race - Am. Indian-Alaskan Nat.	21	8	4
Race - Asian-Pacific Islander	23	9	8
Limited English Speaking	17	4	5
Handicapped	324	88	536
Unemployment Comp. Claimant	199	-	34
Unemployed	1408	462	485
Welfare Recipient	-	-	415
Length of Prog. Stay (wks)	29	34	27
Adult Av. Wage at Placement	5.50	5.15	4.73

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C20

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 20

	Total Adults	Adults (Welfare)	Youth
Total Terminations	684	333	327
1. Entered Unsub. Employment	439	212	216
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	3
2. Youth Employability Enhance.	-	-	-
A. Entered Non-IIA Training	-	-	-
B. Returned to Full Time School	-	-	-
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	-
3. Attained Youth Competencies	-	-	-
4. Other Terminations	245	121	111
Male	369	143	176
Female	315	190	151
Age 14-15	-	-	0
Age 16-21	-	-	327
Age 22-54	651	331	-
Age 55 and over	33	2	-
Dropouts	95	40	47
Students	5	2	121
High School and up	584	291	159
Head of House with Child	201	156	37
Race - White	472	209	183
Race - Black	181	108	111
Race - Hispanic	23	11	26
Race - Am. Indian-Alaskan Nat.	6	4	6
Race - Asian-Pacific Islander	2	1	1
Limited English Speaking	2	1	2
Handicapped	89	28	31
Unemployment Comp. Claimant	68	-	9
Unemployed	223	76	85
Welfare Recipient	-	-	120
Length of Prog. Stay (wks)	22	22	28
Adult Av. Wage at Placement	5.12	4.94	4.17

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C21

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 21

	Total Adults	Adults (Welfare)	Youth
Total Terminations	310	177	233
1. Entered Unsub. Employment	211	108	108
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	2
2. Youth Employability Enhance.	-	-	20
A. Entered Non-IIA Training	-	-	1
B. Returned to Full Time School	-	-	-
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	-
3. Attained Youth Competencies	-	-	-
4. Other Terminations	99	69	105
Male	180	94	128
Female	130	83	105
Age 14-15	-	-	23
Age 16-21	-	-	210
Age 22-54	301	176	-
Age 55 and over	9	1	-
Dropouts	57	37	17
Students	-	-	139
High School and up	253	140	77
Head of House with Child	66	51	9
Race - White	301	172	229
Race - Black	2	1	2
Race - Hispanic	2	1	0
Race - Am. Indian-Alaskan Nat.	5	3	2
Race - Asian-Pacific Islander	-	-	-
Limited English Speaking	-	-	-
Handicapped	22	9	56
Unemployment Comp. Claimant	23	-	2
Unemployed	261	162	99
Welfare Recipient	-	-	61
Length of Prog. Stay (wks)	28	31	22
Adult Av. Wage at Placement	5.19	5.12	3.95

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C22

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 22

	Total Adults	Adults (Welfare)	Youth
Total Terminations	826	476	473
1. Entered Unsub. Employment	586	322	258
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	1
2. Youth Employability Enhance.	-	-	123
A. Entered Non-IIA Training	-	-	91
B. Returned to Full Time School	-	-	12
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	20
3. Attained Youth Competencies	-	-	-
4. Other Terminations	240	154	92
Male	469	274	273
Female	357	202	200
Age 14-15	-	-	-
Age 16-21	-	-	473
Age 22-54	804	471	-
Age 55 and over	22	5	-
Dropouts	159	111	114
Students	4	2	93
High School and up	663	363	266
Head of House with Child	198	148	35
Race - White	794	457	453
Race - Black	4	3	4
Race - Hispanic	9	4	7
Race - Am. Indian-Alaskan Nat.	18	11	9
Race - Asian-Pacific Islander	1	1	0
Limited English Speaking	2	1	1
Handicapped	122	51	73
Unemployment Comp. Claimant	65	-	12
Unemployed	504	300	298
Welfare Recipient	-	-	176
Length of Prog. Stay (wks)	26	25	21
Adult Av. Wage at Placement	4.97	4.91	4.13

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C23

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 23

	Total Adults	Adults (Welfare)	Youth
Total Terminations	1194	448	508
1. Entered Unsub. Employment	797	265	297
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	3
2. Youth Employability Enhance.	-	-	27
A. Entered Non-IIA Training	-	-	22
B. Returned to Full Time School	-	-	1
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	4
3. Attained Youth Competencies	-	-	-
4. Other Terminations	397	183	184
Male	437	114	218
Female	757	334	290
Age 14-15	-	-	0
Age 16-21	-	-	508
Age 22-54	1152	441	-
Age 55 and over	42	7	-
Dropouts	184	83	74
Students	6	5	149
High School and up	1004	360	285
Head of House with Child	394	247	43
Race - White	1020	369	360
Race - Black	138	67	142
Race - Hispanic	5	2	4
Race - Am. Indian-Alaskan Nat.	10	3	0
Race - Asian-Pacific Islander	21	7	2
Limited English Speaking	19	6	0
Handicapped	129	26	96
Unemployment Comp. Claimant	89	-	6
Unemployed	825	307	320
Welfare Recipient	-	-	127
Length of Prog. Stay (wks)	20	22	21
Adult Av. Wage at Placement	5.43	5.32	4.52

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C24

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 24

	Total Adults	Adults (Welfare)	Youth
Total Terminations	367	172	329
1. Entered Unsub. Employment	301	138	243
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	2
2. Youth Employability Enhance.	-	-	1
A. Entered Non-IIA Training	-	-	-
B. Returned to Full Time School	-	-	-
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	1
3. Attained Youth Competencies	-	-	-
4. Other Terminations	66	34	85
Male	179	58	168
Female	188	114	161
Age 14-15	-	-	1
Age 16-21	-	-	328
Age 22-54	362	170	-
Age 55 and over	5	2	-
Dropouts	73	38	85
Students	6	3	85
High School and up	288	131	159
Head of House with Child	130	92	43
Race - White	210	83	89
Race - Black	134	76	219
Race - Hispanic	17	10	14
Race - Am. Indian-Alaskan Nat.	2	1	4
Race - Asian-Pacific Islander	4	2	3
Limited English Speaking	8	2	2
Handicapped	41	11	31
Unemployment Comp. Claimant	26	-	1
Unemployed	303	145	268
Welfare Recipient	-	-	146
Length of Prog. Stay (wks)	39	42	12
Adult Av. Wage at Placement	5.05	4.84	4.01

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C25

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 25

	Total Adults	Adults (Welfare)	Youth
Total Terminations	1273	393	940
1. Entered Unsub. Employment	954	246	603
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	4
2. Youth Employability Enhance.	-	-	7
A. Entered Non-IIA Training	-	-	0
B. Returned to Full Time School	-	-	5
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	2
3. Attained Youth Competencies	-	-	-
4. Other Terminations	319	147	330
Male	702	159	479
Female	571	234	461
Age 14-15	-	-	1
Age 16-21	-	-	939
Age 22-54	1256	392	-
Age 55 and over	17	1	-
Dropouts	210	93	210
Students	9	7	132
High School and up	1054	293	598
Head of House with Child	314	184	75
Race - White	701	118	375
Race - Black	525	274	545
Race - Hispanic	23	1	7
Race - Am. Indian-Alaskan Nat.	7	0	2
Race - Asian-Pacific Islander	17	0	11
Limited English Speaking	16	2	8
Handicapped	67	6	68
Unemployment Comp. Claimant	70	-	12
Unemployed	969	349	713
Welfare Recipient	-	-	231
Length of Prog. Stay (wks)	18	18	13
Adult Av. Wage at Placement	6.27	5.20	4.41

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

TABLE C26

Annual Status Report
Report Period: July, 1985 to June, 1986

Service Delivery Area: 26

	Total Adults	Adults (Welfare)	Youth
Total Terminations	391	123	155
1. Entered Unsub. Employment	320	90	89
A. Entered Apprentice Program	-	-	0
B. Entered Armed Forces	-	-	1
2. Youth Employability Enhance.	-	-	-
A. Entered Non-IIA Training	-	-	-
B. Returned to Full Time School	-	-	-
C. Completed Program Objectives	-	-	-
D. Completed Major Level of Ed	-	-	-
3. Attained Youth Competencies	-	-	-
4. Other Terminations	71	33	66
Male	300	88	85
Female	91	35	70
Age 14-15	-	-	2
Age 16-21	-	-	153
Age 22-54	385	123	-
Age 55 and over	6	0	-
Dropouts	54	20	11
Students	-	-	53
High School and up	337	103	91
Head of House with Child	79	43	21
Race - White	373	116	147
Race - Black	-	-	-
Race - Hispanic	-	-	-
Race - Am. Indian-Alaskan Nat.	16	7	8
Race - Asian-Pacific Islander	-	-	-
Limited English Speaking	1	1	1
Handicapped	30	6	14
Unemployment Comp. Claimant	38	-	10
Unemployed	241	79	71
Welfare Recipient	-	-	48
Length of Prog. Stay (wks)	34	34	35
Adult Av. Wage at Placement	6.59	6.14	4.51

Source: Michigan Department of Labor, 1987, JTPA PY '85 Annual Status Report, Lansing, MI: Author.

APPENDIX D
MICHIGAN JTPA SERVICE DELIVERY AREAS

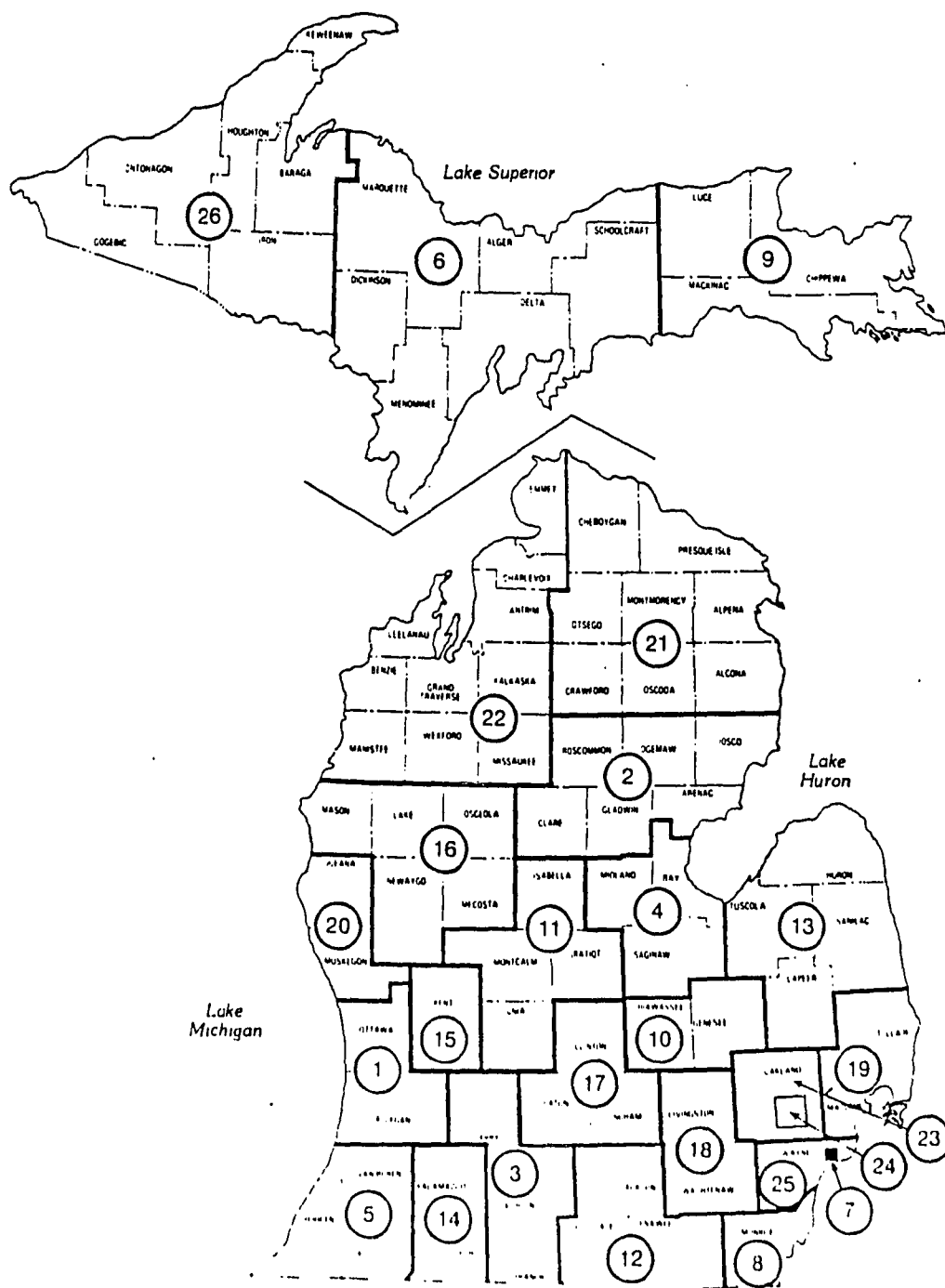


Figure 10. Michigan JTPA Service Delivery Areas

APPENDIX E
CORRELATION MATRICES

LIST OF TABLES

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Table E1
Correlation Matrix for PY 1984
Michigan Adult Models I

OBS	_TYPE_	_NAME_	ADLEER	COSTPER	ADLWAGE	WELFARE	BLACK	ADLWAGE
1	MEAN		69.6165	3243.89	5.08025	50.4035	19.5443	18.7192
2	STD		11.9499	1179.22	0.370912	9.94283	22.0737	3.43185
3	N		26	26	26	26	26	26
4	CORR	ADLEER	1	-.594287	0.244687	-.623412	-.520986	-.344432
5	CORR	COSTPER	-.594287	1	.0879283	0.378281	0.577248	0.482193
6	CORR	ADLWAGE	0.244687	.0879283	1	-.520072	-.092269	0.302828
7	CORR	WELFARE	-.623412	0.378281	-.520072	1	0.471	0.194405
8	CORR	BLACK	-.520986	0.577248	-.092269	0.471	1	0.729578
9	CORR	ADLWAGE	-.344432	0.482193	0.302828	0.194405	0.729578	1
10	CORR	LENSTAY	0.311474	-.109113	0.226103	-.365151	-.527033	-.542277
11	CORR	LIMENGL	-1.2E-04	-.061529	-.119084	.0043354	0.425568	0.474321
12	CORR	ACT1	-0.21923	0.375032	0.238251	.0030041	0.478513	0.458027
13	CORR	ACT3	0.402536	-.260012	0.20677	-.462279	-.672582	-.664657
14	CORR	HISPANIC	-.107827	-.206139	-0.24348	0.201476	0.395067	0.390855
15	CORR	INC25TH	-.046019	0.10447	0.47868	-.168417	0.131532	0.701311
16	CORR	FEMALE	-.312075	0.291465	-.223805	0.210129	0.507146	0.46813
17	CORR	UEMP_CQU	.0078027	-0.08721	-.438788	.0318714	-.258433	-.461808

OBS	LENSTAY	LIMENGL	ACT1	ACT3	HISPANIC	INC25TH	FEMALE	UEMP_CQU
1	20.0142	0.695156	25.7816	38.2905	2.48458	968.071	43.9049	11.0654
2	5.29172	0.586217	14.3606	17.2429	2.60644	271.588	7.40816	2.21503
3	26	26	26	26	26	26	26	26
4	0.311474	-1.2E-04	-0.21923	0.402536	-.107827	-.046019	-.312075	.0078027
5	-.109113	-.061529	0.375032	-.260012	-.206139	0.10447	0.291465	-0.08721
6	0.226103	-.119084	0.238251	0.20677	-0.24348	0.47868	-.223805	-.438788
7	-.365151	.0043354	.0030041	-.462279	0.201476	-.168417	0.210129	.0318714
8	-.527033	0.425568	0.478513	-.672582	0.395067	0.131532	0.507146	-.258433
9	-.542277	0.474321	0.458027	-.664657	0.390855	0.701311	0.46813	-.461808
10	1	-.291782	-.232138	0.531142	-.423391	-.369198	-.467601	0.12371
11	-.291782	1	0.424615	-.489051	0.609173	0.384883	0.53681	-.303411
12	-.232138	0.424615	1	-0.26807	-.049997	0.373013	0.672017	-.470428
13	0.531142	-.489051	-0.26807	1	-.538843	-.366433	-.520925	0.409935
14	-.423391	0.609173	-.049997	-.538843	1	0.193955	.0579094	-0.08124
15	-.369198	0.384883	0.373013	-.366433	0.193955	1	0.366905	-.591741
16	-.467601	0.53681	0.672017	-.520925	.0579094	0.366905	1	-.315175
17	0.12371	-.303411	-.470428	0.409935	-0.08124	-.591741	-.315175	1

Table E2
Correlation Matrix for PY 1984
Michigan Youth Models I

OBS	_TYPE_	_NAME_	POSTERM	COSTPOS	YTHEER	UCROTH	OFFENDER	BLACK
1	MEAN		74.4911	2541	56.7667	10.0843	6.59069	23.9341
2	STD		10.7681	884.583	14.4249	25.4856	4.79032	24.7601
3	N		26	26	26	26	26	26
4	CORR	POSTERM	1	-.462385	0.250889	-0.38854	0.365136	-.105574
5	CORR	COSTPOS	-.462385	1	0.182267	-.179073	-.256805	0.297694
6	CORR	YTHEER	0.250889	0.182267	1	-.205037	0.153487	-.138375
7	CORR	UCROTH	-0.38854	-.179073	-.205037	1	0.130565	-0.31204
8	CORR	OFFENDER	0.365136	-.256805	0.153487	0.130565	1	-.165676
9	CORR	BLACK	-.105574	0.297694	-.138375	-0.31204	-.165676	1
10	CORR	FEMALE	-.300561	.0857023	-.069632	-.094975	-.272322	0.641247
11	CORR	AGE20_21	-.241363	0.497216	0.574625	-.048495	.0025017	.0919724
12	CORR	HSGRAD	-.130111	0.406739	0.622308	-.054962	-.143686	-.112138
13	CORR	POP_DEN	-.240109	0.553284	.0040169	-.161821	-.275158	0.593469
14	CORR	HISPANIC	0.35396	-.195318	-.030111	-.255462	0.264884	0.069145
15	CORR	AGE14_15	0.215179	-.348566	-0.60421	-.026885	.0110906	-.297232
16	CORR	RURAL	.0454283	-.508611	-.241418	0.379675	.0551252	-.718664
17	CORR	NOTLOOK	0.135892	0.218736	0.638982	-.140499	-.102291	-.234332
OBS	FEMALE	AGE20_21	HSGRAD	POP_DEN	HISPANIC	AGE14_15	RURAL	NOTLOOK
1	46.0608	30.2307	33.4475	0.608077	2.61977	4.08453	39.6194	9.96459
2	5.58335	10.01	12.5292	1.05331	2.58301	10.1269	41.8632	4.69178
3	26	26	26	26	26	26	26	26
4	-.300561	-.241363	-.130111	-.240109	0.35396	0.215179	.0454283	0.135892
5	.0857023	0.497216	0.406739	0.553284	-.195318	-.348566	-.508611	0.218736
6	-.069632	0.574625	0.622308	.0040169	-.030111	-0.60421	-.241418	0.638982
7	-.094975	-.048495	-.054962	-.161821	-.255462	-.026885	0.379675	-.140499
8	-.272322	.0025017	-.143686	-.275158	0.264884	.0110906	.0551252	-.102291
9	0.641247	.0919724	-.112138	0.593469	0.069145	-.297232	-.718664	-.234332
10	1	.0827818	0.113481	0.563243	-.219673	-.190365	-0.24567	-.190389
11	.0827818	1	0.848659	0.326685	0.134572	-.564184	-.318472	0.544836
12	0.113481	0.848659	1	0.373869	-.051645	-.482201	-.066332	0.647448
13	0.563243	0.326685	0.373869	1	-.135697	-.198698	-.506612	0.142482
14	-.219673	0.134572	-.051645	-.135697	1	0.234761	-.140823	-0.08397
15	-.190365	-.564184	-.482201	-.198698	0.234761	1	0.389961	-.269931
16	-0.24567	-.318472	-.066332	-.506612	-.140823	0.389961	1	-.024479
17	-.190389	0.544836	0.647448	0.142482	-0.08397	-.269931	-.024479	1

Table E3
Correlation Matrix for PY 1985
Michigan Adult Models II

OBS	_TYPE_	_NAME_	FEMALE	AGE55UP	BLACK	HISP	DROPOUT	WELF
1	MEAN		46.7646	3.90885	19.7731	2.71423	20.4942	46.8908
2	STD		8.10587	2.4395	22.1864	2.66295	5.22764	11.358
3	N		26	26	26	26	26	26
4	CORR	FEMALE	1	0.329501	0.310135	-0.011132	0.308485	0.309881
5	CORR	AGE55UP	0.329501	1	-0.281439	-0.13281	0.106592	0.0786836
6	CORR	BLACK	0.310135	-0.281439	1	0.314678	0.428332	0.408755
7	CORR	HISP	-0.011132	-0.13281	0.314678	1	0.115436	0.0068056
8	CORR	DROPOUT	0.308485	0.106592	0.428332	0.115436	1	0.492217
9	CORR	WELF	0.309881	0.0786836	0.408755	0.0068056	0.492217	1
10	CORR	WAGE	0.207813	-0.25822	0.718145	0.284643	0.2281	0.0386184
11	CORR	URATE	0.0097292	0.275447	-0.289442	-0.304349	0.0611867	0.222632
12	CORR	WEEKS	-0.162378	0.0531398	-0.311985	-0.219684	-0.317322	-0.15541
13	CORR	HANDIC	-0.075225	0.135429	-0.232607	0.250148	-0.287172	-0.31308
14	CORR	AVERN	-0.252357	0.329268	-0.538093	0.0294318	-0.120086	0.166185
15	CORR	AEER	-0.446049	-0.078164	-0.55066	-0.066275	-0.566791	-0.603538
16	CORR	COSTEE	0.465344	-0.19207	0.539849	-0.162265	0.356916	0.296224
17	CORR	PWAGE	-0.519705	-0.373506	-0.149701	-0.261769	-0.480387	-0.673679
OBS	WAGE	URATE	WEEKS	HANDIC	AVERN	AEER	COSTEE	PWAGE
1	18.7192	10.7385	22.6154	10.3588	5746.62	72.4496	2864.88	5.12654
2	3.43185	3.21435	6.63974	4.747	2876.31	11.3064	957.026	0.491796
3	26	26	26	26	26	26	26	26
4	0.207813	0.0097292	-0.162378	-0.075225	-0.252357	-0.446049	0.465344	-0.519705
5	-0.25822	0.275447	0.0531398	0.135429	0.329268	-0.078164	-0.19207	-0.373506
6	0.718145	-0.289442	-0.311985	-0.232607	-0.538093	-0.55066	0.539849	-0.149701
7	0.284643	-0.304349	-0.219684	0.250148	0.0294318	-0.066275	-0.162265	-0.261769
8	0.2281	0.0611867	-0.317322	-0.287172	-0.120086	-0.566791	0.356916	-0.480387
9	0.0386184	0.222632	-0.15541	-0.31308	0.166185	-0.603538	0.296224	-0.673679
10	1	-0.664332	-0.35689	-0.092202	-0.66874	-0.385571	0.373089	0.162835
11	-0.664332	1	0.221501	-0.083979	0.402015	-0.10018	0.0127251	-0.281364
12	-0.35689	0.221501	1	-0.053176	0.318394	0.300347	0.0631979	0.2186
13	-0.092202	-0.083979	-0.053176	1	-0.068012	0.408756	-0.479849	-0.10031
14	-0.66874	0.402015	0.318394	-0.068012	1	0.147036	-0.49133	-0.208775
15	-0.385571	-0.10018	0.300347	0.408756	0.147036	1	-0.585519	0.280082
16	0.373089	0.0127251	0.0631979	-0.479849	-0.49133	-0.585519	1	-0.058118
17	0.162835	-0.281364	0.2186	-0.10031	-0.208775	0.280082	-0.058118	1

Table E4
Correlation Matrix for PY 1985
Michigan Youth Models II

OBS	_TYPE_	_NAME_	FEMALE	AGE1415	BLACK	WELF	URATE	WEEKS
1	MEAN		47.4054	5.03269	25.5185	37.2719	10.7385	20.4615
2	STD		4.74719	9.86131	25.7264	13.1145	3.21435	6.69466
3	N		26	26	26	26	26	26
4	CORR	FEMALE	1	-0.43226	0.488346	0.485437	.0273452	-.162381
5	CORR	AGE1415	-0.43226	1	-.347298	-.277063	.0337984	.0533355
6	CORR	BLACK	0.488346	-.347298	1	0.581945	-.380155	-.354483
7	CORR	WELF	0.485437	-.277063	0.581945	1	0.16589	-.231006
8	CORR	URATE	.0273452	.0337984	-.380155	0.16589	1	0.252871
9	CORR	WEEKS	-.162381	.0533355	-.354483	-.231006	0.252871	1
10	CORR	ASIAN	-.436402	0.139652	0.173694	-.233237	-.503158	-.162883
11	CORR	INC25TH	-0.12119	.0139928	0.202534	-.403162	-.792126	-.278368
12	CORR	HANDIC	-.458783	0.517622	-.256946	-.478992	-.334327	.0221075
13	CORR	DROPOUT	0.327957	-0.27663	0.521705	0.639543	-.082735	-.252942
14	CORR	SINGLE	0.359467	-.359034	0.456152	0.474508	.0136705	0.187065
15	CORR	YEER	.0396161	-.571408	.0175421	-.164197	-.051956	0.204337
16	CORR	YPRATE	-.159143	0.137692	-.117036	-.057336	0.15431	.0785115
17	CORR	COSTPOS	0.478686	-.307916	0.398521	.0494499	-.449513	-.243876
OBS	ASIAN	INC25TH	HANDIC	DROPOUT	SINGLE	YEER	YPRATE	COSTPOS
1	0.609231	967.423	16.7354	19.9346	9.75885	51.8681	81.8877	2339.46
2	0.78503	271.544	10.6608	9.19177	3.35002	14.0671	6.53702	845.707
3	26	26	26	26	26	26	26	26
4	-.436402	-0.12119	-.458783	0.327957	0.359467	.0396161	-.159143	0.478686
5	0.139652	.0139928	0.517622	-0.27663	-.359034	-.571408	0.137692	-.307916
6	0.173694	0.202534	-.256946	0.521705	0.456152	.0175421	-.117036	0.398521
7	-.233237	-.403162	-.478992	0.639543	0.474508	-.164197	-.057336	.0494499
8	-.503158	-.792126	-.334327	-.082735	.0136705	-.051956	0.15431	-.449513
9	-.162883	-.278368	.0221075	-.252942	0.187065	0.204337	.0785115	-.243876
10	1	0.37528	0.326126	.0044457	.0283616	0.17962	0.229661	-.082978
11	0.37528	1	0.468346	.0427122	-.223405	-0.00154	-.373502	0.400987
12	0.326126	0.468346	1	-.292069	-.381261	-.508131	-.079733	0.212136
13	.0044457	.0427122	-.292069	1	0.302311	-.056336	0.102772	-.041814
14	.0283616	-.223405	-.381261	0.302311	1	0.219906	.0108474	0.286987
15	0.17962	-0.00154	-.508131	-.056336	0.219906	1	0.228193	-.145696
16	0.229661	-.373502	-.079733	0.102772	.0108474	0.228193	1	-.376148
17	-.082978	0.400987	0.212136	-.041814	0.286987	-.145696	-.376148	1

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