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THE IMPACT OF CETA ACTIVITIES ON SELECTED
HAMPTON ROADS MANPOWER PROGRAMS:
COST-BENEFIT ANALYSIS AND
UTILIZATION-FOCUSED EVALUATION

by
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B.A. May 1975, State University of New York
M.S. May 1979, State University of New York

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Old Dominion University in Partial Fulfillment of the
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DOCTOR OF PHILOSOPHY
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May, 1984

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ABSTRACT

THE IMPACT OF CETA ACTIVITIES ON SELECTED HAMPTON ROADS MANPOWER PROGRAMS: COST-BENEFIT ANALYSIS AND UTILIZATION-FOCUSED EVALUATION

Raymond A. Gromelski
Old Dominion University, 1984
Director: Dr. Joseph P. Mooney

The study examined the effects of Classroom Training, On-the-Job Training, Work Experience, and JobShop programs of the Comprehensive Employment and Training Act (CETA) on the job opportunities, amount of government transfer payments, and criminal activities of the 1982 terminees. The purposes of the program were to determine (1) program cost-effectiveness; (2) which program components operate at higher levels of efficiency; and (3) which selected client characteristics influenced program results.

The evaluation described program success in terms of increased job opportunities and reductions in government transfer payments for CETA participants in the Hampton/Newport News area. Comparisons were made of the employment records, criminal records, and the amount of government transfer payments of CETA terminees and a Control Group of eligible applicants who did not participate in the program.

The CETA program was responsible for an increase in tax contributions and reductions in criminal justice system costs. The cost-benefit analysis indicated that CETA was cost-effective for the sample of 1982 terminees when taxpayer contributions will be paid back in approximately five years. Classroom Training, On-the-Job Training, and JobShop significantly increased the job placement and wage rates of the 1982 terminees. While the effects of Work Experience were positive, the results were not considered substantial. The effects of race, age, education, and sex varied among the different program activities, and securing unsubsidized employment upon termination was the major factor influencing the employment opportunities of the 1982 terminees. Since CETA did reduce the arrest rate of the participants by 50 percent during the first post-program year, and since the crimes committed by the Comparison Group were more serious, evidence does exist that CETA reduced the criminal activities of the terminees selected for the study.

DEDICATION

To my wife, Debra Ann.

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My dissertation committee must be acknowledged for their involvement throughout the process: Joseph P. Mooney, Ed.D., Director; Wolfgang Pindur, Ph.D; Leonard C. Sippel, MBA; and Petra E. Snowden, Ph.D. I also wish to acknowledge David B. Raible, Liza Horowitz, and Tamara D. Harper for their assistance.

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CHAPTER 1
INTRODUCTION

Purpose of the Study

The purpose of this study was to evaluate the effects of Classroom and On-the-Job Training, Work Experience, and JobShop programs of the Comprehensive Employment and Training Act (CETA).¹ The evaluation design included a cost-benefit analysis to illustrate program effectiveness. The evaluation described program success in terms of increased job opportunities and reductions in government transfer payments for CETA program participants in the Hampton/Newport News area.

In this study, comparisons were made of the employment records, criminal activities, and amount of government transfer payments of program participants and individuals with similar demographic characteristics not involved in the program. The purposes of the study were to identify (1) which program components including Classroom and On-the-Job Training, Work Experience, and JobShop operate at higher levels of efficiency; and (2) which selected client characteristics influence program results.

The target population was defined as all citizens in

the Hampton/Newport News area who terminated the CETA program in 1982. The random selection of a sample of eligible individuals who applied to and were not placed in the program during 1982 provided a Control Group for the study.

Research Problems

The major research problem was the effect of the CETA program on the job opportunities, the amount of government transfer payments, and criminal activities of 1982 program terminees. Other specific research problems were as follows:

1. A comparison of the different effects of Classroom and On-the-Job Training, Work Experience, and JobShop components of CETA on the wage rates and job placement rates of 1982 program terminees;
2. The effects of the type of termination, age, sex, education, and ethnic group on the job placement rates and the wage rates of 1982 CETA terminees;
3. The effects of CETA on the arrest rates of 1982 CETA terminees;
4. The effects of CETA on the amount of government transfer payments received by 1982 CETA terminees;
5. The effects of CETA on the tax contributions and criminal justice system costs of 1982 CETA terminees; and

6. The comparison of program costs of the 1982 CETA terminees and benefits, including reduced government transfer payments, criminal justice system costs and increased tax contributions.

Limitations

The evaluation and research designs did not include individuals who participated in the Summer Youth Employment Programs (SYEP), Youth Employment Training Program (YETP), or in-school Work Experience.² Since the primary goal of these youth programs was to help economically disadvantaged youth stay in school,³ and since 96 percent of the 1982 Summer Youth Employment Program terminees returned to school,⁴ the Peninsula Manpower Staff indicated that program activities exclusively for in-school youth should not be included in the study. The staff determined that low enrollments in the Youth Employment Training Program and in-school Work Experience eliminated a need for an evaluation of the other youth in-school programs.⁵

To comply with the Privacy Act and the confidentiality requirements of the respective public service agencies providing data, only aggregate data may be released on government transfer payments and criminal activities. This data limitation severely restricted the use of adequate measures to indicate statistical significance. Without individual data, independent variables such as program

activity, sex, race, age, and education could not be introduced into the design for research questions related to government transfer payments and criminal activities. However, the release of aggregate data ensured that the individual records of the CETA applicants and terminees remained confidential.

The number of individuals eligible for the Control Group in the research design was 180. A large sample of non-participants would have reduced differences in the demographic characteristics of the CETA and the Comparison Groups. The introduction of several independent variables in the research design created analysis of variance cells with insufficient numbers to yield confident results. With a small sample, variations in a performance measurement must be extremely large to indicate statistical significance at a respectable level of confidence. Since actual program cost per participant could not be analyzed, secondary sources were used to generate the cost component of the cost-benefit analysis. Secondary sources were estimates based upon average quarterly costs and enrollment data. Some program benefits including dollar value of reduced crime, also used secondary sources which were supported by the literature. ⁶

Problem Significance

During the past decade, Peninsula Office of Manpower Programs (POMP) expenditures for Classroom and On-the-Job

Training, Work Experience, and Job Shop were approximately 15 million dollars. From July 1974 to September 1982, over nine thousand Southeast Virginia residents participated in the program with nearly two thousand securing unsubsidized employment.⁷ Program size confirmed the need to conduct evaluations facilitating program improvement and proper utilization of public funds.

Currently, federal manpower programs are in a transition period. President Reagan is transferring authority for the administration of employment and training programs to state governments.⁸ Since Governor Robb will continue to initiate decisions regarding the operation of these programs, manpower officials should anticipate the need to identify program effects.⁹ To expedite his decision process, the Governor needs a complete understanding of the advantages and disadvantages of these employment and training programs.

After reviewing current government documents and consulting with manpower officials, one point is clear: manpower and employment service deliveries will be mandated to conduct a cost-benefit analysis for all their activities in the near future.¹⁰ Since POMP officials have confirmed the need to conduct a cost-benefit analysis, and since research comparing program costs with social benefits for manpower programs is severely restricted to national studies, the study should be considered a practical issue filling a significant research gap.

With President Reagan's plans to expand the states' role in the decision process, manpower officials should anticipate several program changes during the next few months. ¹¹ Since program evaluation, including cost-benefit analysis, may facilitate these changes, the study should be recognized as innovative and timely. The implementation of the Job Partnership Training Act and a reduction in resources emphasizing cost-effectiveness further ensured the timeliness of this study. ¹² In addition, the sophisticated data collection procedures should improve instrumentation for analyzing program effects.

Specific Utilization Objectives

The primary utilization objective was to provide POMP management staff with an evaluation which accurately describes CETA program success in terms of increased job opportunities for participants and decreased transfer payments for government agencies. The evaluation also provided management officials with sophisticated follow-up data to illustrate accurate information on post-program labor force experience.

This study applied two management strategies, evaluation process and cost-benefit analysis, to examine the true effects of a public service delivery system. By focusing evaluation questions upon the information needs of

the decision-makers and adopting an active-reactive-adaptive evaluation process, the research design developed a utilization-focused evaluation which was a major objective of the study. Patton stated,¹³

First, relevant decision-makers and information users must be identified and organized--real, visible, specific, and caring human beings, not ephemeral, general, and abstract "audiences", organizations, or agencies. Second, evaluators must work actively, reactively, and adaptively with these identified decision-makers and information users to make all other decisions about the evaluation decisions about research focus, design, methods, analysis, interpretation, and dissemination.

Other utilization objectives included:

1. Develop evaluation designs which may be applied to other manpower agencies;
2. Determine if anticipated outcomes were consistent with program results;
3. Conserve public funds by emphasizing successful manpower components and expediting program improvement;
4. Provide an objective procedure to establish program priorities; and
5. Identify data sources and performance measures.

Manpower evaluations including cost-benefit analysis require complex research designs to describe program impact. Data analysis should complement the information needs of the agency. Relevant literature was reviewed (Chapter 2) to insure design validity, confirm results, and

develop utilization strategies. Chapter 3 provides research methodology and data analysis for the study, and Chapter 4 describes the results of the research questions and hypotheses. Chapter 5 provides conclusions, recommendations, and future implications of the cost-benefit analysis and utilization-focused evaluation.

FOOTNOTES

¹ U.S., Congress, Comprehensive Employment and Training Act of 1973, Pub. L. 93-203, 93rd Cong., 1st sess., Vol. 87, December 28, 1973, pp. 839-82.

² U.S., Congress, Comprehensive Employment and Training Act Amendments of 1978, Pub. L. 95-524, 95th Cong., 2nd sess., Vol. 92, October 27, 1978, pp. 1909-2021.

³ U.S., Department of Labor, Office of Research and Evaluation, Continuous Longitudinal Manpower Survey - CLMS Report No. 15 (December 1982), p. 24.

⁴ Peninsula Office of Manpower Programs, CETA Program Status Summary, (Fiscal Year 1982).

⁵ Ibid.

⁶ Manpower Demonstration Research Corporation, The Supportive Work Evaluation: Final Benefit/Cost Analysis (New York: Mathematica Policy Research, Inc., 1981), pp. 72-90.

⁷ Peninsula Office of Manpower Programs, CETA Financial Status Report and CETA Program Status Summary (Fiscal Years 1974-82).

⁸ U.S., Department of Labor, Employment and Training Administration, "Implementing Regulations for Programs Under the Job Training Partnership Act; Proposed Rule," Federal Register No. 12 48 (January 18, 1983):2292-93.

⁹ National Alliance of Business, Business Currents No. 2 IV (January 30, 1984):3.

¹⁰ Employment and Training Report of the President 1982 (Washington, D.C.: Government Printing Office), p. 122.

¹¹ U.S., Department of Labor, "Implementing Regulations for Programs Under the Job Training Partnership Act," pp. 2292-93.

¹² Ibid.

¹³ Michael Quinix Patton, Utilization-Focused Evaluation (Beverly Hills: Sage Publications, 1978), p. 284.

CHAPTER 2

REVIEW OF THE RELATED LITERATURE

The literature review provides a theoretical framework to support the hypotheses identified in the study and identifies the measurement criteria used to evaluate and assess the performance of manpower programs. The six components of the literature review are (1) historical overview; (2) manpower impact models; (3) manpower program variables; (4) CETA and other manpower evaluation designs; (5) criminal activities; and (6) summary.

Historical Overview

This section of the literature review provides a brief historical overview of manpower programs implemented since the early 1960's. The primary focus of this historical review is the Comprehensive Employment and Training Act (CETA) implemented in 1973. ¹

Pre-CETA Era

The 1950's was considered a quiet period with regard to employment and training policy development. ² Of special

interest during this time period were federal efforts to provide employment services to the handicapped.³ Federal manpower policy entered a new phase in the 1960's as the Great Society programs emphasized a need to serve individuals who had difficulty entering and competing in the labor market.⁴ Figure 1 provides a complete description of the federal employment and training legislation prior to CETA.⁵

During the 1960's, federal manpower programs were initiated to correct labor market deficiencies created by technological advances; however, this primary goal was modified to emphasize the employment needs of the economically disadvantaged. While the Manpower Development and Training Act and the Economic Opportunity Act supported the same basic activities of the CETA program,⁶ 1967 amendments to these Acts were an attempt to decentralize federal manpower programs.⁷ Since the Emergency Employment Act of 1971 created temporary public employment positions (See Figure 1), it was a similar response to high unemployment as the CETA Public Service Employment Program.

Mirengoff concluded that two factors influenced the passage of the 1973 CETA legislation: (1) the uncoordinated and overlapping manpower programs implemented in the 1960's, and (2) the Nixon Administration support of a decentralization of federal programs. Mirengoff stated,⁸

Dissatisfaction with the tangle of separate programs that evolved, plus the drive of the Nixon Administration toward decentralization of federal programs

Title	Year	Purpose
Area Redevelopment Act	1961	Train workers in specific geographic economically depressed areas such as the rural poor in Appalachia.
Manpower Development Training Act	1962	Provide a broad range of services and including recruitment, job selection, job referral, testing, counseling, vocational training, and basic education.
Vocational Education Act	1963	Emphasize a new focus on employment of individuals rather than the skill needs of the labor market.
Equal Opportunity Act	1964	Provide programs to combat poverty for economically disadvantaged minority groups.
Civil Rights Act	1964	Prohibit discrimination in employment on the basis of race, religion, creed, or national origin.
Manpower Development and Training Act (Amendments) Economic Opportunity Act (Amendments)	1967	Emphasize participation of the poor and allow employment and training services to be controlled by local jurisdictions.
Social Security Act (Amendments)	1967	Establish the Work Incentive Program to provide services directed at improving the employability of welfare clients.
Concentrated Employment Act	1967	Provide comprehensive employment services to a designated geographic area.
Cooperative Area Manpower Planning System (Executive Order)	1967	Provide a sharing of information for federal manpower programs.
Manpower Development and Training Act (Amendments) Economic Opportunity Act (Amendments)	1970	Create a comprehensive manpower program planning system.
Emergency Employment Act	1971	Create jobs in the public sector for unemployed.

Figure 1
Pre-CETA Employment and Training Legislation

laid the foundation for a basic reform of the nation's manpower development system.

Snedeker and Snedeker indicated that seventeen separate categorical programs were established during the 1960's under the legislative acts described above.⁹ Each program had its own federal administration, funding procedures, eligibility requirements, and administrative agencies. According to these authors, pre-CETA manpower programs could not respond to differences in localities, control taxpayer dollars or complement the delivery of state and local manpower services. "The needy were being required to fit the programs, rather than the programs to fit their needs."¹⁰

Comprehensive Employment and Training Act

During 1973, numerous manpower programs created in the previous decade were consolidated under the Comprehensive Employment and Training Act (CETA). Figure 2 describes and compares the titles of the 1973 Act and the 1978 CETA Amendments. Pre-CETA manpower programs experienced a decentralization process which transferred implementation responsibilities from the federal government to the local governments. Local jurisdictions with populations exceeding 100,000 became grant recipients (prime sponsors) and were responsible for policy development and the selection of delivery agents who provided employment and training

CETA 1973 (Pub. L. No. 93-203)

CETA AS AMENDED IN 1978 (Pub. L. No. 95-524)

Title VI: General ProvisionsTitle I: Administrative Provisions

Title I: Comprehensive Manpower Services Establishes nationwide program of comprehensive employment and training services (training, employment, counseling, assessment, placement) for the economically disadvantaged, unemployed, or underemployed; administered by State and local government.

Title IIB: Comprehensive Employment and Training: Services for the Economically Disadvantaged Establishes nationwide program of comprehensive employment and training services (training, counseling, supported work, work experience, supportive services) for the economically disadvantaged, unemployed, underemployed, and people in school; administered by State and local government.

Title IIC: Comprehensive Employment and Training Services: Upgrading and Retraining Authorizes providing financial assistance to public and private employers for costs associated with upgrading entry-level employees; permits prime sponsors to retrain people facing impending layoffs with little chance of equivalent future employment.

Title II: Public Employment Programs Authorizes a program of transitional employment for unemployed and underemployed, providing services in areas of substantial unemployment; training and manpower services to be provided whenever possible to enable movement into unsubsidized employment.

Title IID: Comprehensive Employment and Training Services: Transitional Employment Opportunities for the Economically Disadvantaged Authorizes a public service employment program for the economically disadvantaged.

Title IIIA: Special Federal Responsibilities: Special Target Groups Provides for nationally sponsored programs and supervised manpower services to youth, offenders, people with limited English, Native Americans, migrant and seasonal farmworkers, and others particularly disadvantaged in the labor market.

Title IIIA: Special Federal Responsibilities: Special National Programs And Activities Provides for nationally sponsored programs and employment and training services to youth, offenders, people with limited English, Native Americans, migrant and seasonal farmworkers, Veterans, the handicapped, older workers, displaced homemakers, single parents, people lacking education credentials, public assistance recipients, women, and others.

Title IIIB: Special Federal Responsibilities: Research, Training, and Evaluation Authorizes research, demonstration, and evaluation programs; administered by the Secretary of Labor.

Title IIIB: Special Federal Responsibilities: Research, Training, and Evaluation Continues research, demonstration, evaluation, and labor market information activities.

Title IV: Job Corps Authorizes the Job Corps, a primarily residential program of education, skills training, and counseling for disadvantaged youth.

Title IVB: Youth Programs: Job Corps Authorizes the Job Corps, a primarily residential program of education, skills training, and counseling for economically disadvantaged youth.

Figure 2

Comprehensive Employment and Training Act Titles in 1973 and 1978 Amendments

CETA 1973 (Pub. L. No. 93-203)

CETA AS AMENDED IN 1978 (Pub. L. No. 95-524)

Title IV: Youth Programs: Summer Youth Programs Authorizes prime sponsors to conduct summer programs containing useful work, basic education, and employability development activities for economically disadvantaged youth.

Title V: National Commission for Manpower Policy

Title V: National Commission for Employment Policy

Title VI: Countercyclical Public Service Employment Program Establishes a program to provide temporary employment during periods of high unemployment; eligibility requires receipt of public assistance or unemployment in 10 of 12 preceding weeks and family income at or below Bureau of Labor Statistics lower living standard.

Title VII: Private Sector Opportunities for the Economically Disadvantaged Authorizes a demonstration program to obtain more private sector participation in CETA efforts to assist the disadvantaged; establishes Private Industry Councils to work with CETA prime sponsors in assisting CETA participants to move to unsubsidized jobs in the private sector.

Title VIII: Young Adult Conservation Corps Authorizes a year-round corps of people 16-23 years old to do conservation work on public land.

SOURCE: U.S., General Accounting Office, CETA Programs for Disadvantaged Adults - What Do We Know About Their Enrollees, Services, and Effectiveness? (June 1982), p.9.

Figure 2-continued

activities. ¹¹

A 1978 CETA report published by the Department of Labor summarized the CETA administrative and decision-making structure as follows: ¹²

1. Basic decision-making authority is lodged primarily with cities and counties.
2. CETA funds are allocated by formulas which consider unemployment rate, number of low income people, and previous manpower allocations.
3. Each local jurisdiction must have an advisory council to represent manpower related interests and to help in the review and development of local decisions.
4. The Department of Labor retains a variety of supervisory duties and responsibilities including technical assistance.

Mirengoff and Rindler stated that the major objective of the CETA program was job training to improve the employment opportunities of the economically disadvantaged.

¹³ A second level of objectives was as follows: ¹⁴

1. Improvement in the needs assessment and the responsiveness of manpower policies to local conditions.
2. Improvement in program planning and the appropriateness of a mix of services for each area.
3. Improvement in the efficiency and flexibility of service delivery systems.

4. Improvement in quality of program management accountability.
5. Improvement in program coordination of related services.

These objectives should produce (1) a more effective service delivery system for persons in need; (2) increased earnings of program participants as compared to previous manpower results; and (3) a more efficient system which meets the need of the local labor markets for qualified workers. ¹⁵ The Continuous Longitudinal Manpower Survey provided another function of CETA: to create public service jobs for the unemployed and underemployed during periods of economic instability or high unemployment. ¹⁶

In 1982, the Peninsula Office of Manpower Programs provided the following services to Virginians located in Hampton, Newport News, James City County, Williamsburg, York County and Poquoson: ¹⁷

1. Classroom Occupational Training was conducted by the Peninsula Manpower Skill Center for automotive mechanics, welding, production machine operation, radio-television repair, clerical, building maintenance, and heating and air conditioning repair. Subcontractors, including Hampton Manpower Services Project, the Newport News Office of Human Affairs, and the Williamsburg/James City County Community Action Agency, operated Classroom Occupational Training programs with the private

proprietary schools. In addition, the Classroom Training program at Thomas Nelson Community College offered subjects in twenty-one occupational areas.

2. Classroom Basic Education Training was provided by the Hampton Manpower Services Project and Newport News Office of Human Affairs. The Peninsula Manpower Skill Center provided advanced educational training which served as prerequisites to skill training.
3. On-the-Job Training was provided for eligible individuals in compliance with a contractual agreement. On-The-Job Training paid fifty percent of the wage for a specific time period.
4. In-School Work Experience Program provided students with work after school to enhance good work attitudes and a career education orientation.
5. Out-Of-School Work Experience Program provided training and skill orientation for persons entering or re-entering the labor market to improve employment potential and job prospects. Emphasis was placed on improving job application and interview techniques.

Other services to CETA participants included outreach, recruitment, intake, client assessment, counseling, orientation, job placement, follow-up activities, health services, child care and transportation. For Fiscal Year 1982, approximately one thousand persons were served with

expenditures exceeding 2.3 million dollars. The figures do not include 1.2 million dollars allocated to support nearly 900 youths in the Summer Youth Employment Program and the Youth Employment and Training Programs. ¹⁸

CETA Amendments

Several legislative actions were enacted to expand CETA manpower responsibilities, including: ¹⁹

1. The Emergency Jobs and Unemployment Assistance Act of 1974 authorized public service employment positions to provide immediate jobs to the unemployed.
2. Emergency Jobs Program Extension Act of 1976 reauthorized and amended the original Emergency Jobs and Unemployment Act of 1974 for Fiscal Year 1977.
3. Youth Employment Demonstration Projects Act of 1977 established four new youth programs.
4. Economic Stimulus Appropriations Act promoted expansion of the Public Service Employment Program under CETA.

During the first five years, CETA activities identified additional target groups which required manpower services, and the 1978 CETA Amendments restructured the federal manpower system to accommodate these expanding needs. ²⁰ The

U.S. General Accounting Office reported the following: ²¹

After the 1978 restructuring, the CETA system remained fairly well decentralized. Many services under the new titles were administered by the same local authorities who administered services under the Comprehensive Service title, but local control in selecting target groups and services lessened.

The National Commission for Employment Policy identified another purpose of the 1978 CETA Amendments: to provide cooperative and coordinate efforts among the plans, programs and services of CETA and other agencies which administer similar program activities. These agencies include economic development, community development, vocational education, vocational rehabilitation, public assistance, and self-employment training. ²² The CETA Staff Development Program for the Commonwealth of Virginia identified two major changes which resulted from these amendments: ²³

1. It strengthened the accountability and fraud and abuse provisions of the original Act.
2. It shifted the direction of the Act from the public to the private sector.

CETA Problems

Several problems were identified by Hargrove and Dean during the CETA implementation process which included: ²⁴

1. While programs were planned and operated locally,

- long-range planning was poor;
2. Categorical ties were not quickly abandoned;
 3. Plans were responsive only to a limited set of local demands; and
 4. The new federal role had been only partially achieved.

The Department of Labor reported the following problems with the CETA organization structure:

1. Frequent legislative changes, irregular funding, and excessive turnovers in staff created administrative problems; and
2. The new system developed little change in the nature of program activities. ²⁵

While CETA funds substituted local agency appropriations, Richardson and Lawther stated that program management improvements were necessary to provide additional services for disadvantaged groups, and enhance private sector involvement in local manpower operations. ²⁶

Summary

As information and technical advances in the early 1960's displaced workers, the Manpower Development and Training Act provided job training services to reduce the employment gap. ²⁷ Social unrest and welfare costs were the major political factors influencing the development of the federal manpower programs in the mid-1960's. Manpower

programs shifted priorities to emphasize the needs of the poor instead of displaced workers. For example, the Work Incentive Program required welfare recipients to register with the program while the Economic Opportunity Act attempted to break the poverty cycle of the uneducated and untrained economically disadvantaged.²⁸ The three basic goals of this time period were: (1) develop the abilities of the people; (2) create jobs; and (3) match people and jobs.²⁹ Torpey stated the following:³⁰

During the Johnson Administration, changing social, economic and political conditions led to shifting and emerging manpower problems. The three basic goals of the active manpower policy formalized in 1964, charted the course of ensuing manpower action during his tenure.

As manpower programs expanded, federal agencies emphasized program accountability and performance. Confusion with the growth of categorical programs and high unemployment rates led to the consolidation of multiple and inconsistent manpower programs.³¹ During the early 1970's, manpower programs were decentralized to shift management responsibilities from the federal government to local and state agencies.³² Torpey indicated,³³

Decisions on what needed to be done to improve specific manpower conditions would not be made by the federal government but by the area where the unemployed person lived and wanted to work.

During the late 1970's, federal manpower legislation continued to emphasize the needs of the economically

disadvantaged and improve service delivery. However, the need to direct manpower planning into the private sector generated political support for the new Job Training Partnership Act (JTPA) of 1983.³⁴

The JTPA establishes a formal partnership with the private sector and local manpower offices and transfers administrative authority to the state governments.³⁵ As grant recipients, the Governors review and approve the job training plans which are submitted by local government officials and representatives of the private sector.³⁶ Also, the Governors are responsible for program assessment and evaluation. JTPA emphasizes adult and youth training programs.³⁷

Manpower Impact Models

An effective evaluation strategy should establish a model which illustrates impact of the manpower program.³⁸ The model should have four components: (1) target groups; (2) intervention; (3) effects; and (4) research design.³⁹ The target groups are program participants; the intervention is the program; and the effects are performance on several impact measures. The research design examines the cause-and-effect relationship between program activities and performance measures. Since impact models should describe the effects of the program in measurable terms, Borus indicated that performance measures are positive

outcomes usually described in program goals.⁴⁰

After defining program goals and objectives, Rutman indicated that specific measures which have been theoretically tested should be used in the research designs to determine impact.⁴¹ In addition, the model should describe the cause-and-effect relationship between program activities and the performance measures.⁴² While these cause-and-effect relationships are often theoretical, every effort should be initiated to validate the impact model.⁴³ This section of the literature review describes the impact models and performance measures used in previous manpower evaluations. Strengths and limitations of the impact models are discussed as the preferred models are highlighted.

Performance Measures

The primary concern of a valid evaluation process is the establishment of broad program impacts and criteria to measure performance. A technical paper on CETA Performance Measurement sponsored by the Department of Labor stated,⁴⁴

1. Performance standards should represent reliable proxies for predictors of the achievement of the program goals;
2. Use of these performance standards should create incentives in the delivery of program services; and

3. Performance standards should account for local differences in program mix, enrollee characteristics and labor market conditions.

The Department of Labor reported, ⁴⁵

These measures included the following: (1) average hourly post-program wage rates; (2) gains in average hourly wage rates; (3) job retention status on the first job after CETA; (4) number and percent of terminees employed at the time of follow-up contact; (5) average number of weeks worked during the post-program period; (6) gains in weeks worked; (7) the product of weeks worked and average hourly wages; and (8) gains in the product of weeks worked and average hourly wages.

A Joint Legislative Audit and Review Commission for the Commonwealth of Virginia provided the following indicators to measure the success of the CETA programs: the rate terminees remained in unsubsidized jobs and length of time employed. ⁴⁶

Scanlon, Buchanan, Nay, and Wholey provided four performance measures to assess the impact of manpower programs on participants: (1) change in wage rate-hourly income at job entry minus last hourly income on full-time job before enrollment; (2) changes in earned income over the twelve month period following job entry minus the earned income over the twelve month period preceding enrollment; (3) change in unearned income over the twelve month period following job entry minus unearned income over the twelve month period preceding enrollment; and (4) job stability

measures, including the number of jobs in a twelve month period and time employed. ⁴⁷

An evaluation of the Work Incentive Program identified two other performance measures which could be used to evaluate CETA: (1) job entries per staff; and (2) welfare grant reduction. Borus stated that previous indicators used to measure CETA performance included placement rates, earnings, proportion of time and employment, wage rates, and levels of transfer payments. The Department of Labor established criteria to evaluate the CETA Classroom Training component of the CETA program as follows: ⁴⁸

1. Were there jobs at the end of the line for Classroom Training participants?
2. What kind of training wages did Classroom Training graduates receive?
3. What is the quality of the jobs in which the Classroom Training graduates were placed?
4. Do Classroom Training graduates stay on the job?
5. Who participated in the Classroom Training program?
6. Was the program cost justified?

Previous Manpower Impact Models

Evaluation Model Number One: Pre to Post Program Changes

The most sophisticated study conducted during the

1970's to measure the impact of CETA programs was the Continuous Longitudinal Manpower Survey (CLMS). The 1979 Employment and Training Evaluation Report of the Department of Labor stated that the CLMS tracked samples of participants in the CETA program and solicited information by reviewing records and conducting interviews. CLMS data collection was concerned with two research questions: ⁴⁹

1. Who is served by each of the major types of CETA decentralized systems?
2. What are the employment and earnings experiences of CETA participants after they leave the programs?

The Office of Research and Evaluation of the Department of Labor reported the following: ⁵⁰

In the analytic phase of the survey, the CLMS data are used primarily to produce: (1) gross estimates of pre to post program changes in employment and earnings; and (2) net estimates of how much of the pre to post program changes in participant earnings are attributable to CETA.

Bradley, Mangum, and Robson conducted a follow-up study which compared pre to post earnings of participants of the Manpower Development and Training Act, the Concentrated Employment Program and the Work Incentive Program. ⁵¹ Participants were interviewed during training and three, six, and twelve months following terminations. ⁵² Since interview sites included San Francisco, Oakland, Denver, and

Boston, results could be compared.

Evaluation Model Number Two: Comparison Group

Since the research methodology of the CLMS did not include a control group, the Office of Research Evaluation used data from the Bureau of Census to construct a comparison group and assess net program impact. The Social Security Administration provided the data on the comparison group which included quarterly earnings for a specific time period.⁵³ The Department of Labor indicated,⁵⁴

In general, assessment of the nature and extent of differences between pre-program and post-program earnings and labor force experiences of CETA participants is used to determine gross impact; through the construction of a comparison group, changes in the earnings for comparable groups of non-participants can be used to estimate net impact.

In 1972, Goldstein assessed the impact of five training programs including Manpower Development and Training Act, Neighborhood Youth Corp., Work Incentive Program, Job Corps, and Job Opportunities in the Business Sector.⁵⁵ According to Goldstein, the "crucial element in the manpower impact model was the control group which provided the 'reference point' to measure the effect of training."⁵⁶ Schiller

conducted an evaluation to assess the impact of the Work Incentive Program (WIN) which included a comparison group of eligible applicants who were not placed in the program.⁵⁷ The evaluations of the Job Corps⁵⁸ and the National Supported Work Demonstration⁵⁹ programs conducted by Mathematica Policy Research Corporation included a comparison group to assess program impact. The measuring criteria used in a Job Corp study were fraction of the time employed, weeks worked per six months, hours worked per week, earnings per week in current dollars, and earnings per week in 1977 dollars.⁶⁰

Evaluation Model Number Three: Regression Analysis

Sawhney, Jantzen and Hernstadt analyzed the effectiveness of the CETA training programs using a multiple regression analysis. The design of the study included a large sample of terminees and a comparison group; the performance measure was percent employed.⁶¹ The Florida Training Institute study conducted by Neilan and Johnston included a multiple regression to determine which variables influenced program results.⁶²

Advantages and Limitations

A 1979 Employment and Training Report⁶³ indicated that CETA evaluations should determine net effects⁶⁴ and stated,

Evaluation efforts, through the Continuous Longitudinal Manpower Survey and other means, should determine the net effects of the CETA program and determine the relative effectiveness of different activities in various participant groups.

Research designs which measure pre-post program changes do not estimate net impact; a comparison group should determine program effect on participant wage histories.⁶⁵ A CETA Technical Assistance Report indicated that the comparison group design is a relatively simple way to study program impact.⁶⁶ The Technical Assistance Report indicated the following:⁶⁷

Impact on individual participants is relatively easy to evaluate. For example, the earning patterns of participants may be compared to those of similar control or comparison groups of non-participants, and the net effect can be attributed to the program. Findings for participants may then be generalized to the target group in a form of a probability statement.

While Social Security data may not be an accurate source of income, Commins indicated that the data can yield valid comparison groups to assess impact of manpower programs.⁶⁸ King, Harkins, and Geraci stated that CLMS provides an adequate data source for national evaluation studies of manpower programs; however, the process is not timely to complement the information needs of the local manpower agencies.⁶⁹

Coffin stated that large samples are required to conduct evaluations using multiple regression analysis.⁷⁰

Since local manpower evaluation efforts may include relatively small samples, this strategy is usually restricted for national manpower evaluations. Lawther and Gromelski indicated that results of a multiple regression analysis may be difficult to translate into program changes and may not be timely to aid planning efforts of the local manpower agencies. ⁷¹

An Evaluation Model for Local Manpower Agencies

To determine impact, evaluations should compare individual changes which have occurred as a result of the program to what would have occurred if the individual had not participated. This task requires an adequate control group to compare the employment and criminal activities of participants and non-participants. Borus stated the following: ⁷²

In order to determine the changes which have occurred with respect to an individual we need to know what his experiences and situation have been after the treatment and what it would have been had there been no social program.

Borus indicated that an appropriate comparison group for manpower evaluations could consist of eligible individuals who applied but did not enter. Also, the comparison group members can be selected from previous years instead of current participants. ⁷³ The advantages of these data collection procedures are: (1) results are provided faster;

and (2) evaluation procedures do not need to be built into the design of the program. ⁷⁴ Rossi identified another type of comparison group which could be used to assess manpower programs as follows: ⁷⁵

To assess the impact of manpower training for the unemployed, subsequent work histories of program participants were compared to those of relatives and neighbors of the participants who were also unemployed. The rationale for the use of unemployed friends of the participants was that such friends were likely to share the same age, residential location, attitude, and perhaps motivation of their participant friends and, hence, be similar to the participant in most aspects relevant to the manpower program.

Other comparison groups identified by a CETA Technical Assistance Document were as follows: (1) individuals who registered for CETA programs but are subsequently known to be ineligible; (2) individuals who were found eligible for a CETA program but who leave the program before assignment to a specific project and without receiving participant services; (3) individuals who actively participate in CETA programs but who terminate prior to completion of training; (4) eligible individuals who receive participant support services only; (5) individuals registered with the employment services but who are not enrolled in CETA; and (6) individuals registered for participating in other manpower programs or who are on a waiting list. ⁷⁶

The U.S. Comptroller General's Office indicated that CETA prime sponsors have not assessed performance of Classroom Training and On-the-Job Training programs

adequately and emphasized a need for performance standards to improve the evaluation process.⁷⁷ Borus identified ten steps to evaluate the impact of employment related programs as follows:⁷⁸

1. Examine the components, clients and operating conditions of the program;
2. Determine the possible impacts of the program;
3. Establish one or more measures of the program;
4. Determine which impact should be measured;
5. Establish a measurement design which will have internal and external validity in estimating the net impacts of the program;
6. Determine the initial cost of the program;
7. Apply a design which measures a net increment in cost;
8. Design procedures for gathering data and analysis;
9. Adjust the impacts and costs; and
10. Make calculations and discuss the findings.

Borus stated,⁷⁹

In our opinion, the impact of all employment related social programs should be systematically evaluated with such evaluations as soon as each program becomes operational and continuing on a periodic basis.

Rossi and Freeman indicated that establishing impact is identical to establishing causality, and causal relationships in the social sciences are usually measured

probabilistically. Therefore, the problem of determining program effectiveness is the same as "establishing that the program is the cause of some specific event." ⁸⁰

Manpower Program Variables

This section of the literature review describes the variables including demographic, program type, and termination type which influence the employment activity of the manpower program participants. Figure 3 illustrates the variables selected for several evaluation studies conducted during the past 15 years and supports the selection of the independent variables of the study.

Client Demographic Characteristics

Scanlon, Buchanan, Nay, and Wholey stated that evaluation designs should establish groupings where differences in performance are anticipated. Their categories for manpower evaluations were sex, race, age, and education. The race category included white versus non-white; the sex category included male and female; the age category included under twenty-two and twenty-two or older; and education category included under twelve years and twelve years or more. ⁸¹ Figure 3 indicates that sex, age, education, and race were the four most popular variables introduced in previous evaluation designs.

Authors	Years	Program(s)	Influential Variables
Commins	1970	Manpower Development and Training act	Program activity, sex, age, and race.
Engleman	1972	Job Corps	Age, marital status, education, race, and length of stay in program.
Goldstein	1972	Manpower Development and Training Act, Neighborhood Youth Corp., Work Incentive Program, Job Corps, and Job Opportunities in the Business Sector	Sex, education, race, and age.
Bradley, Mangum, and Robson	1973	Manpower Development and Training Act, Concentrated Employment Program, and Work Incentive Program	Sex, race, age, and education.
Department of Labor	1976	Portland Concentrated Employment Program	Sex, race, age, and education.
Department of Labor	1976	U.S. Immigration	Sex, region of origin, of education, English fluency, age, relative status, and occupation group.
Department of Labor	1978	Comprehensive Employment and Training Act for Eastern Massachusetts	Work experience, age, program activity, and sex.
Brandwein	1980	Comprehensive Employment and Training Act	Program activity, previous employment record, race, sex, and type of termination.
Zornitsky	1980	Comprehensive Employment and Training Act	Sex, age, education, economically disadvantaged, handicapped, ex-offender, and program activity.
Hahn and Friedman	1981	Job Factory and Youth Employment Services	Sex, age, race, public assistance, education, and reading level.
Neilan and Johnson	1981	Comprehensive Employment and Training Act for the Florida Training Institute	Sex, race, age, program activity, and length of stay.

Figure 3
Manpower Program Variables

Authors	Years	Program(s)	Influential Variables
Taggart	1981	Comprehensive Employment and Training Act	Program activity, sex, age, race, and previous employment record.
Bloom	1982	Comprehensive Employment and Training Act	Sex.
Department of Labor Continuous Longitudinal Manpower Survey	1982	Comprehensive Employment and Training Act	Age, sex, education, program activity, type of termination, and race.
Sawhney, Jantzen, and Hernstadt	1982	Comprehensive Employment and Training Act	Age, sex, race, education, family status, English native language and public assistance recipient.

Figure 3-continued

During the 1960's, the results of the National Longitudinal Survey indicated that formal education was positively related to labor market experience and discrimination against women was considerably greater than discrimination based on race.⁸² Commins confirmed these results and stated that women's gains for the Manpower Development and Training Act were less than earning gains reported by men.⁸³ Commins also reported that younger participants experienced greater earning gains than the older groups.⁸⁴ Engleman concluded that marriage and an additional year of schooling were positively related to participant earnings.⁸⁵

Goldstein had inconsistent results for three manpower evaluations conducted during the 1960's. Manpower Development and Training Act, Neighborhood Youth Corp. and Work Incentive Program indicated that Institutional Training significantly increased earnings for males while female increased earnings were minimal. The earnings impact was greater for high school dropouts in the Manpower Development and Training Programs and the Neighborhood Youth Corp, and high school graduates in the Work Incentive Program. Only the Work Incentive Program indicated significant difference between age groups; youth and older workers were not placed as easily as other participants.⁸⁶

While men reported higher wage increases than women in pre-CETA programs, the reverse was true in the post-CETA era.⁸⁷ The Department of Labor reported that CETA programs

were more effective for individuals with more than one but less than ten years of Work Experience. Also, the younger and older participants had the smallest percentage changes after program intervention.⁸⁸ The Continuous Longitudinal Manpower Survey confirmed these results and reported the following:⁸⁹

During the second post-program year (1978) women who participated in CETA gained substantially more over women in the comparison group, than men did over their comparison group. The net gains for women were larger in both dollar amounts and percentage terms.

Older CETA participants who were thirty years of age or older experienced larger net gains than younger participants.⁹⁰ Male and female participants with past employment experience had larger earning gains following training.⁹¹

Program Activity

Since manpower activities vary among the different localities, Taggart indicated that CETA should be assessed by program component to determine the relationship between activities and outcomes.⁹² Rutman also identified a need to separate program components in the impact model and measure them according to their respective goals and objectives. This procedure is a viable strategy for assessing the impact of large governmental programs including CETA.⁹³

In 1970, Commins indicated that program results were not consistent among the different components of the training programs.⁹⁴ The Department of Labor confirmed these results and reported that wage rate differences were identified by program activity, and On-the-Job Training participants had the highest percentage wage increases both before and after CETA.⁹⁵ The Continuous Longitudinal Manpower Survey supported these findings and indicated that program activity accounted for variations of impact among CETA participants.⁹⁶ The results stated,⁹⁷

In 1978, those who had participated in On-the-Job Training had the largest net earnings (\$570). Next highest impacts were experiences from Classroom Training (\$442) trainees, followed by those who participated in Public Service Employment.

Type of Termination

The Continuous Longitudinal Manpower Survey (CLMS) reported that employment status upon termination was the variable which had the most influence on participant earning gains.⁹⁸ The Department of Labor reported the following:⁹⁹

The net earning gains realized by the placed group were consistently stronger than any other variable examined in the net impact analysis of fiscal year 1976 CETA entrance.

Sawhney, Jantzen, and Hernstadt concluded that a high proportion of CETA trainees who secured unsubsidized employment upon termination were employed several months

later.¹⁰⁰ Brandwein reported that terminees who were not placed in employment did not experience the earning gains experienced by the terminees who were placed.¹⁰¹

Summary

Borus identified several client demographic characteristics which should be considered for manpower evaluations. These variables included but were not limited to the following:¹⁰²

1. Age;
2. Sex;
3. Marital status;
4. Education level;
5. Military service;
6. Employment status at enrollment;
7. Previous occupations;
8. Socioeconomic background;
9. Arrest record;
10. Prior mobility; and
11. Eligibility for different types of income.

Borus stated,¹⁰³

To conduct an evaluation of a social program, it is necessary to measure the relationships between the program impacts (the dependent variables) and a

variety of independent variables, including the personal characteristics of participants, the program components, and the conditions under which the programs operate.

The reports of the Continuous Longitudinal Manpower Survey identified the variables influencing program results as: (1) age; (2) sex; (3) education; (4) program activity; (5) type of termination; and (6) race. The reports indicated that these variables provided variations of impact among CETA participants. Brandwein confirmed the survey data and indicated that previous employment experience also influenced participant wage gains.¹⁰⁴ Zornitsky indicated that CETA was a complex system which required understanding of the "explanatory variables" including client characteristics and program activity to improve program performance.¹⁰⁵

CETA and Other Manpower Evaluations

This section of the literature review describes previous evaluation efforts including program evaluations and cost-benefit analyses to assess the impact of federal manpower agencies. Morgan indicated that program evaluation goes beyond monitoring effects and identifies changes which have occurred as a result of agency intervention.¹⁰⁶ An effective manpower evaluation should emphasize program impact for groups considered to have limited employment opportunities including young women, high school dropouts,

minorities, and poor families. Program evaluation should enhance service delivery improvement and confirm that the economically disadvantaged are actively involved in the program. ¹⁰⁷

Impact Evaluations

The National Longitudinal Survey, Barnes indicated, provided evidence that participants in training programs had higher earning gains than a comparable group of non-participants. ¹⁰⁸ Commins confirmed these findings and reported that manpower training did substantially increase participant wages for three years following termination. ¹⁰⁹ Bradley, Mangum and Robson concluded that the terminees of the Manpower Development and Training Program (MDTA), the Concentrated Employment Program (CEP), and the Work Incentive Program (WIN) did experience earning gains during a time period with no minimum wage increases or accelerated unionization. ¹¹⁰

A CETA evaluation conducted in Eastern Massachusetts reported that the post-program wage changes were greater for CETA than the manpower programs predating CETA. ¹¹¹ In 1981, Hahn and Friedman published the results of an evaluation which assessed two job search assistance programs, Job Factory and Youth Employment Services. While the Job Factory participants experienced higher job placement rates than a comparison group, terminees of the

Youth Employment Services did not report higher placement rates.¹¹²

The third follow-up report of the Job Corps which evaluated economic impact indicated that participants in the first four years following termination increased earnings by 15 percent and were employed three additional weeks during the year.¹¹³ The Office of Policy Evaluation and Research of the Department of Labor reported,¹¹⁴

Earnings would have increased approximately from \$2,500 per year in the immediate post-program time period to \$5,500 four years later. However, approximately one-half of this growth in earnings appears to be associated with general inflation, and the bulk of the remaining half is associated with increases in employment.

A CETA evaluation conducted by Sawhney, Jantzen, and Hernstadt indicated that job training increased the employment stability of the program trainees dramatically. "The average trainee overall was 90 percent more likely to remain employed than a non-terminee."¹¹⁵ The results of the Continuous Longitudinal Manpower Survey (CLMS) indicated that the CETA participants experienced improvement in their employment opportunities and earnings throughout the post-program period.¹¹⁶ The Survey concluded,¹¹⁷

The average percent of time employed was 63 percent in the first post-CETA year, and increased to 72 percent in the second year after termination. These figures may be compared to 38 percent for the year before CETA entry. Average annual earnings were \$4,510 in the first year after termination, and \$5,550 in the second post-CETA year.

Cost-Benefit Analyses

Cost-benefit analysis is a management tool which has two distinct purposes: (1) evaluate competing alternatives; and (2) determine program payback efficiency. (For each dollar allocated is a dollar of social benefits generated by a specific program.) The cost-benefit analysis has three major components: (1) cost, direct and indirect program inputs; (2) benefits, tangible and intangible net outcomes; and (3) comparison of costs and benefits. This methodology which quantifies program impact into dollar terms was first applied extensively to social programs during the 1960's.

In 1972, Barsby described the application of cost-benefit analysis in manpower program evaluations and identified three perspectives (society, individual, and government) to calculate the cost-benefit ratios.¹¹⁸ The U.S. General Accounting Office identified criteria to conduct a CETA cost-benefit analysis which included but was not limited to the following:¹¹⁹

1. Increased employment;
2. Reduced unemployment;
3. Increased Gross National Product;
4. Increased tax revenue;
5. Increased value of goods produced;
6. Decreased administrative costs and transfer payments for social programs;
7. Reduced crime;

8. More stable prices;
9. Increased skill level of labor force;
10. More equitable income distribution;
11. Help to the disadvantaged;
12. Increased social stability;
13. Fostering good will; and
14. Better race relations.

Dymond described the role of cost-benefit analysis in the formulation of manpower policy and emphasized a need to concentrate efforts on estimating the cost-benefit relationship with all variables influencing manpower program effects.¹²⁰ According to Dymond, evaluation studies should be conducted where data is available to reduce cost and provide results in a timely manner. Dymond indicated,¹²¹

Admittedly, some benefit/cost investigations have been pretty spurious, but on the whole, there seems to be ample evidence that the purely economic returns from programs which are directed to increasing the quality and productivity of manpower resources are indeed high.

Azzi indicated that cost-benefit analyses conducted during the 1960's compared participant earning gains with the public expenditures for the program. The process had two components: (1) difference between wages before and after program intervention; and (2) earning gains attributable to the program by comparing employment histories of terminees and a comparison group of non-participants. Comparison of the dollar value of the earning gains and program costs yielded the true worth of

the training effort. ¹²² In addition, Azzi identified several deficiencies with previous manpower cost-benefit strategies. ¹²³

They used the dollar value of inputs to measure the consumption costs imposed on taxpayers through the program without considering the equity costs from the transfer of benefits to shareholders. If the discounted gains in earnings exceeded discounted program costs, the studies argue both that the programs are efficient and that they are distributing sufficient benefits to trainees to more than offset cost to taxpayers. These studies simply overlook the existence of specific skills and consider only wages determined in a manner consistent with simple neoclassical price theory.

Johnson confirmed that computation of program benefits ¹²⁴ require a comparison group to assess impact. ¹²⁵

A very common method of estimating the net impact of manpower programs has been the straight-forward comparison of pre- and post-training earnings of trainees; however, in a dynamic economy, the assumption that future earnings in the absence of training would equal earnings prior to training is, in general, wrong. In order to assess the net impact of a program, it is essential that a comparison group (a group of individuals who are to some extent similar to the trainees but who did not receive training) be included in the analysis.

The Department of Labor has published the results of three follow-up evaluations which assessed the economic impact of the Job Corps. The second and third follow-up reports conducted by the Mathematica Policy Research Corporation provided methodological considerations for a manpower cost-benefit analysis as follows: ¹²⁶

1. Identification of program benefits which include:

- (1) reduced dependence on transfer programs; (2) reduced criminal activity; (3) reduced drug and alcohol abuse; (4) use of alternative training and educational programs; and (5) increased post-program output;
- 2. Identification of program costs which include: (1) expenditures; and (2) opportunity cost of corpsmember;
- 3. Calculation methods for the cost-benefit ratios;
- 4. Determination of the appropriate perspective for the analysis (society, corpsmembers, or non-corpsmembers);
- 5. Identification of discount rates to generate present value of costs and benefits;
- 6. Estimation of taxes paid; and
- 7. Identification of the types of criminal activities and related costs per arrest.

The transfer payments included Aid to Families with Dependent Children, General Assistance, Supplemental Security Income, Unemployment Compensation, Social Security, Medicaid, Food Stamps, Public Housing Subsidies, and other welfare programs.¹²⁷ Since the Job Corps and CETA provided similar services, including vocational skills training and basic education, several components of the research methodology of the cost-benefit analysis may be applicable for a CETA evaluation. In addition, the results of the Job Corps evaluation may generate comparable data to support the

findings of the study.

Using a similar research design and researchers from the Job Corps study, Mathematica Policy Research Corporation conducted a cost-benefit analysis of the National Supported Work Demonstration Program. Since the research methodology was accepted by the Department of Labor, the Manpower Demonstration Research Corporation, the Job Corps, and the National Supported Work Demonstration Program, the validity of the evaluation strategy was confirmed. The Manpower Demonstration Research Corporation reported, 128

Mathematica's benefit/cost analysis, presented here and in the supporting technical reports, is more reliable and comprehensive than those previously undertaken in employment and training programs.

The methodological contributions of the Supported Work and Job Corps evaluations for this study were identical with two exceptions. First, the Supported Work study provided comparative data from cost-benefit studies conducted by other employment and training programs. For each respective program, the Supported Work study described the target group, type of services, time period of study, location of the study, benefit/cost ratios, research methodology, sample size, benefit and cost measures, discount rate, and duration of benefits. Second, the Supported Work study closely examined the cost-benefit studies of four manpower programs serving target groups similar to the CETA program. 129

Summary

As with other management strategies measuring program efficiency, cost-benefit analysis has advantages and limitations. The cost-benefit evaluation of the Supported Work Program did not measure all potential benefits of employment including (1) the reduction of criminal activity to society; and (2) benefits of the family members of the participants.¹³⁰ However, Master, Garfinkel and Bishop stated that taxpayers should emphasize a need to compare program costs and benefits which directly effect them such as a substantial reduction in welfare payments and criminal activities.¹³¹

Figure 4 summarizes the results of several manpower cost-benefit analyses and provides descriptive data to expedite review of research methods. Since benefits, costs, discount rates, and duration of benefits varied among the different studies, valid comparison of program results was difficult. "When different benefits and costs are measured, there is often no way of making a meaningful comparison."¹³²

During the past five years, manpower cost-benefit methodology has become more consistent to facilitate comparison of program results. The Supported Work and Job Corps evaluations of the Mathematica Policy Research Corporation provided valuable information which may expedite local efforts to conduct a cost-benefit analysis.

Program	Author(s)	Year	Services Provided	Benefits	Costs	Discount Rate	Duration of Benefits	Major Findings
Manpower Development and Training Act, Area Redevelopment Act (Michigan)	Hardin and Borus	1972	Classroom Training	Increased tax payments; reduced transfer payments.	Increased government outlays for transfer payments; training allowances; instruction costs; reduction in taxes during participation.	4-8%	10 years	Higher returns for short-term classes as compared with intermediate and long classes.
Public Service Employment Program of CETA	Burnin and Cobbe	1978	Temporary Employment	Reduced transfer payments; Output produced by participants	Program costs	0%	During participation only	Reductions in transfer payments and the value of program output was approximately equal to program costs.
Wildcat	Friedman	1978	Temporary Employment	Output produced by participants; reduced criminal activity; reduced transfer payments; increased tax payments.	Program costs	0%	Three years	For taxpayers, the program returned \$1.12 for every dollar invested. The net present value per participant was \$1.678.
Job Corps	Thornton, Long, and Mallar	1978	Basic Education; Skill Training; Work Experience; Placement	Increased earnings; output produced by Corpsmembers; Reduced Transfer payments; Reduced Criminal Activity; Reduced Utilization of Alternative Services.	Program Costs minus transfers; Opportunity Costs for Corpsmembers; Administrative Costs.	3% 5% 10%	14% decay per year for expected working life.	With exception to the 10% discount analysis, benefits exceed program costs.
Work Incentive Program	Schiller	1978	Job Search; Education; training; subsidized employment	Increased Earnings.	Employment Services; Related Supportive Social Services.	3% 6%	10% 19% 35% Decay per year.	For males and females, the benefit-cost ratios were 2.11 and 1.35, respectively with a 3% discount rate and 19% decay per year for benefits.

Figure 4

A Comparison of Manpower Cost-Benefit Studies

Program	Author(s)	Year	Services Provided	Benefits	Costs	Discount Rate	Duration of Benefits	Major Findings
National Supported Work Demonstration	Mathematica Policy Research, Inc.	1979	Temporary Employment	Output Produced by participants; increased earnings and taxes; reduced criminal activity; reduced drug treatment cost; reduced utilization of alternative services.	Program Costs minus transfers; Opportunity costs for participants; increased cost of child care; administrative costs.	5%	3% decay per year for working life of AFDC group; 17% for other groups.	For welfare recipients and ex-addicts the benefit-cost ratios were 2.17 and 1.83 respectively. For youth and ex-offenders, the results were not positive.
CETA	Taggart	1981	Classroom and On-the-job training	Reduced transfer payments; increased earnings and tax payments.	Program Costs	10%	10 years	For classroom training and on-the-job training, benefit-cost ratios were 2.9 and 1.7, respectively.
CETA	National Council on Employment Policy	1981	Classroom Training; on-the-job training; temporary employment	Value of Work during participation; post-program earning gains; for Administrative	Program Costs; Opportunity costs	15%	14% decay per year for expected working life.	Every dollar invested in on-the-job training returned \$2.28 in social benefits; every dollar invested in classroom training returned \$1.14 in social benefits; work experience participants did not experience gains or losses following termination.
CETA Broward County, Florida	Nealan and Johnston	1981	Classroom training; on-the-job training; temporary employment	Increased earnings and tax payments; reduced transfer payments.	Program Costs	10%	5 years	Every dollar invested returned \$1.33 in government benefits; in 24 years, participants generated taxes which were equal to program costs; a decrease of 10% in number of participants receiving public assistance following termination; average number of hours worked increased by 17 a week.

Figure 4-continued

Program	Author(s)	Year	Services Provided	Benefits	Costs	Discount Rate	Duration of Benefits	Major Findings
Job Corps	Mathematica Policy Research, Inc.	1982	Basic education; Skill training; Work Experience; Placement	Output produced by Corpsmembers including earnings and taxes; Reduced transfer payments; reduced Criminal activity; Reduced Drug/Alcohol Abuse; Reduced utilization of alternative services.	Increase government outlays for transfer payments, training and instruction costs, and administrative costs during participation; Opportunity costs of Corpsmembers.	5%	14% decay per year for expected working life.	Increased employment of three weeks a year; Increased earnings of \$655 per year; Reduced welfare assistance of two weeks a year; Reduced Unemployment Insurance payments of one week a year.

Figure 4-continued

Criminal Activities

This section of the literature review describes the effects of employment and training programs on the criminal activities of participants. During the past two decades, the federal government has continued to support program activities which enhance the employability of individuals who are considered a high risk of becoming involved in criminal activities. In some cases, programs such as the National Supported Work Demonstration Program were specifically designed for offenders.¹³³ The purpose of these programs was to provide Work Experience for offenders which would complement a more conventional life style to reduce recidivism.¹³⁴

After reviewing several research experiments, Myers indicated that the results of previous studies which described the effects of job opportunities on crime were not consistent. Myers concluded that the relationship between employment opportunities and criminal activities was ambiguous.¹³⁵ In support of the Myers study, Leveson stated that a significant relationship does not exist between adult employment rates and crime rates.¹³⁶ In contrast, Thompson identified several deficiencies with the research design of the Leveson study which prohibited accurate interpretation of the results.¹³⁷ Thompson provided evidence that experiences of employment and unemployment are related to criminal behavior.¹³⁸

Phillips, Votey, and Maxwell supported this theory and stated that the lack of job opportunities explain the high crime rates for youth. ¹³⁹

Brenner reported that a one and four tenths percent rise in unemployment during 1970 was directly responsible for 7,660 state prison admissions and 1,740 homicides. ¹⁴⁰ Brenner's time series analysis indicated that a one percent increase in unemployment during a six year period would result in 3,340 admissions to state prisons. ¹⁴¹ "A serious difficulty with Brenner's work is that it fails to specify a model which tests for the impact of unemployment while adequately controlling for a range of other, possibly confounding factors." ¹⁴²

Thompson reviewed several manpower evaluations including the Court Employment Project, Job Corps, Supported Work Program, and Financial Aid to Released Prisoners (Life Program) to examine the relationship between manpower program activities and the criminal histories of participants. ¹⁴³ The Court Employment Project (CEP) which provided employment services to defendants had no impact on the criminal activities of the participants. ¹⁴⁴ The evaluation of the LIFE Program described the effects of transitional aid payments to prisoners on re-arrest rates for property crimes. ¹⁴⁵ Program results indicated a 23 percent re-arrest rate for the sample of aid recipients as compared with a 31 percent re-arrest rate for the control group. Thompson stated the following: ¹⁴⁶

This eight percent difference reflects a relative decrease of approximately 25 percent in property related arrests among experimentals. The study also found a strong, consistent relationship between being employed and reduced arrests among the research subjects in all groups.

The National Supported Work Demonstration Program provided evidence that manpower programs could have a positive impact on participant arrest rates. For two years, eligible individuals were assigned to a program activity or a control group to study the effects of the program. ¹⁴⁷ While the results were not positive for every target group identified by the study, components of the research design have merit including the cost-benefit analysis discussed previously. The results indicated that the Supported Work Program had a positive effect on the recidivism rates of former welfare recipients. ¹⁴⁸

For the first follow-up evaluation of the Job Corps, interviews were conducted with a sample of program terminees and a comparison group. ¹⁴⁹ The Department of Labor reported, ¹⁵⁰

Corpsmembers showed reductions both in drug and alcohol abuse and in criminal behavior in the post-program period Reductions in criminal behavior are evidenced by reductions in the number of post-program arrests for all crimes (arrests for minor motor-vehicle violations were not counted) and in the reduced probability of being in jail or prison during the week of the survey; however, except for males, the effects tend to be statistically insignificant.

During program participation, reductions in arrests were

twice as large as compared with post-program experiences.¹⁵¹ The second follow-up evaluation of the Job Corps indicated that program effects on participant arrest rates diminished during the first year following termination.¹⁵² The second follow-up evaluation supported previous findings of a statistically significant but small reduction in the use of drug-treatment programs by participants.¹⁵³

While the comparison group was the same throughout the three follow-up evaluations, the third follow-up sample excluded 13 Corpsmembers who died.¹⁵⁴ For the third follow-up evaluation, the results indicated (1) no overall reductions in arrests; (2) a reduction in theft arrests; and (3) no reductions in the number of jail days.¹⁵⁵ The Office of Policy Evaluation and Research stated the following:¹⁵⁶

The crime effects are erratic over the post-program period and, in aggregate, over the entire period, show no effect on arrests; however, there is a significant shift from more to less serious crimes.

The program effects on the use of drug and alcohol treatment programs were consistent throughout the entire evaluation process: small reductions in the use of drug and alcohol treatment programs.¹⁵⁷ In 1978, the Department of Labor conducted a three year study to identify and assess the non-economic benefits of the Job Corps. Since all groups except dropout and no-show females significantly reduced their police and court involvement, the results indicated that the Job Corps had effectively functioned as a

rehabilitation agent. 158

Summary

Previous manpower evaluations of the Job Corp, LIFE Program and Supported Work Program indicated that federal responses to high unemployment rates had a positive effect on the criminal activities of program participants. The results suggest that local manpower evaluations should review the criminal histories of former participants. While the research designs may require modifications, these national studies provided the basic components of a manpower evaluation to determine program impact on participant arrest rates.

Summary of Literature Review

Manpower program evaluations perform the following functions: (1) facilitate the development of budget systems which relate need to performance; (2) establish priorities objectively; (3) provide information to expedite a rational decision process; (4) provide data to indicate program efficiency and effectiveness; and (5) "conserve public funds by aiding in the selection of alternatives which have a higher probability of meeting desired outcomes." 159 During the 1970's, the Continuous Longitudinal Manpower Survey (CLMS) was the major federal effort to assess CETA impact.

Pre- and post-CETA employment experiences of participants illustrated variations of impact by program activity, demographic subgroup, and termination status.¹⁶⁰ In 1978, the Department of Labor compared CLMS and Social Security data to determine the net impact of CETA on participant earnings.¹⁶¹ Other evaluation studies, including Bloom,¹⁶² Taggart¹⁶³ and Brandwein,¹⁶⁴ used the CLMS data to confirm previous interpretations of CETA impact.

During the 1960's, manpower cost-benefit analyses were popular; however, recent federal manpower programs including CETA have not conducted cost-benefit analyses to evaluate program effects with exception of the Job Corps¹⁶⁵ and the National Supported Work Demonstration Program.¹⁶⁶ Both evaluations were conducted by the Mathematica Policy Research Corporation and represent a reliable and comprehensive cost-benefit analysis.¹⁶⁷

Dorrer stated that previous manpower evaluations¹⁶⁸ have not conceptualized an impact model to describe the true worth of the program.¹⁶⁹

The scope of program evaluation has neglected to go beyond the broad articulation of policy and program objective in specifying the evaluation model. This in turn has caused the use of simple and inappropriate models that do little in rating the efficiency and effectiveness of social programs and, thus, evaluation-based design of social policy persists in being weak.

Hargrove indicated that evaluation research did not consider the information needs of local manpower officials. Local service deliverers compensated for this deficiency by

relying on management information systems which generally did not assess program effects.¹⁷⁰ Hargrove concluded that research is needed to provide knowledge of "production functions" for prime sponsors which describe the relationship of impact, treatment, and institutional processes.¹⁷¹ Zornitsky indicated that, in most cases, research compared the effects of national manpower programs and could not be applied locally.¹⁷²

For instance, while well designed national studies are able to separate and provide comparable data on the effects of alternative program strategies, they cannot adequately capture differences in local program organization and design, or their effects on performance.

Barsby identified evaluation deficiencies in the manpower cost-benefit analyses¹⁷³ and provided direction for future research.¹⁷⁴

Comparisons of manpower programs are hindered by economists' failure to agree on a common methodology for conducting cost-benefit research Whatever their sources, however, deficiencies in cost-benefit analysis appear to be minimized when the analysis is directed at the internal operation of programs. It is in this direction that cost-benefit analysis particularly needs to be developed.

In 1973, Nay, Scanlon and Wholey described deficiencies with previous manpower cost-benefit strategies and recommended that the Congress adopt a sophisticated data collection methodology to address the following issues:¹⁷⁵

1. Uncertainty over what constitutes cost and benefit;
2. Inadequate data;

3. Average benefit and cost ratios for manpower training programs hide larger variations in benefits and costs that occur within the program from project to project;
4. A productive approach is the use of detailed cost and effectiveness data to identify successful projects within the program and use the experience of those projects to improve the less successful ones;
5. Most benefit and cost analyses and evaluations deal only with the impact of training on the trainees themselves. To realize the potential of manpower training programs as economic tools requires an understanding of the impact on the general labor market.

The National Academy of Sciences emphasized that the primary impact measure of CETA should be the extent to which trainees are securing unsubsidized employment. Also, the Academy provided two recommendations which should be considered by manpower officials: ¹⁷⁶

1. Placement of participants in unsubsidized employment should be recognized as the primary objective and should receive more attention at all levels of CETA administration.
2. Research should be undertaken to assess the economic and non-economic effects of CETA.

The Job Training Partnership Act (JTPA) mandates that

evaluations assess "cost-effectiveness impact on communities and participants," and include performance standards which measure impact on earnings, transfer payments and tax revenues.¹⁷⁷ The 1982 Employment and Training Report of the President reported that the federal government is designing a national evaluation to replace the Continuous Longitudinal Manpower Survey and assess the performance of the JTPA.¹⁷⁸ The report of the President stated the following:¹⁷⁹

Evaluation studies to be undertaken in fiscal 1983 will be concerned with the impact of selected employment and training programs on participant earnings, wages, welfare dependents and other related topics.

The President's Report stated that the evaluation design will include a cost-benefit component and confirmed the timeliness of the study.¹⁸⁰

The literature review provided descriptions of manpower evaluations including cost-benefit analysis which supported the research design and methodology of the study. The literature review also supported the interpretations of the results discussed in Chapter 4 and the recommendations of Chapter 5.

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CHAPTER 3

METHODOLOGY

The following chapter includes a description of the research design and the data collection procedures. Also, Chapter 3 describes the data analysis methodology of the study.

Research Questions and Hypotheses

Figure 5 was formulated to expedite the review of the research questions and provide data collection strategies supporting designs. Figure 6 describes the demographic characteristics of the 1982 CETA applicants and reviews the employment and program activity of the CETA Sample and the Comparison Group selected for the study. The research questions apply retrospective Comparison Group designs to measure the impact of CETA effects and provide for a utilization-focused evaluation. While the research questions and hypotheses indicate that a cost-benefit analysis is included in the evaluation design, the literature review section of the study describes which client characteristics may influence program results and should be introduced as independent variables in the

Research Question Number One: What is the effect of CETA on the amount of transfer payments and other government subsidies and tax contributions of 1982 program terminatees?

Hypothesis	Measure	Design	Source
1.1 Participation in the CETA program reduces the amount of government transfer payments received by program terminatees.	Aid for Dependent Children	Retrospective Comparison Group Design	Social Services
	General Relief		Social Services
	Food Stamp Allocations		Social Services
	Unemployment Insurance payments		Virginia Employment Commission
	Supplemental Social Security		Social Security Administration
	Rent subsidies		Community Development Agencies
	Public Housing Payments		Public Housing Authorities
	Child Care Allocations		Social Services
	Medic-aid Payments		Social Services
	Auxiliary grant allocations		Social Services
	State and local hospitalization payments		Social Services
	Transportation subsidies		Social Services
	Emergency payments		Social Services
1.2 Participation in the CETA Program increases the amount of taxes paid by terminatees during and after program termination.	Taxes paid by participants after termination (.23 x taxable income)	Retrospective Comparison Group Design	Virginia Employment Commission
1.3 Participation in the CETA Program reduces the amount of criminal justice costs for program terminatees.	Criminal Justice System Costs by Arrest Charge	Retrospective Comparison Group Design	Virginia State Police Records

Research Questions and Hypotheses
Figure 5

Research Question Number Two: What are the effects of Classroom and On-the-Job Training, Work Experience and JobShop components on the wage rates and job placement rates of 1982 CETA program trainees?

Hypothesis	Measure	Design	Source
2.1 Participation in Classroom Training increases the wage rates and job placement rates of CETA program trainees.	Difference in mean wages Difference in proportions of individuals employed	Retrospective Comparison Group Design	Virginia Employment Commission
2.2 Participation in On-the-Job Training increases wage rates and job placement rates of CETA program trainees.	Difference in mean wages Difference in proportions of individuals employed	Retrospective Comparison Group Design	Virginia Employment Commission
2.3 Participation in Work Experience increases the wage rates and job placement rates of CETA program trainees.	Difference in mean wages Difference in proportions of individuals employed	Retrospective Comparison Group Design	Virginia Employment Commission
2.4 Participation in JobShop increases the wage rates and job placement rates of CETA program trainees.	Difference in mean wages Difference in proportions of individuals employed	Retrospective Comparison Group Design	Virginia Employment Commission
2.5 Program trainees less than twenty-two years old at registration will have different wage rates and job placement rates than older trainees for each CETA Component.	Difference in mean wages Difference in proportions of individuals employed	Factorial Design	Virginia Employment Commission

Figure 5 - Continued

Research Question Number Two: What are the effects of Classroom and On-the-Job Training and Work Experience components on the wage and job placement rates of 1982 CETA program terminees?

Hypothesis	Measure	Design	Source
2.6 Program terminees with less than twelve years of education will have different wage rates and job placement rates than terminees who were high school graduates for each CETA component.	Difference in mean wages Difference in proportions of individuals employed	Factorial Design	Virginia Employment Commission
2.7 Program terminees who secure unsubsidized employment upon termination will have different wage rates and job placement rates than terminees experiencing non-positive terminations for each CETA component.	Difference in mean wages Difference in proportions of individuals employed	Factorial Design	Virginia Employment Commission
2.8 Black program terminees will have different wage rates and job placement rates than white terminees for each CETA component	Difference in mean wages Difference in proportions of individuals employed	Factorial Design	Virginia Employment Commission
2.9 Female program terminees will have different wage rates and job placement rates than male terminees for each CETA component.	Difference in mean wages Difference in proportions of individuals employed	Factorial Design	Virginia Employment Commission

Figure 5 - Continued

Research Question Number Three: What is the effect of CETA on the arrest rates of 1982 CETA program terminées?

Hypothesis	Measure	Design	Source
3.1 Participation in the CETA Program reduces the arrest rates for murder, felonious assault, robbery, burglary, larceny, motor theft and drug law violations for program terminées.	Difference in proportions of individuals arrested	Retrospective Comparison Group Design	Virginia State Police Records and Statistics-Superintendent's Office
3.2 Participation in the CETA Program reduces arrest rates for terminées in each CETA component.	Difference in proportions of individuals arrested	Factorial Design	Virginia State Police Records and Statistics-Superintendent's Office

Figure 5 - Continued

Additional Evaluation Questions	Measure	Source
1. What were the characteristics of 1982 CETA clients? What were the characteristics of 1982 CETA termines? What were the characteristics of 1982 CETA termines who secured employment upon termination?	Sex, age, education, family status, race/ethnic group, veteran, labor force status, offender, economic status and handicapped	Quarterly Summary of Participant Characteristics
2. What was the proportion of 1982 CETA termines who terminated positively? What was the proportion of 1982 CETA termines who secured unsubsidized employment?	Employment Activity	Quarterly Summary of Participant Characteristics
3. What was the average number of weeks that the CETA Sample Group were unemployed before applying for the program? What were the average number of weeks that the Comparison Group were unemployed before applying for the program?	Employment Activity	Participant Intake Form
4. What was the average number of months CETA clients participated in the program?	Program Activity	Participant Intake Form Participant Termination Form
5. What were the characteristics of the CETA Sample Group? What were the characteristics of the Comparison Group?	Age, sex, education, race/ethnic group, jurisdiction, labor force status, previous CETA wages, handicapped, offender and family status	SPSS Condescriptive and Frequencies programs

Additional Evaluation Questions
Figure 6

research design. The research questions and their respective hypotheses are as follows:

Research Question Number One:

What is the effect of CETA on the amount of transfer payments and other government subsidies and tax contributions of program terminees?

Hypothesis Number One:

Participation in the CETA program reduces the amount of government transfer payments received by program terminees.

Hypothesis Number Two:

Participation in the CETA program increases the amount of taxes paid by terminees during and after program termination.

Hypothesis Number Three:

Participation in the CETA program reduces the amount of criminal justice costs for program terminees.

Research Question Number Two

What are the effects of Classroom and On-the-Job Training, Work Experience, and JobShop components of CETA on the wage rates and job placement rates of 1982 program terminees?

Hypothesis Number Four:

Participation in Classroom Training increases the wage rates and job placement rates of CETA program terminees.

Hypothesis Number Five:

Participation in On-the-Job Training increases the wage rates and job placement rates of 1982 CETA program terminees.

Hypothesis Number Six:

Participation in Work Experience increases the wage rates and job placement rates of CETA program terminees.

Hypothesis Number Seven:

Participation in JobShop increases the wage rates and job placement rates of CETA program terminees.

Hypothesis Number Eight:

Program terminees less than twenty-two years old at registration will have different wage rates and job placement rates than older terminees for each CETA component.

Hypothesis Number Nine:

Program terminees with less than twelve years of education will have different wage rates and job placement rates than terminees who are high school graduates for each CETA

component.

Hypothesis Number Ten:

Program terminees who secure unsubsidized employment immediately upon termination will have different wage rates and job placement rates than terminees experiencing non-positive terminations for each CETA component.

Hypothesis Number Eleven:

Black program terminees will have different wage rates and job placement rates than white terminees for each CETA component.

Hypothesis Number Twelve:

Female program terminees will have different wage rates and job placement rates than male terminees for each CETA component.

Research Question Number Three

What is the effect of CETA on the arrest rates of 1982 CETA terminees?

Hypothesis Number Thirteen:

Participation in CETA reduces the arrest rates for murder, felonious assault, robbery, burglary, larceny, motor theft

and drug law violations for program terminees.

Hypothesis Number Fourteen:

Participation in the CETA program reduces arrest rates for terminees for each CETA Component.

Research Design

An effective evaluation strategy should establish an impact model to illustrate the causal relation of a manpower program.¹ The impact model for the study had four components: (1) target group; (2) intervention; (3) effects; and (4) research design. The target group was 1982 CETA terminees; the intervention was CETA participation in Classroom and On-the-Job Training, Work Experience, and JobShop; and the effects were performance on impact measures. The research design examined the cause-and-effect relationship between these CETA program activities and performance measures by controlling for rival explanations or confounding variables. Of primary concern to the evaluation was the establishment of sound impact measures which are supported by the literature and accurately describe program effects. The impact measures identified for Research Question Number One, which include government transfer payments and tax contributions of the sample, facilitate a cost-benefit analysis and were

confirmed by the following sources:

1. National Supported Work Demonstration Program - Cost/Benefit Analysis; ²
2. Three follow-up evaluations of the Job Corps; ³
3. Cost-Benefit Analysis of the CETA Public Service Employment Program; ⁴
4. U.S., General Accounting Office; ⁵
5. National Council on Employment Policy; and ⁶
6. Broward Employment and Training Administration. ⁷

The two impact measures supporting Research Question Number Two, which described the effect of Classroom Training, On-the-Job Training, Work Experience and JobShop, included: (1) wages rates and (2) job placement rates. Since the National Commission for Employment Policy indicated that the major purpose of employment and training programs is to increase participant earnings, wage rates should be considered a valid impact measure. ⁸ The Department of Labor provided criteria to evaluate Classroom Training which included job placement rates for terminees confirming the use of the second impact measure for Research Question Number Two. ⁹ Additional support for the measuring criteria included:

1. An evaluation of the Work Incentive Program which included job entries as a performance measure; ¹⁰
2. A Joint Legislative Audit and Review Commission for the Commonwealth of Virginia provided an

indicator which measured the success of the CETA program as the rate participants are placed in unsubsidized jobs. ¹¹

3. Borus stated that previous indicators used to measure performance of CETA programs included placement rates and wage rates. ¹²

For Research Question Number Three, which describes the CETA effect on arrest rates, proportions of individuals arrested provided an accurate measure of performance. The LIFE Program, ¹³ National Supported Work, ¹⁴ and Job Corps ¹⁵ used arrest rates to measure program impact on criminal activities. As stated above, the Department of Labor conducted a three year pilot study in 1978 to assess the non-economic effects of the Job Corps. Results indicated that proportions of individuals arrested provided an accurate description of program impact. ¹⁶ In 1977, the Employment and Training Administration provided an overview of the evaluation requirements to assess a CETA program targeted for offenders. The report identified the number of arrests as a measuring criteria for manpower program evaluations. ¹⁷

After reviewing CETA legislation and related literature, the management of the Peninsula Office of Manpower Programs confirmed that wage rates, job placement rates, and arrest rates are valid measures of impact for the Peninsula CETA Program. These measures of program impact are consistent with the intentions of the evaluation

and the needs of the manpower agency. Intermediate impact measures such as increased wages at placement and increased numbers of positive placements were rejected because they are not consistent with CETA's ultimate objective to secure unsubsidized employment for its participants. For example, if a significant number of participants secured temporary employment, this intermediate impact measure may indicate positive results even when high proportions of the participants were unemployed three months following termination.

To illustrate the effect of the CETA program on those who participate, it becomes necessary to determine what the participants would have done in the absence of the program. A valid research design should include the selection of a Comparison Group of non-participating individuals similar to those who received CETA funds. Borus indicated that an appropriate Comparison Group for manpower evaluations could consist of individuals who applied to the program and were deemed qualified but did not enter.¹⁸ To describe the effects of Classroom Training, On-the-Job Training, Work Experience, and JobShop, the program benefits of the cost-benefit analysis, and the effect of CETA on arrest rates, this research design was appropriate. A CETA Technical Assistance Document indicated:¹⁹

Earning patterns of participants may be compared to those of similar Control or Comparison Groups of non-participants, and the net effect can be attributed to the program. Findings for participants may be generalized to the target group

in a form of a probability statement.

Crane examined designs of social experiment evaluations and stated that generally the findings of the research projects are differences among samples drawn from specific populations. These differences are inferred upon target populations with specific levels of statistical confidence.²⁰ The retrospective Comparison Group design indicates differences in performance measures which are a result of the CETA program. The causal relation between CETA intervention and program effects is formally established by examining these differences.

A random sample technique developed by Fitz-Gibbon and Morris²¹ was used to select 217 individuals who participated in Classroom or On-the-Job Training or Work Experience or JobShop and terminated the respective program in 1982. Since the target population for the study is 694 participants who terminated CETA in 1982, a sample of 217 will provide results at a ninety-five percent level of confidence. The non-participants, the Comparison Group, consisted of all eligible individuals who applied for CETA in 1982 and could not be placed. Records of the Peninsula Office of Manpower Programs indicated that 180 individual files existed for this purpose. The data on the performance measures in Research Question Number One expedited a cost-benefit analysis for CETA. Program benefits included differences between the tax contributions, criminal justice costs, and transfer

payments of the CETA and Comparison Groups. The cost-benefit analysis compared government costs and program benefits.

To describe the effects of client characteristics on the employment opportunities of the sample, the retrospective Comparison Group design described above was used with the same sample of CETA terminees and the Comparison Group. The major deviation from the original design was that age, education, termination status, ethnic group, sex, and program activity were introduced as independent variables in the design to generate Analysis of Variance Matrix or Factorial Designs. Rutman identified a need to separate program components in the impact model and measure them individually according to their respective goals and objectives. This procedure is a viable strategy for assessing the impact of large governmental programs including CETA. "Factorial designs and statistical techniques are available for estimating the effectiveness of each component as well as the effects of a combination of components." ²² According to Scanlon, et.al., evaluation designs should establish groupings where difference in performance is anticipated. ²³ The literature review indicates that program activity, sex, age, education, termination status, and ethnic group are legitimate groupings in the design of a manpower evaluation.

Since the Retrospective Comparison Group Design used

program terminees from an earlier period, current data illustrates the long-term program effects instead of short-term effects which may contradict CETA's ultimate objective to secure unsubsidized employment for its participants. In most cases, employment data was collected three to nine months following termination. Since retrospective studies do not require waiting for a post-program period to occur prior to data collection, results were provided faster which met the time requirements of the study. A problem with retrospective studies is that response error increases as time causes memory lapses altering perceptions of past attitudes. To compensate for this deficiency, the research design used a data collection procedure which does not rely upon memory and human error. Since the data sources are government records instead of personal interviews and questionnaires which rely upon memory, human error was eliminated. A Technical Assistance Guide published by the Department of Labor confirmed the use of this strategy and cautioned that self-reporting on criminal offenses could be an unreliable information source. ²⁴

Another confounding factor controlled by the Retrospective Comparison Group Design is statistical regression. Since the sample represents individuals with a history of limited job opportunities, their employment histories can only improve which represents a regression towards the mean. Since each member of the Comparison

Group is also eligible for CETA funds and since the differences between the CETA Group and Comparison Groups represents impact, the design controls for statistical regression.

High unemployment rates and government actions such as the extension of unemployment insurance could distort program impact measures. Since these events and other historical events occurred equally to the CETA and the Comparison Group, their impact on program performance measures are controlled. Since maturation occurred to both groups, it cannot be considered as an alternative explanation.

Since pre-testing did not occur to either groups, it also cannot be considered a valid alternative explanation. Since the research design includes a random sample from the target population which receives treatments for all members, reactive effects of experimental arrangements and interaction of selection and experimental treatment are not considered threats to external validity. Other threats to external and internal validity are not considered appropriate. While the random selection of the CETA sample controls most internal validity questions, the major contribution of this design is the control of labor market forces which could jeopardize evaluation validity.

Since the research design examines the variables which the literature suggests influence manpower program impact, including program activity, age, sex, ethnic group,

termination status and education, this retrospective Comparison Group approach appears valid. Two other factors influenced the selection of this evaluation design:

1. High costs of longitudinal studies prompted the use of the retrospective Comparison Group design and the cost-benefit analysis as viable alternative research designs; and
2. Since the design does not randomize potential clients into Control Groups, disadvantaged individuals are not denied services which may avoid serious political implications.

The additional evaluation questions (Figure 6) which describe the client characteristics of the 1982 applicants and review the employment activity of the Sample required sorting data files maintained by the Peninsula Office of Manpower Programs. The quarterly summary reports described below were consolidated to provide descriptive data for the 1982 CETA clients.

Methods of Gathering Data

Data Sources

The primary and secondary data sources which described the client demographic characteristics to facilitate the introduction of independent variables into the research design were as follows:

1. Participant Intake Form;
2. Supplement to Intake/Application Form;
3. Follow-up Record;
4. CETA Program Status Summary;
5. Quarterly Summary of Participant Characteristics;
6. CETA Financial Status Report; and
7. Participant Termination Form.

The Participant Intake Form indicates the appropriate demographic characteristics of individuals and is completed by all prospective CETA clients. The information includes: (1) name; (2) address; (3) social security number; (4) date of birth; (5) current occupation; (6) family status; (7) economic status; (8) eligibility for public assistance; (9) educational status; (10) sex; and (11) offender determination. The Supplemental Intake/Application Form which is completed during the client's first interview with an intake counselor provides family income data and work histories. The Follow-up Record procedures, which are interviews conducted every thirty days for five months following termination, illustrates individual employment activity. The interviews are conducted only for clients who enter employment at termination; therefore, CETA participants who secure jobs after their termination date are not included in the follow-up procedures.

The CETA Program Status Summary is a quarterly plan of enrollments and terminations for the total program and the various activities undertaken. The Quarterly Summary of

Participant Characteristics indicates a breakdown of total enrollment, terminations, and terminations entering employment by client characteristics which include sex, age, education status, public assistance status, economic status, family status, race/ethnic group, veteran group, labor force status, and offender determination. The CETA Financial Status Report illustrates total expenditures by program activity during a fiscal year.

The Participant Termination Form indicates the client's reason for leaving a program, appropriate employer data for individuals who enter unsubsidized employment and public assistance eligibility. The Termination Form provides job placement rates for the target population of CETA terminees which is a performance measure identified in the research design.

Data Collection Procedures

Data was collected from several governmental agencies providing services to Hampton, Newport News, Williamsburg, Poquoson, York County and James City County. The Virginia Employment Commission, Social Security Administration, and the Virginia State Police provided wage and unemployment histories, social security income records, and criminal histories for all jurisdictions. While Public Housing Authorities and Community Development Agencies provided client housing and rent subsidy data, Social Service

Agencies generated government transfer data for each appropriate jurisdiction. Figure 7 illustrates the information required to generate the research data by the respective organizations. The implications of this data collection strategy are as follows:

1. Data is more accurate;
2. Response rate is not a negative factor inhibiting data reliability and validity;
3. Low cost allows for a larger sample to be selected;
4. After data collection procedures are established, annual evaluations may be generated with minimal effort; and
5. Evaluation design may be applied to other public service agencies using the same data collection procedures at low cost.

Borus has indicated that problems with interviews and questionnaires are high costs and low response rates. Borus also stated that these data collection strategies are time consuming and public service agencies may be able to provide the information in a more timely manner.²⁵ With regard to criminal histories, the Department of Labor indicated that self-reporting data collection strategies including interviews and questionnaires may be an unreliable information source.²⁶

Agency	Information Required to Generate Data	Data
1. Virginia Employment Commission	Name, Social Security Number, Participant Intake Forms, Letter of Explanation, and Privacy Action Certification	Wage and Unemployment Insurance Histories
2. Newport News, Housing Authority, Williamsburg Redevelopment and Housing Authority, Hampton Public Housing Authority.	Name, Social Security Number, Address	Housing Subsidies
3. Newport News Community Development Agency, Hampton Redevelopment Agency, James City County Community Development Agency, York County Housing Office, Poquoson City Manager's Office.	Name, Social Security Number, Address	Rent Subsidies
4. Newport News Social Services, Hampton Social Services, Williamsburg Social Services, James City County Social Services, York County Social Services.	Name, Social Security Number	Government Transfer Payments
5. Social Security Administration	Name, Social Security Number, Address	Supplemental Social Security Records
6. Department of Virginia State Police	Name, Sex, Race, Date of Birth	Criminal Histories

Data Sources
Figure 7

Human Subject Confidentiality

Since masked data was collected from the Virginia State Police, Housing Authorities, and Social Services, only the individual data indicating employment histories and unemployment insurance information from the Virginia Employment Commission (VEC) required a method of coding to maintain confidentiality. Since the identity of human subjects serves no useful purpose for the study, the original VEC records were destroyed after demographic data such as age, sex, and education were matched with VEC records and names and social security numbers were substituted with numbers. This process had no effect on the statistical analysis of the project. After this process was completed, all data was properly masked to secure the confidentiality of the individual records.

Analysis of Results

For the cost-benefit analysis (Research Question Number One), public agencies provided aggregate data which included the total number of individuals receiving aid and the total dollar value of the aid for each measure. The data included a breakdown between the CETA Group and the Comparison Group. Since the aggregate data did not provide the descriptive statistics required for testing statistical significance and since the only purpose of the statistical

tests in the cost-benefit analysis would be to confirm which measure should be considered, the means for each measure was not tested for statistical significance. The literature indicated that all measures which influence manpower program results should be included in the design.²⁷ Dymond stated that cost-benefit analyses must emphasize relationships with all variables influencing manpower program results.²⁸

Program benefits included the differences between the CETA Group and the Comparison Group for all measures identified in the cost-benefit analysis. The benefits were prorated on a yearly basis to indicate the annual dollar value of taxpayer benefits generated from the 217 CETA terminees. The ideal methodology to generate program training costs for these 217 clients should be based upon actual individual data; unfortunately, this data was not available. To compensate for this deficiency, average training cost per participant was calculated on a monthly basis to indicate program costs.

For the purpose of this study, the cost-benefit analysis used the Net Benefits Index Technique. The first step was the discounting of projected benefits into 1982 dollar values. Comparison of the present value of the benefits with program costs generated the cost-benefit relationship of the Net Benefits Index Technique. The discount rates used in the study were five and ten percent, as benefits were projected for a five and ten year time

period. While the use of a sensitivity analysis was considered, the limited scope of the research design restricted its potential value.

The two performance measures for Research Question Number Two which described the CETA effect on job opportunities included: (1) wage rates; and (2) job placement rates. The difference in the mean wages of the CETA and Comparison Groups provided one measure of program impact. The Analysis of Variance, T-Test and Multiple Regression Analyses tested the statistical difference of the mean wages by program activity and client characteristic, and determined the probability that the observed differences were due to chance. If the probability does not exceed five percent and a ninety-five percent level of confidence is achieved, results may be generalized to the target population of 1982 program terminees.

The job placement rates were proportions of individuals securing unsubsidized employment in the CETA Sample and the Comparison Group. The difference in these proportions provided another measure of program impact for Research Question Number Two. The chi square statistic determined the probability that the observed differences were due to chance and a ninety-five percent level of confidence was achieved. Figure 8 indicates the independent and dependent variables for each research hypothesis requiring analysis and the respective test of

Hypothesis	Independent Variables	Dependent Variables	Statistical Measure
2.1 Participation in Classroom Training increases the wage rates and the job placement rates of CETA program trainees.	1. CETA Classroom Training	1. Wage Rates 2. Job Placement Rates	1. Analysis of Variance 2. Chi-Square 3. T-Test
2.2 Participation in On-the-Job Training increases the wage rates and job placement rates of CETA program trainees.	1. CETA On-the-Job Training	1. Wage Rates 2. Job Placement Rates	1. Analysis of Variance 2. Chi-Square 3. T-Test
2.3 Participation in Work Experience increases wage rates and job placement rates of CETA program trainees.	1. CETA Work Experience	1. Wage Rates 2. Job Placement Rates	1. Analysis of Variance 2. Chi-Square 3. T-Test
2.4 Participation in Job Shop increases wage rates and Job Placement rates of CETA program trainees.	1. CETA JobShop	1. Wage rates 2. Job Placement Rates	1. Analysis of Variance 2. Chi-Square 3. T-Test
2.5 Program trainees less than twenty-two years old at registration will have different wage rates than older trainees for each CETA component.	1. CETA Classroom Training 2. CETA On-the-Job Training 3. CETA Work Experience	1. Wage Rates 2. Job Placement Rates	1. Analysis of Variance 2. Chi-Square 3. T-Test 4. Multiple Regression Analysis
2.6 Program trainees with less than twelve years of education will have different wage rates and job placement rates than trainees who were high school graduates for each CETA component.	1. CETA Classroom Training 2. CETA On-the-Job Training 3. CETA Work Experience 4. Client Education	1. Wage Rates 2. Job Placement Rates	1. Analysis of Variance 2. Chi-Square 3. T-Test 4. Multiple Regression Analysis

Statistical Measures
Figure 8

Hypothesis	Independent Variables	Dependent Variables	Statistical Measure
2.7 Program trainees who secure unsubsidized employment immediately upon termination will have different wage rates and job placement rates than trainees experiencing non-positive terminations for each CETA component.	1. CETA Classroom Training 2. CETA On-the-Job Training 3. CETA Work Experience 4. Client Termination Status	1. Wage Rates 2. Job Placement Rates	1. Analysis of Variance 2. Chi-Square 3. T-Test 4. Multiple Regression Analysis
2.8 Black program trainees will have different wage rates and job placement rates than white trainees for each CETA component.	1. CETA Classroom Training 2. CETA On-the-Job-Training 3. CETA Work Experience 4. Client Ethnic Group	1. Wage Rates 2. Job Placement Rates	1. Analysis of Variance 2. Chi-Square 3. T-Test 4. Multiple Regression Analysis
2.9 Female program trainees will have different wage rates and job placement rates than male trainees for each CETA component.	1. CETA Classroom Training 2. CETA On-the-Job Training 3. CETA Work Experience 4. Client Sex	1. Wage Rates 2. Job Placement Rates	1. Analysis of Variance 2. Chi-Square 3. T-Test 4. Multiple Regression Analysis

Figure 8 - Continued

statistical significance. To obtain distribution data on the variables in the study, descriptive data was generated for the entire sample, the CETA Sample, and the Comparison Group, respectively.

For Research Question Number Three, which described the CETA effect on criminal activities, the Virginia State Police provided masked data including the criminal records of the CETA Sample and Comparison Group. The masked data prohibited the introduction of independent variables such as program activity, sex, race, age, education, and termination status into the research design. Since the masked data does not provide the descriptive data required for testing significance, the proportions of arrest rates were not tested for statistical significance.

The data requirements for the additional evaluation questions which describe the client characteristics and employment activity of the CETA applicants are included in the Quarterly Summary of Participant Characteristics, Participant Intake Form, Participant Termination Form, and the descriptive statistics of the CETA Sample and Comparison Group. With one exception, the sample descriptive data, the data was available in the Management Information System of the Peninsula Office of Manpower Programs. Since the data existed in the Management Information System, the analysis for the additional evaluation questions only required simple computer program sorting and minor calculations.

The management staff of the Peninsula Office of Manpower Programs has emphasized a need to summarize the results of the study with graphic illustrations. Charts and tables were constructed to expedite review and facilitate dissemination of the results to state and federal manpower officials. The following tables and charts were considered for the analysis:

1. CETA 1982 expenditures and enrollments for selected program activities;
2. Program costs for CETA sample;
3. CETA effect on unemployment insurance payments;
4. Cost of crime for Comparison Group;
5. Cost for crime for CETA sample;
6. CETA effect on criminal justice costs;
7. CETA effect on tax payments;
8. Monthly transfer payments and enrollments for CETA and Comparison Groups;
9. CETA effect on transfer payments;
10. Program benefits illustrating differences between the Comparison Group and CETA Group;
11. Cost benefit analysis;
12. Comparison of employment activity and program components with appropriate statistics;
13. Comparison of employment activity and client characteristics with appropriate statistics;
14. Characteristics of 1982 CETA clients;
15. Characteristics of 1982 CETA terminees;

16. Characteristics of 1982 CETA terminees who secured employment;
17. Characteristics of CETA sample;
18. Characteristics of Comparison Group;
19. Arrest rates for CETA and Comparison Groups.

While Chapter 3 is a complete description of the research methodology including data analysis strategies, Chapter 4 summarizes the results and provides interpretations to explain the findings of the study. Conclusions and recommendations are reserved for Chapter 5.

FOOTNOTES

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25 Borus, Measuring the Impact of Employment Related Social Programs, pp. 56-57.

26 U.S., Department of Labor, Employment and Training Administration, Employment and Training Programs for Offenders, A Guide for Prime Sponsors Under the Comprehensive Employment and Training Act of 1973 (1972), pp. VII-IX.

27 Canada, Department of Manpower and Immigration and U.S., Department of Labor, Cost-Benefit Analysis of Manpower Policies - The Role of Benefit/Cost Analysis in Formulating Manpower Policy (1969), p. 47.

28 Ibid.

CHAPTER 4

DISCUSSION OF RESULTS

In Chapter Four the selected demographic characteristics of the sample are reviewed and the results of the utilization-focused evaluation and cost-benefit analysis are described. Client demographic data is also provided for the sample of Comprehensive Employment and Training Act (CETA) participants and the Comparison Group. Table 1 provides the demographic data for the entire sample drawn from the population of 1982 applicants and indicates that 80 percent were black and 93 percent were unemployed during the application process. Eleven percent of the sample were previous offenders; the average age was 24.7; and 38 percent were high school dropouts. Two hundred and ninety-five individuals selected for the study were residents of Hampton and Newport News. The remaining 72 individuals were residents of Williamsburg, York County, James City County, or Poquoson.

One hundred and nineteen trainees selected for the study were enrolled in Classroom Training as compared with 29 in On-the-Job Training, 15 in Work Experience, and 47 in JobShop. Seven agencies provided services for the participants during 1982. Sixty-eight individuals

TABLE 1
 DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE
 IN PERCENTAGES
 N=366

<hr/>	
Age	
Less than 22	41
22 or older	59
Sex	
Male	52
Female	48
Race	
Black	80
White	20
Education	
Dropout	38
High School Graduate	62
Handicapped	02
Offender	11
Pre-CETA Labor Force Status	
Unemployed	93
Employed	07
<hr/>	

participated in Peninsula Manpower Skill Center Programs and 42 were provided services by the Newport News Office of Human Affairs. The remaining 100 individuals were enrollees distributed among the Hampton Manpower Services Project, Williamsburg/James City County, Virginia Employment Commission, Thomas Nelson Community College, and JobShop.

In the following sections, the results of the Research Questions are discussed and analyzed. For the cost-benefit analysis (Research Question Number One) and Research Question Number Three, which described the effect of CETA on crime, the results were not statistically analyzed. The descriptive statistics required for testing statistical significance were not provided; however, the results could have policy significance for the Peninsula Office of Manpower Programs. While statistical significance refers to generalizing results from a sample to a specific population in the form of a probability statement, policy significance emphasizes results which the agency considers valid. For example, the effect of Work Experience on job placement rates may not be statistically significant; however, the Peninsula Office of Manpower Programs may consider the results substantial.

Results of the Research Questions and Hypotheses

Research Question Number One

What is the effect of CETA participation on the amount

of transfer payments and other government subsidies and tax contributions of 1982 program terminees?

Hypothesis Number One: Participation in the CETA Program reduces the amount of government transfer payments received by program terminees.

Results:

Table 2 indicates the number of recipients and dollar value of the monthly transfer payments for the CETA sample and the Comparison Group. As shown in Table 2, 11 percent of the terminees in the CETA sample and the individuals selected for the Comparison Group received Aid for Dependent Children. Seventeen percent of the CETA terminees received Food Stamps as compared with 18 percent for the Comparison Group. No one in the sample participated in Child Care, Auxiliary Grants, General Relief, Hospitalization, Transportation Subsidies, Emergency Funds, or Supplemental Security Income. Public Housing Subsidies were distributed to 12 percent of the terminees in the CETA sample and four percent of the individuals selected for the Comparison Group. Public Rent Subsidies were received by six percent in the CETA sample and four percent in the Comparison Group. Since 12 terminees and seven non-participants received unemployment compensation, the proportion of individuals receiving 1983 unemployment compensation was higher for the

TABLE 2
TOTAL AMOUNT OF MONTHLY PUBLIC TRANSFER PAYMENTS FOR CETA SAMPLE AND COMPARISON GROUP
(1983 DOLLARS)

Type of Aid	Number of Participants Receiving Aid	Dollar Value of Payments	Participants Receiving Aid (Percent)
Aid for Dependent Children			
CETA	24	5606	11
Comparison	19	4359	11
Food Stamps			
CETA	36	4751	17
Comparison	32	5716	18
Public Housing			
CETA	25	2443	12
Comparison	4	618	02
Public Rent			
CETA	12	3758	06
Comparison	7	1827	04
Medicaid ^a			
CETA	14		06
Comparison	10		06
Unemployment Insurance ^b			
CETA	12	6158	06
Comparison	7	3613	04

^a Dollar value of Medicaid payments were not available.

^b The 1983 time period for the Unemployment Insurance payments was January to October.

CETA sample than the Comparison Group.

Discussion:

CETA participation did not reduce the amount of government transfer payments for Aid for Dependent Children, Public Housing Subsidies, Public Rent Subsidies, and unemployment compensation. The results indicate that enrollments in these programs were increased by CETA terminees. Only the federal Food Stamp Program recorded a reduction in payments. In most cases, these results were not consistent with the literature. Using a different research design, Nealen stated that public assistance was reduced for CETA participants following termination.¹ Hardin and Borus confirmed that economic benefits of manpower training included reductions in Unemployment Benefits and Welfare payments.² Mathematica Policy Research Corporation stated that participation in the Job Corps reduced the transfer payments of the Corpsmembers.³ An evaluation of the National Supported Work Demonstration Project reported that Aid to Families with Dependent Children, General Assistance, Medicaid, Food Stamps, and Public Housing Subsidies generally decreased for participants.⁴ The Supported Work Evaluation reported that Unemployment Insurance payments increased for program terminees which was consistent with the findings of the study.⁵ The effect of CETA participation on transfer

payments of the 1982 terminees selected for the study was a net loss of \$20,398 annually. Therefore, the results do not support the hypothesis that CETA reduced the amount of government transfer payments received by program terminees.

Interpretations:

Since CETA attracted few recipients of Aid for Families with Dependent Children, substantial reductions in enrollments were not possible. CETA participation represented a loss of benefits and required a full-time work schedule for welfare recipients. Therefore, CETA could not compete with a program which pays individuals not to work. CETA did reduce the Food Stamp payments because recipients could apply for the program without losing their benefits.

Government agencies which distribute housing and rent subsidies inform participants of other public subsidy programs including manpower programs. While the individual amounts of Public Rent and Housing payments may be reduced by CETA participation (subsidies are proportional with family income), the information provided by the programs was responsible for increased CETA enrollments by Public Rent and Housing clients. In most cases, CETA applicants were unemployed for an extended period of time and have exhausted their unemployment benefits. Since some program activities were temporary jobs, participants who did not secure employment upon termination became eligible and applied for

Unemployment Insurance. For the Comparison Group, the individuals remained unemployed and ineligible for the unemployment benefits. The result was an increase in Unemployment Insurance payments for CETA terminees.

Hypothesis Number Two: Participation in the CETA program increases the amount of taxes paid by terminees during and after program participation.

Results:

During the last nine months of 1982 and the first six months of 1983, the average CETA terminee earned \$3,370 as compared with \$2,082 for the individuals selected for the Comparison Group. Since approximately 23 percent of the wages are taxes paid to federal, state, and local governments, the income for the CETA sample represented an additional \$34,720 in taxes during program participation in 1982. Following termination, the CETA sample continued to generate additional tax revenue, \$78,554 annually.

Discussion:

The results indicate a substantial increase in tax revenue and support the hypothesis that CETA participation increased the amount of taxes paid by terminees during and after program participation. The literature, including

Mathematica's Evaluations of the Job Corps ⁶ and the National Supported Work Program ⁷, support these findings.

Interpretations:

Since On-the-Job Training was temporary employment, enrollees paid taxes in 1982 while non-participants remained unemployed. This employment experience was responsible for CETA's positive effect on tax payments during program participation. The results of the study indicate that CETA participation increased the wage rates of the program terminees. As wages increased, additional tax revenue was generated which was proportional to income.

Hypothesis Number Three: Participation in the CETA program reduces the amount of criminal justice system costs for program terminees.

Results:

During 1982, 23 individuals in the Comparison Group were arrested to generate a criminal justice system cost of \$223,183 which increased to \$243,139 in 1983. Twenty-four terminees in the sample were arrested in 1982 generating a criminal justice system cost of \$151,310. For 1983, the criminal justice system costs decreased to \$23,770 for the CETA sample who recorded 10 arrests. Other discussion

related to the effects of CETA participation on arrest rates is reserved for Research Question Number Three.

Discussion:

The results indicate that CETA had a positive impact on criminal justice system costs of the sample, which was consistent with the literature. For example, social benefits from reduced criminal justice system costs were approximately \$8,081 for each Job Corps participant for a four year period.⁸ The Supported Work Evaluation indicated that the social benefit for ex-addicts from reduced crime was \$1,677.⁹ The study concluded that CETA reduced the criminal justice system costs of the 217 terminees by \$72,622 in 1982 and \$219,783 in 1983. The findings support the hypothesis that CETA participation reduced the criminal justice system costs of the program terminees.

Interpretations:

Since the crimes committed by the CETA sample were not as serious as compared with the crimes committed by the Control Group, CETA reduced the criminal justice system costs during program participation. After termination, the major factor influencing the effects of CETA on criminal justice system costs was an increase in the employment

opportunities of the CETA sample which led to a reduction in the arrest rates. While the results of Research Question Number Two indicate that CETA increased employment opportunities of the sample, Research Question Number Three provides evidence of a positive relationship between unemployment and crime. Individuals who are trained will incur high opportunity costs if criminal activity represents a loss of employment. Unemployed individuals who lack basic skills and do not attract perspective employers have nothing to lose. ¹⁰

Cost-Benefit Analysis

The cost-benefit analysis compared taxpayer benefits with the program costs of the 217 terminees. The benefits included CETA impact on transfer payments, criminal justice system costs, and tax revenues. Federal expenditures for the 217 participants were approximately \$1,250,000. Table 3 describes the cost-benefit analysis for the 217 CETA terminees and projects benefits for a five and ten year period using discount rates of five and ten percent. The two major factors influencing the cost-benefit ratios were (1) reduced criminal justice system costs and (2) increased tax revenues of the CETA terminees. While the CETA participants reported an increase in transfer payments, the results did not influence the cost-benefit ratios. With a five percent discount rate, results indicate that the CETA

TABLE 3

COSTS AND BENEFITS FOR 217 CETA PARTICIPANTS
(1982 DOLLARS)

	CETA Effect (1982)	CETA Effect (1983)	5 Year at 5% (1983- 1987)	10 Year at 5% (1983- 1992)	5 Year at 10% (1983- 1987)	10 Year at 10% (1983- 1992)
<u>Benefits</u>						
Reduced Transfer Payments		(20,398)	(79,911)	(125,216)	(63,328)	(78,638)
Increased Tax Payments	34,720	78,554	307,741	482,222	243,881	302,841
Reduced Criminal Justice System Costs ^a	72,622	219,783	861,016	1,349,190	682,896	847,307
TOTAL	107,342	277,939^b	1,088,847	1,706,194	862,897	1,071,510
<u>Costs</u>						
Program Costs for 217 Terminees		(1,259,504)				
<u>Net Value (Benefits Minus Costs)</u>		(874,223)	(63,351)	554,032	(289,265)	(80,652)
<u>Net Benefit Index (Benefits : Costs)</u>		.24	.94	1.48	.74	.92

^a The inflation rates used to convert Criminal Justice System Costs into 1982 dollars was provided by The Federal Reserve Bank located in Richmond, Virginia.

^b The 1982 inflation rate of 6.1 percent was used to convert 1983 dollars into 1982 dollars.

payback period is approximately five years when taxpayer benefits will equal federal expenditures. In ten years, the CETA effect on the 217 terminees will return approximately \$500,000 to the taxpayers.

Research Question Number Two

What is the effect of Classroom Training, On-the-Job Training, Work Experience, and JobShop components on the wage rates and job placement rates of the 1982 CETA program terminees?

Two performance measures were used in Research Question Number Two which required tests of statistical significance: job placement rate and wage rate. To determine the statistical significance of the job placement rates, the chi-square statistic was used throughout the study. For the wage rates of the Classroom Training, On-the-Job Training, Work Experience, and JobShop terminees, T-Tests and Analysis of Variance were conducted independently. Regression Analysis was introduced to complement the results of the T-Test and Analysis of Variance and determine the statistical significance of the wage rates of the demographic subgroups. When the study indicates that the findings are not statistically significant, each statistical measure reported consistent results to support the data analysis.

Hypothesis Number Four: Participation in Classroom Training increases the wage rates and the job placement rates of CETA program terminees.

Results:

During participation, 44 percent of the sample of Classroom Training terminees were less than 22 years of age; 86 percent were black; and 36 percent were dropouts. Sixty-six of the 119 (55 percent) terminees selected for the study were employed in 1983 as compared with 68 of 156 (43 percent) for the Control Group. The chi-square statistic indicated that the difference in job placement rates was statistically significant and may be generalized to the target population with a 95% level of confidence. During the first six months of 1983, the average wage of Classroom Training terminees was \$1,664 as compared with \$1,035 for the Control Group. The T-Test indicated that the difference in the mean wages was statistically significant. ($p \leq .05$) Table 4 describes the CETA effect on wage rates and job placement rates of the sample by program activity.

Discussion:

Classroom Training had a positive effect on the employment opportunities of 1982 terminees. Following termination, participants experienced a substantial increase

TABLE 4
CETA EFFECTS ON WAGE RATES AND JOB PLACEMENT RATES

Program Activity	Total Number (N)	Job Placement Rate (Percent)	Net Effect on Job Placement Rates (percent) (CETA Sample - Comparison Group)	Wages (Mean)	Net Effect on Wages (Mean) (CETA Sample - Comparison Group)
Classroom Training	119	55	12 ^a	1663	630 ^a
On-the-Job Training	29	69	26 ^b	2209	1176 ^a
Work Experience	15	53	10	1308	275
JobShop	47	64	21 ^b	1679	646
Comparison Group	156	43		1033	

^a $p \leq .05$

^b $p \leq .01$

in wages and were less likely to be unemployed. During the first six months, 1982 terminees nearly doubled the earnings of the Comparison Group. These results are consistent with national studies. Taggart reported "that wage increases relevant to a Comparison Group for Classroom Training was \$347 in the first post-program year." ¹¹ The Office of Research and Evaluation concluded that 1976 Classroom Training participants experienced wage gains of \$347 and \$442 for the first two years following termination. ¹² The results of the study indicate that the Classroom Training earning gains of the Peninsula Office of Manpower Programs doubled the earning gains reported by the Office of Research and Evaluation. ¹³ Also, the results support the hypothesis that participation in Classroom Training increases the wage and job placement rates of the program terminees.

Interpretations:

Classroom Training enhanced motivation and represented a substantial investment by the participant. Several weeks of training yield high opportunity costs which can only be returned by securing employment. Since Classroom Training programs of the Peninsula Office of Manpower Programs emphasized job placement and since placement in unsubsidized employment upon termination was the major factor influencing job placement and wage rates in the study, the program had a positive impact upon terminees. The management staff

supported this theory as training efforts which reported low placement rates were replaced by the more successful programs. The implications were higher placement rates and improved performance. Level of education was a factor which influenced program results. High school graduates in Classroom Training had higher job placement and wage rates than dropouts and represented 64 percent of the sample.

Hypothesis Number Five: Participation in On-the-Job Training increases the wage rates and job placement rates of 1982 CETA program terminees.

Results:

During participation, 76 percent of the sample of On-the-Job Training terminees secured employment upon termination; 79 percent were male; and 72 percent were black. Twenty of the 29 (68 percent) terminees selected for the study were employed in 1983 as compared with 68 of 156 (43 percent) for the Control Group. The chi-square statistic indicated that the difference in job placement rates was statistically significant and may be generalized to the target population with a 99 percent level of confidence. During the first six months of 1983, the average earnings of the On-the-Job Training terminees was \$2,209 as compared with \$1,033 for the Control Group. The T-Test indicated that the difference in mean wages was

statistically significant. ($p \leq .05$)

Discussion:

On-the-Job Training had a positive effect on the employment opportunities of the 1982 terminees. During the first six months of 1983, terminees doubled the earnings of the Comparison Group and were less likely to be unemployed. These results are consistent with the literature including national evaluation studies. For example, Taggart reported "that wage increases relevant to a Comparison Group for On-the-Job Training was \$839 in the first post-program year." ¹⁴ The Office of Research and Evaluation reported that On-the-Job Training participants experienced wage gains of \$574 for the second year following termination. ¹⁵ The results of this study indicate that On-the-Job Training earning gains of the Peninsula Office of Manpower Programs exceeded the earning gains reported by the Office of Research and Evaluation. ¹⁶ Also, the results support the hypothesis that participation in On-the-Job Training increases the wage and job placement rates of the program terminees.

Interpretations:

On-the-Job Training places an individual in a job and reimburses 50 percent of the wages to the employer for a

specific time period. After termination, the program anticipates that employment will continue and emphasizes job placement as a performance measure. The reimbursement eliminates some financial risks and enhances an employer's capacity to expand job opportunities. As individuals demonstrate their skills, the perspective employer may evaluate job performance for an extended period of time prior to a formal commitment which may represent a substantial loss. This working arrangement was responsible for a high job placement rate and the success of the program.

Hypothesis Number Six: Participation in Work Experience increases the wage rates and job placement rates of CETA program terminees.

Results:

During participation, 67 percent of the sample of Work Experience terminees were not placed upon termination; 73 percent were 22 years of age or older; 80 percent were female; 67 percent were black; and 87 percent were high school graduates. Eight of the 15 (53 percent) terminees selected for the study were employed in 1983 as compared with 68 of 156 (43 percent) for the Control Group. During the first six months of 1983, the average earnings of the Work Experience terminees was \$1,308 as compared with \$1,033

for the Control Group. The differences in job placement rates and mean wages were not statistically significant.

Discussion:

While the descriptive statistics indicate that Work Experience had a positive effect on wage rates and job placement rates of the sample, the results were not statistically significant and cannot be generalized to the target population of 1982 terminees. The findings were consistent with the literature. The Office of Research and Evaluation reported that Work Experience participants did not experience wage gains for the first two years following termination.¹⁷ The results do not support the hypothesis that Work Experience participation increases the job placement and wage rates of program terminees.

Interpretations:

As a response to high unemployment, Work Experience programs created temporary jobs in the public sector. Since job placement was not a performance measure, 67 percent of the Work Experience sample were not placed upon termination. Low placement rates upon termination were a major factor influencing the poor job placement and wage rates of the Work Experience sample. While Classroom Training enhanced motivation and On-the-Job Training recorded high placement

rates, Work Experience participants were conducting menial office tasks in government offices. Public sector management would not train temporary employees for positions which enhanced motivation, personal growth, and career development. In some cases, the Work Experience programs failed to provide incentives for individuals to continue in the labor force.

Hypothesis Number Seven: Participation in JobShop increases the wage rates and the job placement rates of CETA program terminees.

Results:

During participation in the JobShop program, 66 percent of the sample of JobShop terminees were high school graduates; 94 percent were black; and 75 percent were 22 years of age or older. Thirty of the 47 (64 percent) terminees selected for the study were employed in 1983 as compared with 68 of 156 (43 percent) for the Control Group. The chi-square statistic indicated that the difference in the job placement rates was statistically significant and may be generalized to the target population with a 99 percent level of confidence. During the first six months of 1983, the average earnings of the JobShop terminees was \$1,679 as compared with \$1,033 for the Control Group. The difference in mean wages was not statistically significant.

Discussion:

JobShop had a positive effect on the employment opportunities of the 1982 terminees. Following termination, participants experienced a substantial increase in wages and were less likely to be unemployed. During the first six months of 1983, terminee wages exceeded the Comparison Group wages by 62 percent. Since the literature and national studies have not isolated the effects of the JobShop, the results cannot be compared with other manpower evaluations. The results support the hypothesis that participation in JobShop increases the job placement and wage rates of the sample.

Interpretations:

As with Classroom and On-the-Job Training, the management staff of the Peninsula Office of Manpower Programs emphasized job placement to measure the performance of JobShop. The implications were higher job placement rates and improved performance. Since a component of the program was designed exclusively to improve job placement skills, JobShop enhanced the employment opportunities of the program terminees.

Hypothesis Number Eight: Program terminees less than 22 years old at registration will have different wage rates and

job placement rates than older terminees for each CETA component.

Results:

For Classroom Training, 62 percent of the terminees who were less than 22 years of age were employed in 1983; 51 percent of the older terminees were employed during this same time period. During the first six months of 1983, average earnings of the younger terminees was \$1,744 as compared with \$1,600 for the older terminees. Differences in mean wages and job placement rates were not statistically significant.

For On-the-Job Training, 67 percent of the terminees who were less than 22 years of age were employed in 1983; 33 percent of the older terminees were employed during this same time period. During the first six months of 1983, average earnings of the younger terminees was \$1,722 as compared with \$2,732 for the older terminees. Differences in mean wages and job placement rates were not statistically significant.

For Work Experience, 75 percent of the terminees who were less than 22 years of age were employed in 1983; 46 percent of the older terminees were employed during the same time period. During the first six months of 1983, average earnings of the younger participants was \$1,400 as compared with \$1,276 for the older terminees. Differences in mean

wages and job placement rates were not statistically significant.

For JobShop, 75 percent of the terminees who were less than 22 years of age were employed in 1983; 60 percent of the older terminees were employed during the same time period. During the first six months of 1983, average earnings of the younger terminees was \$1,387 as compared with \$1,780 for the older terminees. Differences in mean wages and the job placement rates were not statistically significant. Table 5 describes the effects of CETA on the wage rates and job placement rates by client characteristic and termination status for each program activity.

Discussion:

For each program activity, the results indicate that younger terminees had higher placement rates than the older participants. Placement rates of the On-the-Job Training and Work Experience participants who were less than 22 years of age exceeded the placement rates of the older terminees by 34 percent and 29 percent, respectively. In some cases, the wage data did not support the job placement data. For example, On-the-Job Training and JobShop terminees who were 22 years of age or older reported higher earnings and lower job placement rates than the younger terminees. The results suggest that the young terminees were more likely to be employed but at lower wage rates as compared with the older

TABLE 5
THE EFFECTS OF CETA ON THE WAGE RATES AND JOB PLACEMENT RATES BY CLIENT CHARACTERISTIC AND TERMINATION STATUS

	Classroom Training Employed Wages (Percent) (Mean) (N=119)		On-the-Job Training Employed Wages (Percent) (Mean) (N=29)		Work Experience Employed Wages (Percent) (Mean) (N=15)		JobShop Employed Wages (Percent) (Mean) (N=46)		CETA Sample Employed Wages (Percent) (Mean) (N=210)		Comparison Group Employed Wages (Percent) (Mean) (N=156)	
<u>Age</u>												
Less than 22 years of age	62	1744	67	1722	75	1400	75	1387	65	1672	40	794
22 years or older	51	1600	33	2732	46	1276	60	1780	55	1746	47	1218
Difference	11	144	34	1010	29	124	15	393	13	74	7	424
<u>Education</u>												
High School Dropout	46	1362	69	2681	50	941	56	1710	53	1657	46	982
High School Graduates	61	1833	69	1825	54	1365	68	1664	62	1748	42	1070
Difference	15	471	0	856	4	424	12	46	9	91	4	88
<u>Race</u>												
Black	52	1425	62	2091	50	1091	64	1787	56	1575	43	1009
White	77	3091	88	2521	60	1745	67	115	76	2478	46	1100
Difference	25	1666 ^b	26	430	10	654	3	1672 ^b	20 ^a	903 ^a	3	91
<u>Sex</u>												
Male	56	1776	70	2350	67	1888	55	1191	59	1794	53	1236
Female	55	1559	67	1672	50	1164	70	2042	59	1643	32	778
Difference	1	217 ^a	3	678	17	724	15	851	0	151	21 ^b	458
<u>Termination Status</u>												
Secured employment at Termination	78	2765	68	2560	80	2715	68	2274	74	2610		
Non-Positive Termination	42	991	71	1106	40	606	63	1324	48	1042		
Difference	36	1174 ^b	3	1454 ^a	40	2109 ^a	5	950	26 ^b	1568 ^b		

^a $P \leq .05$

^b $P \leq .01$

terminees. The results support the hypothesis that age influenced the wage rates and job placement rates of the CETA participants.

Interpretations:

During the past few years, the management staff of the Peninsula Office of Manpower Programs has emphasized program activities to reduce high youth unemployment rates. The implications have been higher placement rates for younger terminees. Lack of work experience explains the low wage rates reported by the younger terminees in the study. In most cases, these participants do not have prior experience which could qualify them for higher salaries. Older terminees have additional practical work experience which justifies higher wages. Youth, who are trained and require less wages, attract perspective employers. The results of On-the-Job Training support this theory and indicate that youth recorded high placement rates at low salaries.

Hypothesis Number Nine: Program terminees with less than 12 years of education will have different wage rates and job placement rates than terminees who are high school graduates for each CETA component.

Results:

For Classroom Training, 46 percent of the high school dropouts and 61 percent of the graduates were employed during 1983. During the first six months of 1983, average earnings of the dropouts was \$1,362 as compared with \$1,833 for the graduates. Differences in mean wages and job placement rates were not statistically significant.

For On-the-Job Training, 69 percent of the high school dropouts and 69 percent of the graduates were employed during 1983. During the first six months of 1983, average earnings of the dropouts was \$2,681 as compared with \$1,825 for the graduates. Differences in mean wages and job placement rates were not statistically significant.

For Work Experience, 50 percent of the dropouts and 54 percent of the graduates were employed during 1983. During the first six months of 1983, average earnings of the dropouts was \$941 as compared with \$1,364 for the graduates. Differences in mean wages and job placement rates were not statistically significant.

For JobShop, 56 percent of the dropouts and 68 percent of the graduates were employed during 1983. During the first six months of 1983, average earnings of the dropouts was \$1,710 as compared with \$1,664 for the high school graduates. Differences in mean wages and job placement rates were not statistically significant.

Discussion:

For Classroom Training, high school graduates experienced higher placement rates and wage rates as compared with dropouts. The graduate/dropout wage differential for Classroom Training terminees was consistent with the literature. Sawhney, Jantzen, and Hernstadt stated that wage benefits were positively related to the level of education.¹⁸ For On-the-Job Training terminees, the results were different; dropouts earned more than graduates during the first six months of 1983. The job placement and wage rates of dropouts in On-the-Job Training were higher than the rates of the participants in other program activities including high school graduates. Therefore, On-the-Job Training was an effective response to the high unemployment rates of high school dropouts. The results support the hypothesis that level of education influenced the job placement and wage rates of program terminees; however, the effects were not consistent among the program activities.

Interpretations:

Program terminees who were dropouts had difficulty learning in a classroom environment which included the program activities of Classroom Training and JobShop. They prefer practical work experience to improve employability. Therefore, On-the-Job Training enrollments indicate a high

percentage of dropouts as compared with Classroom Training, JobShop, and Work Experience. Since high school graduates have recorded success in the classroom environment, Classroom Training did improve their employment opportunities.

For On-the-Job Training, dropouts who normally would not be interviewed had an opportunity to demonstrate manpower skills to perspective employers. Adequate performance during training replaced the requirement of a high school education to secure employment.

Hypothesis Number Ten: Program terminees who secure unsubsidized employment upon termination will have different wage rates and job placement rates than terminees experiencing nonpositive terminations for each CETA component.

Results:

For Classroom Training, 42 percent of the terminees who were not placed in unsubsidized employment upon termination were employed in 1983; 78 percent of the terminees who were placed upon termination were employed during the same time period. The chi-square statistic indicated that the difference in job placement rates was statistically significant and may be generalized to the target population of 1982 terminees with a 99 percent level of confidence.

During the first six months of 1983, average earnings of the Classroom Training terminees who were not placed was \$991 as compared with \$2,765 for the terminees who were placed. The T-Test, Analysis of Variance, and Regression Analysis indicate that the difference in the mean wages of the terminees was statistically significant. ($p \leq .01$)

For On-the-Job Training, 71 percent of the terminees who were not placed were employed in 1983; 68 percent of terminees who were placed upon termination were employed during the same time period. During the first six months of 1983, average earnings of the terminees who were not placed was \$1,106 as compared with \$2,560 for terminees who were placed. While the difference in the job placement rates was not statistically significant, the T-Test and Analysis of Variance indicated that the mean wage difference was statistically significant. ($p \leq .05$)

For Work Experience, 40 percent of the terminees who were not placed were employed in 1983; 80 percent of the terminees who were placed were employed during the same time period. During the first six months of 1983, average earnings of the nonplacements was \$606 as compared with \$2,715 for the placements. While the difference in the job placement rates was not statistically significant, Regression Analysis and Analysis of Variance indicated that the difference in mean wages may be generalized to the target population with a 95 percent level of confidence.

For JobShop, 63 percent of the terminees who were not

placed were employed in 1983; 68 percent of the terminees who were placed were employed during the same time period. During the first six months of 1983, average earnings of the nonplacements was \$1,324 as compared with \$2,274 for the placements. While the difference in the job placement rates was not statistically significant, the Analysis of Variance indicated that the difference in mean wages may be generalized to the target population with a 99 percent level of confidence.

Discussion:

For Classroom Training and Work Experience, securing unsubsidized employment had a positive effect on job placement rates of the 1982 terminees. Also, Classroom Training, On-the-Job Training, and Work Experience terminees who secured employment earned substantially more than terminees who were not placed during the first six months of 1983. The findings are consistent with the literature. For example, Sawhney, Jantzen, and Hernstadt stated that high proportions of participants who obtained unsubsidized employment upon termination were still employed when interviewed three to eight months later.¹⁹ The Office of Research and Evaluation indicated "the net earnings gains realized by the placed group were consistently stronger than for any other variable examined in the net impact analysis of fiscal year 1976 CETA entrants."²⁰ The results support

the hypothesis that securing unsubsidized employment upon termination influenced the job placement and wage rates of the program terminees.

Interpretations:

After employment is secured, most potential barriers including level of education and labor market discrimination are eliminated. Continued employment relies upon employee job performance not demographic traits or political ideologies. For example, the results of the study indicate that blacks, high school dropouts, females, and youth who secured employment upon termination more than doubled the wages of their respective Comparison Group who were not placed. Also, individuals who may be considered employment risks (uneducated inexperienced youth) and have an opportunity to demonstrate job skills in most cases perform beyond expectations and enhance future employment opportunities. The experiences of young high school dropouts in On-the-Job Training programs support this theory.

Hypothesis Number Eleven: Black program terminees will have different wage rates and job placement rates than white terminees for each CETA component.

Results:

For Classroom Training, 52 percent of the black terminees and 77 percent of the white terminees were employed during 1983. During the first six months of 1983, average earnings of the black terminees was \$1,425 as compared with \$3,091 for white terminees. While the difference in the job placement rates was not statistically significant, the T-Test and Regression Analysis indicated that the mean wage difference was statistically significant. ($p \leq .05$)

For On-the-Job Training, 62 percent of the black terminees and 88 percent of the white terminees were employed during 1983. During the first six months of 1983, average earnings of the black terminees was \$2,091 as compared with \$2,521 for the white terminees. Differences in mean wages and job placement rates were not statistically significant.

For Work Experience, 50 percent of the black terminees and 60 percent of the white terminees were employed in 1983. During the first six months of 1983, average earnings of the black terminees was \$1,091 as compared with \$1,745 for the white terminees. Differences in mean wages and job placement rates were not statistically significant.

For JobShop, 64 percent of the black terminees and 67 percent of the white terminees were employed during 1983. During the first six months of 1983, average earnings of the

black terminees was \$1,787 as compared with \$115 for the white terminees. While the difference in the job placement rate was not statistically significant, the T-Test indicated that the wage difference could be generalized to the target population with a 99 percent level of confidence.

Discussion:

For Classroom Training and On-the-Job Training, job placement rates of white terminees exceeded the placement rates of black terminees by approximately 25 percent. During the first six months of 1983, white terminees doubled the earnings of black terminees in Classroom Training. Also, the results indicate that white terminees had higher job placement rates and wage rates than black terminees in Work Experience programs. Since only three JobShop terminees in the sample were white, the effects of race on the wage rates and job placement rates of JobShop terminees cannot be measured with confidence. Federal reports indicated that white CETA terminees had higher wage rates than black terminees for Classroom Training, On-the-Job Training, and Work Experience.²¹ These findings were consistent with the results of the study which support the hypothesis that race influenced the job placement and wage rates of the program terminees.

Interpretations:

National Labor Statistics reported that the unemployment rate for blacks in December 1982 was 20.8 percent; the white unemployment rate during the same time period was 9.7 percent.²² These statistics indicated labor market discrimination based on race which could have influenced the results of the study. The interaction effects of several demographic variables including age and sex also could have influenced the wage rates reported by blacks. For example, black and white terminees who were 22 years of age or older did not experience substantial wage differentials; however, the wage rates of young whites for the first six months of 1983 doubled the earnings reported by young blacks. Therefore, the low earning reported by young blacks, especially females, influenced the overall results for the black terminees. While individuals may adjust to one labor market deficiency, several factors including discrimination based upon race, age, and sex restrict employment opportunities.

Hypothesis Number Twelve: Female program terminees will have different wage rates and job placement rates than male terminees for each CETA component.

Results:

For Classroom Training, 56 percent of the male terminees and 55 percent of the female terminees were employed during 1983. During the first six months of 1983, average earnings of the male terminees was \$1,776 as compared with \$1,559 for female terminees. Differences in the mean wages and job placement rates were not statistically significant.

For On-the-Job Training, 70 percent of the male terminees and 67 percent of the female terminees were employed during 1983. During the first six months of 1983, average earnings of the male terminees was \$2,350 as compared with \$1,672 for female terminees. Differences in mean wages and job placement rates were not statistically significant.

For Work Experience, 67 percent of the male terminees and 50 percent of the female terminees were employed during 1983. During the first six months of 1983, average earnings of the male terminees was \$1,838 as compared with \$1,164 for female terminees. Differences in mean wages and job placement rates were not statistically significant.

For JobShop, 55 percent of the male terminees and 70 percent of the female terminees were employed during 1983. During the first six months of 1983, average earnings of the male terminees was \$1,197 as compared with \$2,042 for female terminees. Differences in mean wages and job placement

rates were not statistically significant.

Discussion:

During the first six months of 1983, the male wage rate substantially exceeded the female wage rate for On-the-Job Training and Classroom Training. Since only three Work Experience terminees in the sample were male, the effects of sex on the wage rates and job placement rates of the Work Experience terminees cannot be measured with confidence. For JobShop terminees, the results were different; female participants recorded higher job placement rates and wage rates.

The literature supports the findings of the sample for Classroom and On-the-Job Training terminees; Borus and Prescott stated that changes in earnings for the first year after participation was \$516 for male participants as compared with \$38 for female participants.²³ According to Sawhney, Jantzen, and Hernstadt:²⁴

Women's wages after training are significantly lower than men's. This finding may reflect the intermittent labor market involvement of females and differences in the preprogram human capital not reflected in the other variables. It might also reflect sex wage discrimination and occupational segmentation.

The results of the study support the hypothesis that sex influenced the job placement and wage rates of the program terminees; however, the effects were not consistent among

the program activities.

Interpretations:

For the Comparison Group, the males experienced higher wage rates and job placement rates which may be generalized to the target population of economically disadvantaged. The results indicate sex discrimination in the labor market which could have influenced the employment opportunities of the female terminees. The interaction effects of several variables could have influenced the wage rates reported by female participants. For example, white males who were less than 22 years of age more than doubled the earnings reported by women. Therefore, the relatively high wages reported by the young males could have influenced the overall results for the male terminees. While traditional manpower programs such as Classroom Training and On-the-Job Training were responses to labor market deficiencies and high unemployment, recent program activities of the Peninsula Office of Manpower Programs have emphasized a need to improve the employment opportunities of specific demographic groups including women. The results of the JobShop program support this theory and indicate that the wage and job placement rates of the female terminees were substantially greater than the rates of the male terminees.

Interaction Effects of Client Demographic Variables

The following analysis describes the interaction effects of the client demographic variables on the job placement rates and the wage rates of the sample of program terminees. Participants who were less than 22 years of age had higher job placement rates than the older terminees; however, the difference in earnings was minimal. The interaction effects of age and sex indicate that young females had higher job placement rates but lower wage rates than older male and female terminees. The results may suggest that the employment opportunities of the young female terminees were part-time or temporary positions at minimum wage rates.

For the first six months of 1983, male and female job placement and wage rates were the same for the CETA sample. While level of education did not influence the employment opportunities of the male terminees, female graduates had a job placement of 65 percent as compared with 38 percent for the female dropouts. The chi-square statistic indicated that the difference was statistically significant. ($p \leq .05$)

For the CETA sample, job placement rates of high school graduates and dropouts were 62 percent and 52 percent, respectively. The chi-square statistic indicated that the difference could be generalized to the target population of 1982 terminees with a 95 percent level of confidence. Therefore, level of education influenced the results of the

CETA program with graduates recording higher placement rates than dropouts. The interaction effects of education and age indicated that the job placement rates of high school graduates who were less than 22 years of age and the older dropouts were substantially different. During 1983, 70 percent of the young graduates had jobs as compared with 49 percent of the older dropouts.

Young female graduates reported substantially lower earnings than older female graduates and males selected for the study. During the first six months of 1983, young female graduates earned only \$1,270 as compared with \$1,900 for older female graduates; \$1,659 for older female dropouts; \$1,916 for young male dropouts; and \$2,031 for young male graduates.

Level of education affected the employment opportunities of the black terminees. During the first six months of 1983, 61 percent of the black graduates were employed as compared with 46 percent of the black dropouts. The interaction effects of race and education provided evidence of labor market discrimination. White high school dropouts nearly doubled the wage and job placement rates of the black dropouts. The chi-square statistic indicated that the difference in job placement rates was statistically significant. ($p \leq .05$) For graduates, the wage and job placement differences of black and white terminees were not as dramatic.

The interaction effects of sex, race, and education

provide additional evidence of labor market discrimination based upon race and sex. During the first six months of 1983, black female dropouts earned \$1,237 as compared with \$2,800 for white dropouts; \$1,634 for female graduates; and \$1,539 for black male dropouts. For the white terminees selected for the study, male graduates earned substantially more than female graduates.

For the CETA sample, white terminees earned \$2,478 and reported a job placement rate of 76 percent during the first six months of 1983; blacks earned \$1,575 with a job placement rate of 56 percent during the same time period. The chi-square statistic and Analysis of Variance indicated that the differences in job placement rates and wage rates could be generalized to the target population of 1982 terminees. ($p \leq .05$) Since the job placement rates for the white and black terminees who were less than 22 years of age were 82 percent and 61 percent, young whites nearly doubled the earnings reported by young blacks.

Seventy-nine percent of the white male terminees were employed during the first six months of 1983 and earned \$2,610. The Comparison Group of black males earned \$1,609 while 55 percent were employed. The chi-square statistic indicated that the difference in job placement rates was statistically significant. ($p \leq .05$) The findings also confirmed that black females experienced the same limited employment opportunities as the black males. The interaction effects of race, age, and sex illustrate that

white males who were less than 22 years of age tripled the earnings of the young black females and nearly doubled the earnings of the older black females, young white females, and young black males.

Research Question Number Three

What is the effect of CETA on the arrest rates of 1982 CETA program terminees?

Hypothesis Number Thirteen: Participation in the CETA program reduces the arrest rates for murder, felonious assault, burglary, larceny, motor theft, and drug law violations for program terminees.

Results:

During 1982, 24 (11 percent) of the CETA sample were arrested as compared with 23 (13 percent) of the Control Group. During the first post-program year, ten terminees (five percent) were arrested while the Control Group recorded 18 arrests (ten percent). Table 6 indicates arrest data by charge of the CETA sample and Comparison Group, including the numbers and proportions of individuals arrested for each group. Since masked data was provided by the Virginia State Police, the descriptive statistics required for testing statistical significance could not be

TABLE 6
ARREST RATES FOR CETA AND COMPARISON GROUPS (JANUARY 1982 - OCTOBER 1983)

Arrest Charge	Number of Arrests 1982		Number of Arrests 1983		Proportion of Individuals Arrested 1982		Proportion of Individuals Arrested 1983	
	CETA	Comparison	CETA	Comparison	CETA	Comparison	CETA	Comparison
Murder	0	0	0	0	0	0	0	0
Felonious Assault	0	1	0	0	0	1%	0	0
Robbery	1	4	0	6	0	2%	0	3%
Burglary	3	2	0	1	1%	1%	0	1%
Larceny and Motor Vehicle Theft	5	4	1	5	2%	2%	0	3%
Drug Law Violations	2	2	0	1	1%	1%	0	1%
Other Personal Crimes ^a	11	10	8	4	5%	6%	4%	2%
Other Miscellaneous Crimes ^b	2	0	1	1	1%	0	0	1%
Total	24	23	10	18	11%	13%	5%	10%

^a Other personal crimes includes possession of stolen goods, concealment of merchandise, shoplifting, fraud, maiming, assault-misdemeanor, obtaining money by false pretense, receiving stolen property, processing worthless checks, welfare fraud, sexual battery, rape, and forgery.

^b Other miscellaneous crimes include habitual offender and aiding a fugitive.

generated.

Discussion:

CETA had a positive effect on the arrest rates of the program terminees selected for the study. During the first year following termination, CETA reduced the arrest rate of the participants by 50 percent. While CETA had no effect on the number of arrests during the training period of the terminees, the crimes committed by the Comparison Group were more serious throughout the time period of the study. During 1983, 13 individuals selected for the Comparison Group were arrested for major crimes including robbery, burglary, larceny, motor vehicle theft, and drug law violations. Only one CETA terminee was arrested for a major crime during the same time period. The findings of the study are consistent with the literature. The results of an evaluation of the Wildcat Service Corporation indicated that a smaller percentage of program terminees was arrested as compared with the individuals selected for a Comparison Group over a three year period.²⁵ The Manpower Demonstration Research Corporation indicated that a strong relationship existed between being employed and reduced arrests among the program participants of the National Supported Work Demonstration Project.²⁶ The results of the study support the hypothesis that CETA participation reduced the arrest rates of the program terminees.

Interpretations:

The major factor influencing the effects of CETA on criminal activity was an increase in the employment opportunities of the program terminees. Since individuals who are employed will incur high opportunity costs, criminal activity is less likely among this group. The results of the study confirm that a positive relationship exists between increased employment and reduced criminal activity. Unemployed persons who lack basic skills and do not attract perspective employers can anticipate minor losses upon conviction. Thompson stated the following: 27

The economic mode of crime suggest that crime becomes unlikely among persons who are well educated and well trained, since they are attractive to employers, well paid, and likely to incur high "opportunity costs" if crime involvements lead to the loss of their legitimate returns.

Hypothesis Number Fourteen: Participation in the CETA program reduces arrest rates for terminees in each CETA component.

Since the arrest data did not include a breakdown by program activity, the data to analyze Hypothesis Number Fourteen could not be generated.

Results of the Additional Evaluation Questions

The additional evaluation questions provide employment information and client demographic data on the target population of 1982 CETA terminees. Demographic data is also provided for the CETA sample and Control Group to compare client characteristics and validate the selection of the Control Group. For the 1982 CETA clients, 41 percent were less than 22 years of age and 54 percent were male; 37 percent were high school dropouts and seven percent were students. During the application process, 79 percent were unemployed, and only one percent of the participants had an income above the poverty level.²⁸

For the 1982 CETA terminees, 45 percent were less than 22 years of age and 47 percent were male; 34 percent were high school dropouts; and 12 percent were students. During the application process 78 percent were unemployed and only one percent of the terminees had an income above the poverty level.²⁹

For 1982 CETA terminees who secured employment, 41 percent were less than 22 years of age and 54 percent were male; 33 percent were high school dropouts and three percent were students. During the application process, 86 percent were unemployed, and only one percent of the CETA terminees who secured employment had an income above the poverty level.³⁰ In 1982, 70 percent of the CETA terminees entered unsubsidized employment, transferred to other

program components, or continued their education on a full time basis. While 32 percent of the clients did not experience a positive termination, 50 percent of the 1982 CETA terminees secured unsubsidized employment.³¹

Individuals selected for the study were unemployed for 20 weeks before applying for CETA, and actively participated in the program for an average of 6.5 months. For the CETA sample, 49 percent were male; 65 percent were high school graduates; and 91 percent were unemployed prior to the application process. The average age was 24.6; 84 percent of the CETA sample were black and nine percent had criminal records. For the Comparison Group, 56 percent were male; 58 percent were high school graduates; and 95 percent were unemployed prior to the application process. The average age was 24.8; 74 percent of the Comparison Group were black; and 14 percent had criminal records. Table 7 describes the demographic characteristics of the sample, and Figure 9 is a graphic illustration of selected demographic characteristics of the CETA sample and the Comparison Group.

Summary of the Findings

CETA increased the tax contributions and reduced criminal justice system costs of the 217 CETA terminees. With exception to the Food Stamp program, CETA did not reduce government transfer payments, including Aid For Dependent Children, Public Housing Subsidies, Public Rent

TABLE 7
DEMOGRAPHIC CHARACTERISTICS OF THE CETA
SAMPLE AND THE COMPARISON GROUP
(IN PERCENTAGES)

Characteristic	CETA Sample	Comparison Group
Total Number	210	156
Age (Mean)	24.6	24.8
Less than 22	40	44
22 or Older	60	56
Sex		
Male	49	56
Female	51	44
Race		
Black	84	74
White	16	26
Education		
Dropout	35	42
High School Graduate	65	58
Handicapped	3	1
Offender	9	14
Pre-CETA Labor Force Status		
Unemployed	91	95
Employed	9	5

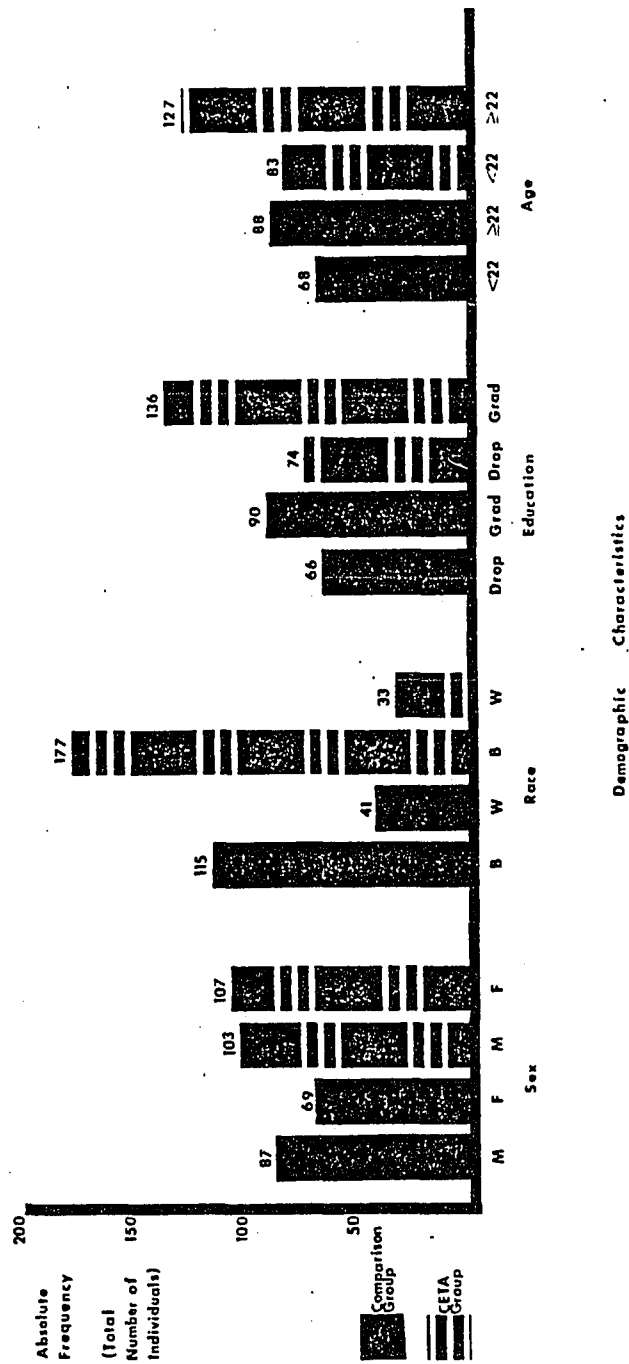


Fig. 9. Frequency Distribution by Selected Demographic Characteristics

Subsidies, and Unemployment Insurance. During 1983, individuals selected for the CETA sample and the Comparison Group did not participate in the following programs: Child Care, Auxiliary Grants, General Relief, Hospitalization, Transportation Subsidies, Emergency Funds, and Supplemental Security Income. The study indicated that program costs for the 217 CETA terminees will be paid back in reduced criminal justice system costs and increased tax subsidies in five years. Reductions in the criminal justice system costs for the CETA sample was the major factor influencing the cost-benefit ratio.

Classroom Training, On-the-Job Training, and JobShop had a positive effect on the wage rates and job placement rates of the 1982 CETA terminees. In some cases, job placement rates increased by 21 percent as wage rates doubled for the first six months of 1983. While the effects of Work Experience on wage rates and job placement rates were positive, the results were not considered substantial.

Securing unsubsidized employment upon termination had a positive effect on the wage rates and job placement rates of the 1982 CETA terminees. Seventy-four percent who secured jobs upon program termination remained employed during 1983 as compared with a job placement rate of 48 percent for the terminees who were not placed upon termination. The effects of race were consistent throughout the study. The job placement rate of white terminees exceeded the respective

black rates for each program activity. The effects of education, age, and sex on the employment opportunities of the sample varied among the different program activities.

Since CETA did reduce the arrest rate of the participants by 50 percent during the first post-program year and since the crimes committed by the Comparison Group were more serious throughout the time period of the study, evidence does exist that CETA had a positive effect on the criminal activities of the program terminees.

While Chapter 4 analyzed the results of the study, Chapter 5 provides a summary and conclusions which describe the implications of the study. Chapter 5 also provides recommendations and management strategies to improve program performance.

FOOTNOTES

- 1 Susan J. Nealen, "CETA Performance Standards and Investment Return Analysis," Florida Training Institute (November 30, 1980):38.
- 2 Einar Hardin and Michael E. Borus, "Benefits and Costs of MDTA-ARA Retraining," Industrial Relations VII (May 1972):224.
- 3 U.S., Department of Labor, Office of Policy Evaluation and Research, Evaluation of the Economic Impact of the Job Corps Third Follow-up Report (September 1982), p. X.
- 4 Manpower Demonstration Research Corporation, The Supported Work Evaluation: Final Benefit/Cost Analysis (New York: Mathematica Policy Research, Inc., 1981), p. 67.
- 5 Ibid.
- 6 U.S., Department of Labor, Evaluation of the Economic Impact of the Job Corps Third Follow-up Report.
- 7 Manpower Demonstration Research Corporation, The Supported Work Evaluation.
- 8 U.S., Department of Labor, Evaluation of the Economic Job Corps Third Follow-up Report, p. X.
- 9 Manpower Demonstration Research Corporation, The Supported Work Evaluation, p. 131.
- 10 James W. Thompson, "Employment and Crime: A Review of Theories and Research," Department of Justice (October 1981):10.
- 11 Robert Taggart, A Fisherman's Guide: An Assessment of Training and Remediation Strategies (Kalamazoo: W.E. Upjohn Institute for Employment Research, 1981), p. 74.
- 12 U.S., Department of Labor, Office of Research and Evaluation, Summary of the First Two Program Years for FY 1976 CETA Entrants (July 1982), p. 6.
- 13 Ibid.
- 14 Taggart, A Fisherman's Guide, p. 74.
- 15 U.S., Department of Labor, Summary of the First Two Program Years of FY 1976 CETA Entrants, p. 6.
- 16 Ibid.

FOOTNOTES (Cont'd)

- 17 Ibid.
- 18 Pawan K. Sawhney, Robert H. Jantzen, and Irwin L. Hernstadt, "The Differential Impact of CETA Training," Industrial and Labor Relations Review 35 (January 1982):251.
- 19 Ibid., p. 247.
- 20 U.S., Department of Labor, Summary of the First Two Program Years for FY 1976 CETA Entrants, p. 11.
- 21 U.S., Department of Labor, Office of Research and Evaluation, The Impact of CETA on 1978 Earnings: Participants in Selected Program Activities Who Entered CETA During FY 1976, Net Impact Report Number One (July 1982), pp. A-5, A-6, and A-8.
- 22 U.S., Department of Labor, Bureau of Labor Statistics, Employment and Earnings (January 1983), p. 7.
- 23 U.S., National Council on Employment Policy, A Policy Statement: CETA Results and Their Implications (September 1981), p. 13.
- 24 Sawhney, Jantzen, and Hernstadt, "The Differential Impact of CETA Training," p. 251.
- 25 Thompson, "Employment and Crime," p. 185.
- 26 Ibid., p. 193.
- 27 Ibid., p. 10.
- 28 Peninsula Office of Manpower Programs, Quarterly Summary of Participant Characteristics (Fiscal Years 1982 and 1983).
- 29 Ibid.
- 30 Ibid.
- 31 Peninsula Office of Manpower Programs, CETA Program Status Summary (Fiscal Years 1982 and 1983).

CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS AND FUTURE IMPLICATIONS

Cost-Benefit Analysis

The cost-benefit analysis indicates that CETA was cost-effective for the sample of 1982 CETA terminees. Using a five percent annual discount rate for projected benefits, taxpayer contributions for the sample in the study will be paid back in approximately five years. Since the aggregate data did not include the descriptive statistics required to test the statistical significance of these results, the pay back periods cannot be generalized to the target population of 1982 CETA terminees.

While the cost-benefit analysis may be considered a sophisticated management tool to evaluate program effects, in most cases, several potential benefits remain unmeasured. For example, benefits which were not measured in the study were as follows:

1. Reduction in the psychological costs of crime;
2. Satisfaction of the CETA participants due to a more socially accepted life style;
3. Increase in health status;
4. Reduction in the costs for drug and alcohol

treatment programs;

5. Changes in welfare due to reduced drug and alcohol use;
6. Satisfaction due to an equitable distribution of income;
7. Psychological benefits of employment; and
8. Benefits of the other family members including the children of the CETA terminees.

Recommendations

The cost benefit analysis conducted for the purposes of this study confirmed that program benefits exceeded taxpayer costs for the sample and provided information which may generate public support for the activities of the Peninsula Office of Manpower Programs. Another practical application is that results may be compared with similar manpower programs to determine relative program efficiency. However, the literature indicated that large variations exist among the cost-benefit strategies conducted by other federal and local manpower agencies, and comparison of the cost-benefit results may be a difficult task.¹ To ensure consistency and facilitate comparisons, the U.S. Congress could adopt a cost-benefit strategy and designate the Department of Labor to prepare procedures and definitions for local manpower agencies. Another alternative for local manpower agencies is to conduct separate cost-benefit analyses for each

program component. The literature supports this recommendation in stating that large variations occur within programs from project to project.² Comparisons would indicate program activities which are more productive and improve the less successful ones by using the experiences of the other projects. Nay, Scanlon, and Wholey confirmed this cost-benefit strategy by stating:³

A more productive approach appears to be the use of detailed cost and effectiveness data to identify successful projects within the programs and to attempt to use the experience of those projects to help improve the less successful ones.

As with other management tools measuring program efficiency, cost-benefit analysis has advantages and disadvantages; however, with proper application, the strategy may serve the decision-maker and generate information which will improve agency performance.

Utilization-Focused Evaluation

The purpose of the utilization-focused evaluation was to facilitate program improvement by identifying the successful components of the Peninsula Office of Manpower Programs. Evaluation results should alter program priorities and emphasize activities yielding higher returns. Classroom Training, On-the-Job Training, and JobShop had a positive impact upon the 1982 program terminees. Since the earning gains and job placement rates of the Work Experience

sample were not substantial the study concludes that the program did not have an effect on the employment opportunities of the 1982 terminees.

The effects of age, sex, education, and race could not be generalized to the target population of 1982 terminees. In some cases, the literature, including a CETA Impact Study conducted by Sawhney, Jantzen, and Hernstadt, supported these findings. ⁴

The regressions results indicate that type of training and characteristics of the post-program job are the primary determinants of post-program employment stability. Demographic traits, in contrast, play a small role Race, sex and age are all unimportant once other factors are accounted for. Similarly, neither native language nor dependence on public assistance seems to exert any influence.

Introducing independent variables in the research design created cells with insufficient sample size to yield impact. These small numbers require extremely large differences in wage rates and job placement rates to generate statistical significance.

For each program activity, white terminees had higher job placement rates and wage rates than black terminees. These results may indicate labor market discrimination based upon race for the sample of CETA terminees. The effects of age, sex, and education on the employment activities of the CETA sample varied among the different program activities. The study concludes that high school graduates had higher wage rates and job placement rates than dropouts in

Classroom Training. For On-the-Job Training the reverse was true; wage rates of the dropouts were higher. The results may suggest that high school graduates be enrolled in Classroom Training while dropouts are placed in On-the-Job Training. Since participants who were less than 22 years of age had higher job placement rates and lower wage rates than the older terminees during the first six months of 1983, the study concludes that the younger terminees in the sample were employed. However, their employment activities were not secure and included part-time or temporary positions at minimum wage rates. The results of the study indicate that sex was an influencing factor on the employment activities of the Comparison Group. These findings may be generalized to the population of 1982 eligibility applicants who were not enrolled in any program activity and may indicate sex discrimination in the labor market for economically disadvantaged women.

Securing unsubsidized employment upon termination was the major factor influencing the wage rates and the job placement rates of the 1982 CETA terminees. The Classroom Training and Work Experience terminees who were placed upon termination doubled the job placement rates and more than tripled the wage rates of the terminees who were not placed.

Recommendations

The Peninsula Office of Manpower Programs could

emphasize Classroom Training, On-the-Job Training and JobShop in their planning process and phase out Work Experience programs. To complement the results and conclusions of the study, the staff could conduct an evaluation of the 1983 terminees. The design should include a larger sample to confirm the effects of selected client characteristics on job placement rates and wage rates. While statistical significance may be difficult to obtain, results which support these findings may validate policy decisions generated by the study. The evaluation may conclude that intake and assessment centers should direct clients with specific demographic characteristics into the appropriate program activity.

After reviewing the effects of securing unsubsidized employment upon termination, the Peninsula Office of Manpower Programs should emphasize that job placement is the primary objective of the agency. Organization goals and objectives should include performance standards which accurately measure the job placement rates of the program participants.

CETA Effects on Arrest Rates

The evaluation of the National Supported Work Demonstration Project conducted by the Mathematica Policy Research Corporation "found a strong consistent relationship between being employed and reduced arrest rates among the

research subjects in all groups." ⁵ During the first year following termination, the Comparison Group doubled the arrest rate of the CETA sample and committed crimes which were more serious. The study concludes that CETA had a positive impact on the arrest rates of the sample. This conclusion is supported by the literature, including the Brenner study which described the relationship between crime and unemployment rates. ⁶

A 1.4 percent rise in unemployment during 1970 was directly responsible for 7,600 state prison admissions and 1,740 homicides, in addition to other social damage. Estimated losses to the economy from these two outcomes alone approach 644 million dollars.

Recommendations

Considering the high costs of the criminal justice system and incarceration, the federal government should support research which describes the effects of employment opportunity on the crime rates. These research efforts could verify the findings of the study and indicate that manpower programs are a viable response to high crime rates.

Other Recommendations

While the results indicate that level of education had different effects on employment opportunities of Classroom and On-the-Job Training trainees (See Table 5), the study does not recommend that dropouts be placed exclusively into

On-the-Job Training while high school graduates are enrolled in Classroom Training programs. While this strategy may improve program efficiency, it may create a tracking system which could inhibit dropout efforts to graduate from high school. The Peninsula Office of Manpower Programs should establish educational linkage programs with the local school districts which allow participants to accumulate high school credit in the programs. The study recommends that dropouts be placed into programs which generate incentive to complete a high school education. Other Classroom Training programs which do not complement a high school education should be reserved for graduates. The Peninsula Office of Manpower Programs should emphasize the need for economically disadvantaged youth to complete a high school education, and additional funds to support this objective should be considered.

To generate public support for manpower programs, the Department of Labor could conduct similar research to assess the impact of the Summer Youth Employment Program which serves disadvantaged youth and the community. Community benefits include clerical assistance for government offices, public facility maintenance, custodial services for public schools, and staff support for Social Service agencies. For disadvantaged youth, the Summer Youth Employment Program improves work attitudes and performance.⁷

The Department of Labor information requirements did not accurately measure program performance. For example,

follow-up interviews were only conducted for terminees who were placed upon termination; the data excludes terminees who were employed as a result of the program a few months following termination. To assess impact, the Peninsula Office of Manpower Programs could collect employment data on terminees for at least a two year period. Data sources include the Virginia Employment Commission and personal interviews conducted by subcontractors.

To measure program impact on the criminal activities, data collected by the Virginia State Police may be appropriate. It is also recommended that the computer programming capabilities of the office be expanded to facilitate data input and analysis requirements of the evaluation process. Additional staff support for the Central Records Unit is recommended. The proposed evaluation process should be designed, implemented, and monitored by a qualified individual with an appropriate academic background. To ensure validity and avoid committing scarce personnel resources to a full-time permanent position, these services may be contracted to an independent evaluator.

Future Implications of the Results

This study provides manpower executives with an utilization-focused evaluation to describe program impact for Classroom Training, On-the-Job Training, Work

Experience, and JobShop. Comparisons of job placement rates and wage rates for each component could alter program priorities to emphasize activities yielding higher returns. For example, since Classroom and On-the-Job Training trainees had higher wage rates and since Work Experience costs were higher, the staff may consider redirecting funds toward Classroom or On-the-Job Training. After introducing client characteristics as independent variables into the design, the results indicate which program activities are appropriate for specific target populations in the sample.

Cost-benefit analysis is a viable management tool which has two distinct purposes: (1) evaluate competing alternatives; and (2) determine payback efficiency. The major concern of the study was with the payback efficiency component of the analysis. In other words, for every dollar allocated to the Peninsula Office of Manpower Programs, a dollar of social benefits returned into the system. Cost-benefit analysis was defined as the quantification of program effects into dollar terms and the comparison of their present value with costs. Cost-benefit analysis provided answers to questions related to program effectiveness and public accountability.

Since 1962, the federal government has spent over 64 billion dollars for manpower programs.⁸ The annual budget for the Manpower Development and Training Act was approximately 80 million dollars; annual expenditures for CETA during the 1970's reached the 9- to 11- billion- dollar

range.⁹ The CETA program and other manpower efforts have one positive effect which cannot be claimed by welfare programs, Unemployment Compensation, and other federal responses to high national unemployment rates. The CETA dollar is earned, and taxpayer investments are returned in a short period of time.

FOOTNOTES

1 Joe N. Nay, John W. Scanlon, and Joseph S. Wholey, "Benefits and Costs of Manpower Training Programs: A Synthesis of Previous Studies with Reservations and Recommendations," The Urban Institute (March 1973):250.

2 Ibid.

3 Ibid.

4 Pawan K. Sawhney, Robert H. Jantzen, and Irwin L. Hernstadt, "The Differential Impact of CETA Training," Industrial and Labor Relations Review 35 (January 1982): 248.

5 James W. Thompson, "Employment and Crime: A Review of Theories and Research," Department of Justice (October 1981):193.

6 Ibid., p. 55.

7 New Jersey, Passaic County Board of Freeholder, CETA the Company: We Mean Business (1981).

8 Eli Ginzberg, "The Uses and Limits of Manpower Policy," Thrust The Journal for Employment and Training Professionals 2 (Winter/Spring 1980):133.

9 Ibid.

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APPENDIX A
DEFINITION OF TERMS

The Definition of Terms draws heavily upon five documents which included: Employment and Training for Offenders ¹; An Orientation to CETA ²; Employment and Training Administration, Glossary of Program Terms and Definitions ³; Continuous Longitudinal Manpower Survey Report Number Five ⁴; and, Evaluation: A Systematic Approach, Second Edition ⁵.

Accountability: The responsibility of program staff to provide evidence to sponsors and superordinate units of conformity to program coverage, treatment, legal, and fiscal requirements.

Adjudication: The process of determining guilt or innocence.

Administrative Costs: All indirect and direct costs associated with the management of the grant. Such costs are those which do not directly and immediately benefit participants but are necessary for effective delivery of direct participant benefits. These costs are generally identified with supervision and management, and fiscal and record keeping systems.

Aid to Families with Dependent Children (AFDC): A program authorized by the Social Security Act to provide financial assistance and social services to needy families with dependent children.

Annual Earnings: The total earnings over a 12-month period, such as the year before entry or the first year after program termination.

Annual Plan: That part of the Comprehensive Employment and Training Plan which consists of the yearly description of program activities and services to be provided by prime sponsors.

Apprehension: The seizure or arrest of a person.

Arraignment: A court procedure at which the defendant is informed of charges against him and is given the opportunity to enter a plea.

Arrest: The taking into custody of an individual by an officer of the law, usually the police.

Assessment: Interviewing to determine each participant's employability, aptitudes, abilities, and interests and to develop a plan to achieve the participant's employment goals. Testing and counseling may also be utilized during the assessment process.

Average Hourly Wages: The average wage for each participant is the arithmetic mean of the starting and ending hourly wage rates for the period of interest.

Balance of State: The geographical areas of a state which are ineligible for independent prime sponsorship, and which, therefore, become the responsibility of the state government in a statutory role as a prime sponsor.

Benefits: Net project outcomes, usually translated into monetary terms which may include both direct and indirect effects.

Booking: To formally record charges against a person at the police station or at the receiving desk of the county jail.

Citation: A summons, an official notice to appear in court.

Classroom Training: Any training conducted in an institutional setting including vocational education which is designed to provide individuals with the technical skills and information required to perform a specific job or group of jobs. It may also

include training designed to enhance the employability of individuals by upgrading basic skills through the provisions of courses such as remedial education.

Client: An individual who utilizes the services of an employment and training agency.

Component: A distinguished or logically separable element of any specific system or program.

Confounding Factors: Extraneous variables resulting in outcome effects that obscure or exaggerate the true effects of an intervention.

Consortium: An association of independent units of local government organized to permit joint planning and operation of employment and training programs.

Contract: A procurement instrument by which the prime sponsor pays for property, services, supplies, materials, or equipment.

Control Group: A group of untreated clients that are compared to experimental groups on outcome measures in evaluations.

Conviction: Formal finding of guilt, entered by the judge.

Costs: Inputs, both direct and indirect, required to produce an intervention.

Cost-Benefit Analysis: Studies of the relationships between costs and outcomes of social projects, usually expressed in monetary terms.

Deferred Sentence; Deferred Plea; Deferred Prosecution: A form of probation in which the court delays sentencing for a period of

time, permitting the defendant to go into the community under probationary supervision.

Delivery Systems: The administrative and planning agencies and service units which provide employment and training services to potential clients.

Dependent Variable: The factor which the researcher is interested in explaining. It may be the math ability of high school students, the fluctuations in the oil market, or the effects of compensatory education on preschoolers.

Detention: Temporary incarceration of an individual pending court or parole board action.

Direct Violation: Revocation of parole because of a new arrest.

Disadvantaged: A reference to persons competitively disadvantaged in the job market by age, race, sex, education, and physical or mental impediments. For administrative and planning purposes, the characteristics of the disadvantaged are specified by income levels and other labor market indicators. (See Economically Disadvantaged).

Discouraged Workers: Persons without a job who make no effort to find work because they feel certain that no work is available. Often such a person becomes "discouraged" after long periods of fruitless searching for work. Discouraged workers are usually termed the "hidden unemployed." They are not included in unemployment estimates. Their withdrawal from the labor market during periods of high unemployment causes an underestimation of the severity of unemployment.

Discounting: The treatment of time in valuing costs and benefits; that is, the adjustment of costs and benefits to their

present values, requiring a choice of discount rate and time frame.

Disposition: Formal decision of the court or parole board for handling a case.

Dropout: One who leaves school or a training program prior to completing the minimum requirements for certification.

Earnings: Respondent earnings include earnings from any and all jobs during the period of interest.

Economically Disadvantaged: A person who fulfills the following criteria:

1. receives or is a member of a family which receives public assistance; or
2. had a family income during six months preceding application which would have qualified for public assistance payments; or
3. is a member of a family which has received a total family income for the previous six months that does not exceed the poverty level; or
4. is a member of a family whose annualized income based on the six months prior to application did not exceed seventy percent of the lower living standard income level; or
5. is a foster child on whose behalf state or local government payments are made; or
6. has significant barriers to employment:

- a) A client of a sheltered workshop;
- b) A handicapped individual;
- c) A person residing in an institution or facility providing twenty-four hour support such as a prison, a hospital, or community care facility; or
- d) A regular outpatient of a mental hospital, rehabilitation facility or similar institution.

Evaluability Assessment: A set of procedures for planning evaluations so that interests are taken into account in order to maximize the utility of the evaluation.

Evaluation: The measurement of effectiveness and impact of program results in terms of participant program activities as they relate to the community. The objective of evaluation is the improvement of the quality of services being delivered through the prime sponsor and to help in the achievement of stated goals.

Experimental Group: A group of clients to whom an intervention is delivered and whose outcome measures are compared with those of control groups.

External Validity: Extent to which the design of a study allows findings to be generalized.

Felony: A serious crime, in most states punishable by more than one year in prison.

Financial Status Report (FSR): CETA fiscal reporting from which annual expenditures are summarized.

Follow-up: Continuing contracts made by representatives of service delivery agencies with their former clients in an effort to determine additional services needed by the clients or to collect information on the clients' current labor market status for evaluative purposes.

Goals: A broad statement of commitment, mutually agreed upon and generally involving more than a year.

Independent Variable: The variable used to explain the one that is dependent. It is usually thought of as being causal prior to the dependent variable. In the study of compensatory education, the independent variable would be the type of education presented to the preschoolers.

Intake: The complete system designed to bring participants into employment and training programs which includes procedures to receive, process and assess client needs. This process also assigns clients to the appropriate services.

In-School: The status of being enrolled full-time and attending an elementary, secondary, trade, technical or vocational school, or a college, including a junior college or a university. An individual shall maintain the status of "in-school" between semesters or quarters or during the summer months provided that individual is scheduled to attend full-time the next regularly scheduled quarter of any of these schools.

Institutional Training: Any form of job training, personnel counseling, or basic education conducted within the formal educational establishment rather than a specific work site.

Internal Validity: Extent to which the design and execution of a study allow definitive statements of outcome.

Intervention: Any program or other planned effort designed to produce intended changes in a target population.

Job Bank: A computer assisted system which provides listings of job openings in the area.

Labor Force: All persons enumerated, as in the non-institutional

- population between 16 and 65 years of age, who are either employed or unemployed, including members of the Armed Forces.

Labor Market: For state or local planning, the geographical region within which most workers are acquired. For some jobs this may be a given community, while for others it may be nationally oriented. Also, the physical area which a worker can search for a job within reasonable traveling distance of his residence.

Labor Supply: That portion of the labor force which is available to accept jobs within a labor market area.

Master Plan: That part of the Comprehensive Employment and Training Plan (CETP) which serves as the long-term agreement between the Department of Labor and the prime sponsor.

Measure: See Performance Measure.

Misdemeanor: A minor crime, with a penalty not exceeding one year.

Monitoring: Assessment of whether or not an intervention is (1) operating in conformity to its design, and (2) reaching its specified target population.

Objective: A specific measurable plan designed to achieve a goal mutually agreed upon and completed within a year.

Offender: Any person who is or has been confined in any type of correctional institution, or assigned to a community-based facility.⁶

On-the-Job-Training: Training in the public or private sector given to an individual, who has been hired first by the employer, while he or she is engaged in productive work which provides

knowledge or skills essential to the full and adequate performance of the job.

Opportunity Costs: The value of opportunities foregone because of an intervention project.

Orientation: The function of providing individuals with information which would increase their awareness and understanding of those attributes other than job skills, required to obtain and hold a job. Orientation sessions may be for groups of individuals and might provide information on personal appearance, health, job hunting, employment, filling out applications or other forms, wages, taxes, and transportation guides.

Outreach: An active effort on the part of program sponsor staff to encourage persons in the designated program administrative area to avail themselves of program services, such as counseling, employment, employment services, training, and other special program services, as appropriate.

Parole: Methods of releasing an offender from an institution prior to his completion of maximum sentence, subject to conditions specified by the paroling authority.

Participant: An individual who is:

1. Declared eligible upon intake; and
2. Receiving employment and training services funded under the CETA Act following intake, except for an individual who receives only outreach or intake services.

Performance Indicator: Qualitative and quantitative analytical measures of major employment service activities, available

quarterly on a statewide, regional, and national basis for the purpose of evaluating performance at all levels.

Performance Measure: Qualitative reading of an actual event.

Performance Requirements: The basic skills, knowledge, abilities, and responsibilities required of a worker for successful job performance.

Placement, Direct: Unsubsidized employment secured for or by a CETA participant after receiving outreach, intake and training services. These trainees may or may not have received CETA supportive services.

Placement, Indirect: Unsubsidized employment secured for or by a CETA participant after participation in training or subsidized employment. These trainees also have received employment and training services and may or may not have received supportive services.

Planning: The process of converting goals into objectives, formulating specific interventions, and defining relevant target populations.

Prime Sponsor: A recipient of manpower financial assistance pursuant to appropriate sections of the CETA Regulations.

Probation: A legal status granted by a court whereby a convicted person is permitted to remain in the community subject to conditions specified by the court.

Program Elements: Identifiable and discrete intervention activities.

Program Planning Summary (PPS): CETA form for planning total enrollments by program activities, and terminations.

Public Assistance: Federal, State, or local government cash payments for which eligibility is determined by a need or income test.

Race/Ethnic Group: The basic racial and ethnic categories are defined as follows:

1. White, Not Hispanic - A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.
2. Black, Not Hispanic - A person having origins in any of the black racial groups of Africa.
3. Hispanic - A person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race.
4. American Indian or Alaskan Native - A person having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.
5. Asian or Pacific Islander - A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This includes, for example, China, India, Japan, Korea, the Phillipine Islands, and Samoa.

Randomization: Chance selection in the assignment of potential clients to experimental and control groups.

Recidivist: A person who is convicted of a crime after having previously been convicted.

Recruitment: Act of soliciting applicants for specific or anticipated openings, using mail, radio, newspaper, and other promotional devices.

Referral: The act of bringing to the attention of an employer, a local office, a training sponsor, or a supportive service agency, an individual who needs job training, or related supportive services.

Reliability: The extent to which scores are reproducible in repeated administrations, assuming all relevant factors are the same.

Standard Metropolitan Statistical Area (SMSA): A metropolitan area designated by the Bureau of the Census which contains (1) at least one city of 50,000 inhabitants or more; or (2) twin cities with a combined population of at least 50,000.

Statistical Controls: Using statistical techniques to hold constant differences between treatment and control groups.

Statistical Significance: Probability that a result is not due to chance.

Subsidized Employment: An employment in which the cost of employee wages is reimbursed to the employer out of government funds. This employment usually is temporary and is generally restricted to individuals enrolled in employment and training programs.

Supplemental Security Income (SSI) Recipient: Any individual certified as one who is receiving Supplemental Security Income benefits under Title XVI of the Social Security Act.

Supportive Services: Services offered to program clients in support of training and employment services, such as day-care, health care, and transportation allowances.

Survey: Systematic collection of information from large study groups, usually by means of interviews or questionnaires administered to a sample of units in the population.

Suspended Sentence: A sentence of incarceration which has been stayed by the court, contingent upon conditions such as probation.

Target Group: See Target Population.

Target Population: A particular population group of a community designated to receive intensive employment and training services, usually for a specific period.

Terminations Positive:

1. Direct Placement - See Placement, Direct
2. Indirect Placement - See Placement, Indirect
3. Self Placement - any client who obtains a job through his or her own job seeking efforts. These clients are not to be counted as either direct or indirect placement.
4. Other Positive Terminations - clients who terminate for the following reasons:
 - i) to enroll full time in an academic or vocational school;
 - ii) to enter the military;
 - iii) to enroll in another manpower vocational

program not funded by CETA;

- iv) to engage in another activity which will increase employability.

Terminations, Non-Positive: Clients who terminate for any reason other than those listed under placement or other positive terminations.

Underemployed: (1) A person who is working part time but seeking full time work; or (2) A person who is working full time but whose current annualization wage rate is not in excess of (a) the poverty level; or (b) seventy percent of the lower living standard income level.

Unemployed: For purposes of determining CETA program eligibility the criteria are as follows:

1. A person who is without a job for a least seven consecutive days prior to application for participation; or
2. A person who is a client of sheltered workshop institutionalized in a hospital, prison, or similar institution; or
3. A person who is 18 years of age or older and whose family receives public assistance or is eligible to receive public assistance; or
4. A person who is a veteran who has not obtained permanent unsubsidized employment since being released from active duty.

Unemployment Insurance (UI): The program term which encompasses all State and Federal unemployment compensation laws and related programs administered by the State and Federal Unemployment Insurance Services.

Unsubsidized Employment: Employment not financed from funds provided under CETA.

Work Experience Program: A short-term or part-time work assignment with a public agency.

FOOTNOTES

¹ U.S., Department of Labor, Employment and Training Administration, Employment and Training Programs for Offenders (July 1977), Appendix C.

² The CETA Staff Development Program, An Orientation to CETA, (Richmond: Virginia Employment Training Council, 1980), Appendix C.

³ U.S., Department of Labor, Employment and Training Administration, Employment and Training Administration (ETA) Glossary of Program Terms and Definitions, Third Edition, (1980).

⁴ U.S., Department of Labor, Office of Research and Evaluation, Continuous Longitudinal Manpower Survey- CLMS Follow-up Report No. 5 (July 1982), Appendix D.

⁵ Peter H. Rossi and Howard E. Freeman, Evaluation: A Systematic Approach, 2nd ed. (Beverly Hills: Sage Publications, 1982).

⁶ U.S., Department of Labor, Employment and Training Administration, Federal Register No. 124 41 (June 25, 1976).

GREATER PENINSULA JOB TRAINING CONSORTIUM

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April 26, 1984

Dr. Lucy Wilson
Program Coordinator
Urban Services Program
Old Dominion University
Norfolk, VA 23507

Dear Dr. Wilson:

Reference is made to the dissertation written by Mr. Raymond A. Gromelski, Old Dominion University and the planned use of the document as it relates to future training programs for this Consortium.

Procedures for the document will be drafted to insure continued application of the evaluation process for future program years, including the current "transitional" fiscal year (October 1, 1983-June 30, 1984). It is envisioned that the evaluation process used by Gromelski will be duplicated (perhaps replicated by other service delivery areas of the Commonwealth) to decide the impact of the various training programs on the participants and, consequently, their communities (increased skills for labor force, increase tax base, etc.). Additionally, cost-benefit findings will be pursued to assist in decision-making in training program design for follow-on years.

Consortium efforts (as described in the dissertation) to determine "appropriate" training programs at best costs will be made in keeping with desired management practices.

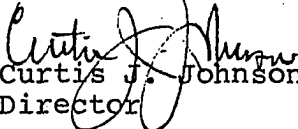
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April 26, 1984

I wish to thank Old Dominion University for allowing this organization to participate in the intern program for doctoral candidates in public administration. We will be happy to continue in this partnership with Old Dominion University.

Sincerely,


Curtis J. Johnson
Director

CJJ/cje

AUTOBIOGRAPHICAL STATEMENT

Raymond A. Gromelski was born in Rome, New York on April 27, 1953. Mr. Gromelski received a Bachelor of Arts in Mathematics from the State University of New York at Plattsburgh in 1975 and a Master of Science in Higher Education Administration from the State University of New York at Albany in 1979. He is a member of the American Society for Public Administration.

Mr. Gromelski has been a Facilities Management Analyst for Old Dominion University and a Property Control Officer for the State University of New York at Plattsburgh. He has served as a Legislative Aide to the New York State Senate Committee on Higher Education.