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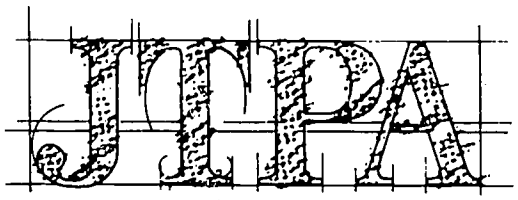
ABSTRACT

This guide is intended to assist states and service delivery areas (SDAs) in addressing the new oversight responsibilities and opportunities stipulated by the Job Training Partnership Act (JTPA) with respect to management information system (MIS) issues in evaluating JTPA programs. The first chapter discusses the general requirements of a JTPA MIS to support evaluation (communications capability, data processing flexibility, skilled staff, statistical software, and a decentralized MIS structure) and contains a supplemental data dictionary (containing participant master, service, and follow-up files and employer and subcontractor master files). The second chapter covers the following six steps in handling survey data: preparing a codebook, preparing data for entry, coding, entering data, using a computer to edit, and analyzing data. A supplement dealing with employer reports concludes the second chapter. The third chapter deals with the following aspects of using statistical software: file preparation for using statistical software, statistical software for microcomputers, and procedures for using statistical software. A supplemental demonstration of statistical software concludes the guide. (MN)



EVALUATION
DESIGN PROJECT

JTPA Evaluation at the State and Local Level

Volume VIII: MIS Issues in Evaluating JTPA

By David Grembowski

August 1986

Special appreciation is expressed to the National Commission for Employment Policy, for serving as the project's national sponsor and contributing substantial staff consultation to the project as it developed.

Project Development and Coordination:

Washington State Employment Security
Isiah Turner, *Commissioner*

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National Commission for Employment Policy
IBM Corporation
Washington State Employment Security

CONTEXT OF THIS VOLUME

This is one in a series of volumes produced by the JTPA EVALUATION DESIGN PROJECT.

PURPOSE AND PHILOSOPHY

The purpose of this project has been to develop a set of evaluation tools that are useful to states and local service delivery areas (SDAs) in judging the way their JTPA programs are being managed and the impact they are having. The intention has been to base these analytic and managerial tools on sound program concepts and research methods, and to design them such that the information obtained is of practical and direct use in improving JTPA policies and programs at the state and local level. This kind of information is also expected to make a unique contribution to national training policy and Federal oversight of JTPA.

It is hoped that these volumes will stimulate and support state and local evaluation efforts in JTPA, and promote more consistency than in previous programs with respect to the issues studied and the methods used to investigate them. An important goal is to encourage the generation of complementary information on program implementation and impact that is comparable across states and SDAs. Comprehensive, comparable information is essential to the development of a valid and reliable knowledge base for resolving problems and improving programs. It is also required for adjusting national training strategies to changing needs and priorities at the state and local level.

PRODUCTS

Consistent with this purpose and philosophy, the project has produced a set of materials to assist states and SDAs in evaluating their programs. These are to be useful in planning, designing and implementing evaluation activities. As an integrated collection, each set is developed to support comprehensive evaluations over the JTPA planning cycle.

The careful tailoring of these materials to state and local users is appropriate. JTPA represents a new employment and training policy shaped not only by the experience of managers and the perspectives of employers, but by scientific assessments of previous approaches for addressing unemployment, poverty and other barriers to economic security. In this context, the value of JTPA programs is also expected to be judged. In fact, the Act's assessment requirements are more explicit and sophisticated than those of any employment and training legislation to date. It clearly distinguishes between *monitoring* activities, whose purpose is to determine compliance (such as with performance standards) and *evaluation* activities, whose purpose is to determine how a program is being managed and implemented, and the kinds of effects it is having on recipients and relevant others. Equally significant, new constitutencies are expected to make these more rigorous assessments. States and SDAs now have this important responsibility. It is the first time in the history of employment and training programs that the Federal government's evaluation role has been significantly reduced.

This change affords states and local areas opportunities to influence public policy. It also requires them to assume new oversight responsibilities. Program evaluation is expected to become an integral part of the management of organizations administering, planning and delivering public training services. This is as it should be. The more information available at these levels, where changes in organizations can most readily be made, the more effective the management of JTPA programs. This project was undertaken in that context.

The evaluation tools produced by the project have been developed with a sensitivity to the differing needs, interests and resources of state and local users. They have been packaged into a single comprehensive and integrated set of volumes called *JTPA Evaluation at the State and Local Level*. The set contains planning and evaluation *guides* and *issue papers*. The following volumes are available in the set:

Volume	Author
I: Overview	Project Team
II: A General Planning Guide	Deborah Feldman
III: A Guide for Process Evaluations	David Grembowski
III Supplement: Some Process Issues at the State Level	David Grembowski
IV: A Guide for Gross Impact Evaluations	Carl Simpson
V: A Guide for Net Impact Evaluations	Terry Johnson
VI: An Implementation Manual for Net Impact Evaluations	Terry Johnson
VII: Issues Related to Net Impact Evaluations	
A. Issues in Evaluating Costs and Benefits	Ernst Stromsdorfer
B. The Debate Over Experimental vs. Quasi-Experimental Approaches	Ann Blalock
VIII: MIS Issues in Evaluating JTPA	David Grembowski

NOTE: Although each of the discrete products listed above is the responsibility of a single author, each seeks to incorporate the results of professional peer review, the many excellent recommendations of the advisory group, and the ideas and suggestions of the numerous practitioners interviewed in the process of developing these materials.

To further qualify these volumes, Volume III is accompanied by a supplement for state users. This is consistent with the significant differences between states and SDAs in the kinds of process issues that are most essential to study. The volume on net impact evaluations is sufficiently technical, because of the statistical methods involved, that a practical manual has been written to accompany it. This guide and manual tend to be more appropriate for states, since relatively large sample sizes are required for analysis. However, they are equally useful to larger SDAs and consortia of smaller SDAs which may want to jointly study the net impact of their programs. Regional evaluations, for example, can be very productive in providing management information relevant to regional labor markets. Although there is a separate issue paper on evaluating costs and benefits, this issue is also covered in the gross impact and net impact guides. In this respect, the user benefits from three related but different approaches to this important element of program evaluations. Also, the user should be aware that the Appendix of Volume II includes *A Report on a National/State Survey of Local JTPA Constituencies*. This survey was carried out by Bonnie Snedeker, with the assistance of Brian O'Sullivan, to provide additional input from practitioners to the development of the planning and process evaluation guides.

In conclusion, several expectations have directed the development of these volumes:

THE GUIDES

The General Planning Guide

This guide is to assist users in *planning, funding and developing an organizational capacity* to carry out process, gross outcome, and net impact evaluations and to *utilize their results*. Separate state and local versions are available.

The Evaluation Guides

These volumes are to have the following characteristics:

☐The guides are to *complement* one another.

- They are to provide information on program management and other characteristics of program implementation, which can:
  - —Describe the way in which administrative, managerial and service delivery policies and practices operate to affect outcomes, as a set of interventions separate from the program's services.
  - —Pinpoint the source, nature and extent of errors and biases for which adjustments must be made in gross and net impact evaluations.
  - —Help explain the results of gross and net impact evaluations.
- They are to provide information on aggregate gross outcomes, and outcomes differentiated by type of service and type of recipient, which can:
  - —Describe relationships between certain implementation modes and service strategies, and a broad array of client and employer outcomes.
  - —Help explain the results of net impact evaluations.
  - —Suggest the more important outcomes that should be studied in net impact evaluations.
  - —Help sort out those aspects of implementation that may be most critical to study in process evaluations.
- They are to provide information on net impact (the program's return on investment), which can:
  - —Closely estimate the effect of the program's services on clients.
  - —Suggest which services and client groups are most important to study in broader but less rigorous gross impact studies.
  - —Help identify the decision points in program implementation (particularly service delivery) which may be most important to study in process evaluations.

☐The guides are to enable the user to carry out *comprehensive assessments* of JTPA programs.

- They are to allow the user to acquire several different perspectives on the same program within a particular time period: on program implementation, on outcomes for clients and employers and on net impact.
- They are to permit the user to interrelate these different kinds of information to gain a wider understanding of what is happening in a program and why.

☐The guides are to describe approaches and methodologies as consistently as possible, to achieve *comparability*.

- They are to define variables and relationships as similarly as possible.
- They are to define research designs, and methods of data collection and analysis using as similar concepts as possible.

☐The guides are to *draw from past research* on employment and training programs, as well as seek *new* approaches and methods of specific value in evaluating JTPA at the state and local level.

- They are to replicate, to the extent possible and feasible, the issues and measures reflected in Federal monitoring and evaluation decisions.
- They are to make selective use of the results of relevant CETA studies, national studies of JTPA, and issue papers on JTPA evaluation by national public interest organizations in the employment and training area.
- They are to rely on the professional literature in applied social research.

THE ISSUE PAPERS

Volume VII contains two issue papers which serve as companion pieces to the preceding volumes on net impact evaluation. The first paper on cost-benefit issues is designed to help users identify, measure and analyze relationships between monetary and nonmonetary costs and benefits in determining the program's return on investment. The second paper examines the pros and cons of different research strategies associated with the net impact approach. The final volume on MIS issues is to assist users in better understanding how JTPA and other employment and training *management information systems* can efficiently support the evaluation of program implementation and impact.

THE SET OF VOLUMES

The set is *integrated*, but affords *flexible use*. The user can utilize the entire set for comprehensive evaluations over a two-year planning cycle or longer planning period, or the user can apply the information in each volume independently, based on the most pressing evaluation priorities and timeframes and given the extent of resources, during a particular fiscal year or biennium.

It should be understood that although evaluation products have been developed for JTPA, their basic principles and methods can be applied more broadly by states and local areas to evaluate other employment and training programs and other social programs.

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INTRODUCTION

With passage of the Job Training Partnership Act (JTPA) in 1982, Congress created new principles for organizing and operating the nation's largest employment and training program. States would assume greater administrative roles. Services to economically disadvantaged would be provided through local "service delivery areas" (SDAs). New partnerships would be formed between the private sector and state and local governments. Performance standards would be enforced. With the new principles, however, came very few details on implementing JTPA. No "how-to" books or other resources existed to guide implementation. States and SDAs soon realized that they were on their own, and that successful implementation of JTPA would be a learning process as they ventured into new administrative territory.

This is, in essence, what evaluation is, a learning process, that can be used to improve JTPA performance. However, many States and SDAs are unprepared to conduct evaluations of their JTPA programs. If each agency independently developed its own evaluation design, much duplication of effort and inconsistency in the designs might result. To correct this situation, the National Commission for Employment Policy funded the Washington State Employment Security Department to develop evaluation designs for use at the state and local level. The designs are intended to provide guidance and some uniformity to JTPA evaluation efforts across states and local areas.

Four evaluation guides of Title II-A programs exist: net impact evaluation, gross impact evaluation, and separate guides for local and state process evaluation. All four guides require data from the JTPA Management Information System (MIS). This volume provides JTPA MIS specifications for supporting the evaluation guides. If your current or future MIS fully or partially satisfies this volume's specifications, its functions expand from generating required reports to producing knowledge for decision-making. Thus, the MIS is a tool that local and state JTPA officials can use to learn how well their programs work and what can be done to improve them.

All of this is possible because of two revolutions in data processing. The first revolution was the birth of the microcomputer chip in the early 1970s and the gradual development of relatively low-cost personal computers. SDAs and subcontractors now have the data processing capability of monitoring and evaluating their own programs with their own personal computers. Such computational independence was virtually unknown in prior employment and training programs when access to data was restricted by sole reliance on centralized mainframe computers. With parallel advances in telecommunications, local administrators can use their PCs to access, retrieve and analyze JTPA data maintained in central data bases at the state level.

This revolution in hardware and communications would not have been much good without a parallel revolution in software, or the programs which personal computers use. A key advance was the development of data base

management system (DBMS) software for storing, accessing and manipulating data in a flexible manner. Administrators must no longer wait several weeks or months to obtain their reports; they can produce timely reports themselves from their own desktop computers. And, with more administrators involved directly in data processing, data processing staff have become busier than ever. In short, the hardware and software revolutions complement each other, and both are central features of this volume. Naturally, a well-designed MIS by itself does not guarantee ideal solutions for all of management's problems. But if the questions are appropriate and the data are available, an MIS with DBMS software can be one of local and state management's most powerful tools.

CHAPTER 1
GENERAL REQUIREMENTS OF A JTPA MIS SUPPORTING EVALUATION

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This chapter is divided into three sections. In the first section the general requirements of a JTPA MIS supporting evaluation are described. In the second section alternative MIS structures are discussed. The last section presents the "Data Dictionary" of the MIS, which defines the data elements needed for performing evaluations of JTPA programs.

GENERAL REQUIREMENTS

Six general requirements of the computerized JTPA MIS must be satisfied if states, SDAs and subcontractors are to perform impact and process evaluations of their respective programs. These are labeled as follows: 1) data needs, 2) MIS structure, 3) communications, 4) data processing flexibility, 5) statistical software and 6) skilled staff. Each requirement is discussed below.

Data Needs

The evaluation guides have specific information requirements. The net impact evaluation requires data from the JTPA MIS as well as other sources. The gross impact evaluation requires mainly JTPA MIS data, supplemented as needed by information collected through participant and employer surveys. Process evaluation uses a mixture of quantitative data from the MIS and qualitative data from other sources. The JTPA MIS must contain, or have access to, data elements that satisfy these requirements.

Exhibit 1 contains a list of the data elements, or variables, required by the net and gross impact evaluation guide.[1] UI data limitations will likely prevent most states from expanding the variable list for the state net impact evaluation. However, local administrators may wish to include other variables from the MIS in their gross impact evaluations. Local process evaluation requires all the variables in the gross impact column of Exhibit 1, plus any other variables in the MIS which may be relevant in a process evaluation.

In short, Exhibit 1 provides minimum data requirements; state and local officials may add variables to the list as needed. In either case, the computer must contain sufficient storage to record the variables over relevant periods for all participants included in the evaluation. In general, as the number of participants and variables and their length of storage increase, so will the costs of maintaining the MIS. However, these costs can be offset by the benefit of the information which these additional variables can produce in an evaluation. In constructing an MIS suitable for evaluation, state and local officials must seek a balance between the information needs of the evaluation and the various costs associated with satisfying those needs.

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[1] Exhibit 1 is based on the data requirements defined in the net and gross impact models. Please consult these volumes for more specific descriptions of these variables.

EXHIBIT 1

CROSSWALK BETWEEN THE IMPACT MODELS

VARIABLE *	LOCAL/STATE GROSS IMPACT MODEL	NET IMPACT MODEL
OUTCOME		
Whether employed	X	X
Earnings	X	X
Hourly wage	X	
Whether receiving welfare grants	X	X
Amount of welfare	X	X
Skill transfer	X	
Job quality	X	
Non-economic benefits	X	
TREATMENT		
Training vector: (0,1) Variables**	X	X
Classroom training-- remedial education	X	X
Classroom training-- institutional skills	X	X
OJT	X	X
JSA (all employment/placement related activities)	X	X
Work experience	X	X
Multiple activity variable	X	X
Other activity variable	X	X
Training intensity: **		
1-digit DOT code of training	X	X
Length of program participation in weeks	X	X
Number of hours of training per day	X	X
Whether complete treatment	X	X
Screening selection and intake services: **		
Whether participant received testing	X	X
Support services (0,1) variables: **		
Whether received transportation	X	X
Whether received child care	X	X
Whether received handicapped services	X	X
Whether received health care	X	X
Whether received meals/food	X	X
Whether received temporary shelter	X	X
Whether received financial counseling	X	X
Whether received clothes	X	X
Whether received other services	X	X

VARIABLE *	LOCAL/STATE GROSS IMPACT MODEL	NET IMPACT MODEL
CONTROLS		
Age	X	X
Sex	X	X
Race/ethnicity	X	X
Handicapped	X	
Veteran status	X	
Displaced homemaker	X	
Education	X	X
English-speaking ability	X	
Pre-JTPA earnings	X	
Pre-JTPA wage rate	X	
Pre-JTPA employment	X	
Pre-JTPA unemployment	X	
Welfare status	X	X
Marital status	X	X
Economically disadvantaged	X	X
Local unemployment rate	X	X
Average wage rate in area	X	X
Whether resides in an urban or rural SDA	X	
Labor market variables: a string of (0,1) variables indicating the market where the participant resides		X

* Please see the evaluation and implementation guides for precise definitions of these variables and the periods when each variable should be collected.

** Other variables may be also be listed in each guide.

The variables in Exhibit 1 must be generated from the data elements in the JTPA MIS. A list of these data elements and their definitions are presented at the end of this chapter in the Data Dictionary. The definitions are drawn from the Job Training Longitudinal Survey (JTLS) and JTPA-MIS guidelines issued by the Department of Labor. Each variable must be defined in the same manner across all SDAs and subcontractors in a state. This is particularly important for the net impact evaluation, where data from several SDAs are combined for analysis. If variables are defined differently across SDAs and subcontractors, the evaluation may produce erroneous conclusions. For example, one variable in the MIS might be "classroom training." In SDA I the classroom training variable contains a "1" for every participant who receives this service. In SDA II, however, the service is defined as classroom training plus job search assistance, and the classroom training variable contains a "1" for every participant that receives both services. The definitions of classroom training in the two SDAs differ, which can lead to misleading results and conclusions in a net impact evaluation. For similar reasons, variables should also be defined the same whenever gross impact results of several SDAs are compared. Some states may use different definitions than the ones presented in the Data Dictionary. In general, this should not be a problem if the definitions are used consistently across SDAs and subcontractors in a state.

MIS Structure

The structure, or configuration, of the MIS must support the evaluation models. A 1984 National Governors' Association state survey on JTPA management information systems reveals that two basic MIS structures exist, centralized or decentralized. Centralized structures usually consist of participant data for all SDAs stored on a mainframe computer located at the state (though some states have developed minicomputer systems). SDAs are usually connected to the mainframe through terminals, personal computers, or minicomputers. In some states SDAs have no access to the state computer but receive reports on a periodic basis. Few subcontractors likely have access to state systems unless the subcontractor is a state agency.

In decentralized structures, each SDA has one or more personal or minicomputers containing its participant data. The state's computer may or may not be linked to each SDA's computer. The most common decentralized structure is similar to Washington State's IBM personal computer system. The system's design and data definitions are established by the state, and both generally become standard across SDAs. Thus, the state and SDAs share control of the MIS: the state controls through system design, while the SDA controls through system operation.

Participant and financial systems are usually separate in both centralized and decentralized structures. In fact, the two systems sometimes exist on different computers. For example, some SDAs with a decentralized participant system have financial data maintained by the state. In short, participant and financial systems are usually separate but are configured in a variety of ways across SDAs and states. While existing JTPA MIS structures are not barriers to evaluation, their structures must be taken into account in designing a prototype MIS to support the evaluation guides.

Communications

Because implementation of JTPA is dispersed among state, SDA and subcontractor organizations, so is information about "what goes on" in the program. In the JTPA MIS, agencies must have mechanisms for communicating or transmitting data from one agency to another. In SDAs that subcontract intake, mechanisms must exist for transmitting application and enrollment data from the subcontractor to the SDA, regardless of whether the MIS has a centralized or decentralized structure. Different forms of data communication are possible:

- the subcontractor enters the applicant data into its own computer and transmits it to the SDA by telephone;
- the subcontractor is linked to the JTPA MIS and can enter applicant data directly into the MIS; or,
- the subcontractor sends the applicant forms to the SDA or state, which enters the data into the MIS.

Each subcontractor must also be able to access its data in the MIS. This is essential if subcontractors are to conduct gross impact and process evaluations of their own programs. Again, different MIS-to-subcontractor communications modes are possible, such as a direct communication line with the MIS or monthly extracts written on a floppy disk and mailed to the subcontractor for analysis on its personal computer.

Mechanisms must also exist for data communication between the SDA and the state. In centralized MIS structures each SDA must have the capability to enter and extract its data from the state data base. In decentralized MIS structures the state must be able to extract data from the SDA computer systems. Ideally, this is performed using telephone lines or other communication channels that link the SDA with the state MIS. However, other forms of data communication are possible, such as monthly extractions of requested data on floppy disks that are mailed between the state and SDA. In short, in decentralized structures, states need data from SDAs to perform state net impact evaluations; in centralized structures SDAs and subcontractors need data from the state to perform gross impact and process evaluations of their own programs.

These communication requirements apply to all of the evaluation guides. The net impact evaluation guide, however, has additional requirements. The net impact guide also requires data from unemployment insurance (UI) and welfare automated data systems. Assuming the net impact evaluation is performed at the state level, the state computer system must be capable of accessing data from these other systems. If the JTPA, UI and welfare data are all on the same computer, access to the appropriate data can usually be readily achieved. If the data reside on different computers, the UI and welfare data must be transmitted to the JTPA MIS using computer tapes or data communication channels. The implementation guide for the net impact evaluation examines these issues in greater detail.

Two issues usually determine whether inter-agency data communication occurs. The first issue is control. That is, the agency that controls the data may be reluctant to release them to other agencies, reducing the agencies' abilities to conduct evaluations of their own programs. The second issue is technical. In order for two computers to communicate, data must have standard formats, such as ASCII. Proper system design and having the same brand of computer equipment across agencies can overcome this potential problem.

Data Processing Flexibility

All forms of evaluation require the freedom to manipulate and analyze data in a variety of ways. To satisfy this requirement the JTPA MIS must employ software known as a data base management system (DBMS). In most computer systems in JTPA, data are distributed across several files. A DBMS can access data across files through relatively simple data retrieval commands that can be applied in a wide variety of data processing environments. The commands selectively pool information from the DBMS files into a form that satisfies the analyst's information needs. Further, a DBMS is adept in modifying files after they are created. Variables and records may be freely entered and deleted from previously developed files. In short, a DBMS provides a flexible mode of data processing capable of addressing the information requirements of the evaluation guide.

DBMS software commonly used on mainframes includes ADABAS, DATACOM, IDMS, IMS, SYSTEM 2000, TOTAL and several others. Personal computer DBMS software includes RBASE 5000, REVELATION, DATAFLEX, DBASE III, HELIX, ORACLE, and many others. Each software package has its own strengths and weaknesses; they are by no means equal. However, a JTPA MIS using DBMS software should provide the data processing flexibility required by the evaluation guides.

Some agencies may not have DBMS software in their MIS, and the costs of adding the software to their information systems may be prohibitive. When a DBMS is not possible, a satisfactory alternative is to develop user-friendly, general-purpose computer programs for extracting data from the data base. The user, who may be a computer programmer or a JTPA administrator, supplies the program with a list of desired data items and other parameters, and the program retrieves the requested data items from the data base and writes them onto an output file for subsequent analysis.

Statistical Software

Although DBMS software is adept in manipulating data and generating report lists, it does not have the capability of performing the statistical analyses required by the evaluation guides. Therefore, the JTPA MIS should also include statistical software, such as SPSS, SAS, SYSTAT, or other major brand. SPSS, for example, has developed a statistical package that runs on most mainframes and IBM-compatible personal computers. Chapter 3 presents examples of SPSS programs used to examine JTPA participant data.

Skilled Staff

Satisfying the above requirements will be of little value if skilled staff are not available to perform data processing. This does not necessarily mean that staff with computer science degrees are needed

for data processing to support evaluation. In gross impact and process evaluations, for example, the chief skill requirement is experience with DBMS and statistical software packages. States may wish to offer technical assistance to SDAs and subcontractors in the area of software use. The state net impact evaluation, however, will likely require data processing personnel to combine the UI, welfare and JTPA data sets into a form required for performing the evaluation.

MIS STRUCTURE

Centralized MIS Structure

In this guide "structure" refers to the components of the information system and how data are organized into files. The former may be one of two basic types, centralized or decentralized. A centralized structure is presented in Exhibit 2. The centralized MIS features a mainframe (or mini) computer containing the JTPA MIS, located at the state level. The MIS uses DBMS and statistical software. The MIS contains the participant system as well as data required for the cost analysis and benefit-cost analysis (see Issues in Evaluating Costs and Benefits, Volume VII). The latter data are transmitted to the state by each SDA, which operates its own financial system. However, in some states (such as those with no SDAs) the financial system is either a part of the centralized JTPA MIS or located on a separate computer at the state level. In the latter case a communication interface links the JTPA MIS with the financial system (if needed) as well as the UI and welfare systems. As mentioned earlier, this interface may be either a direct communication channel or tape transfer.

Evaluation can occur at each level--state, SDA and subcontractor. States use the JTPA MIS to perform state process evaluations and state gross and net impact evaluations. SDAs and subcontractors can perform process and gross impact evaluations of their respective programs. In this case, communication links connect the state JTPA MIS with all SDAs and, in some cases, selected contractors, such as a local Job Service office. Different links may exist, such as follows:

- Local offices use terminals or PCs to access the data base, and all analyses are performed on the mainframe computer. Communication is through telephone lines (or other electronic medium). Security controls in the DBMS permit each SDA to access only its data. The DBMS does not allow SDAs either to delete data from the data base or to modify existing records. Thus, while SDAs and subcontractors can add new records to the data base, they can only "read" data after they are entered.

- Telephone lines (or other electronic medium) are used to transfer data from the state MIS to the SDA's or subcontractor's PC or minicomputer.

- Each month the state provides each SDA with a floppy disk(s) containing all data entered into the MIS during the period. SDAs analyze the data on their own PCs or minicomputers.

Periodic reports, one method of state-to-local data transfer, are not included because they do not satisfy the information requirements of the local evaluation guides.

Different types of SDA-subcontractor communication channels exist as shown in Exhibit 2. SDA I provides its subcontractors only with paper reports; subcontractors can only perform crude evaluations of their programs. After receiving its data from the State, SDA II relays appropriate data to each subcontractor using floppy disks. Subcontractors perform their own evaluations using their own PCs. In SDA III the Job Service subcontractor has a direct communication line to the SDA's computer for accessing its data. In short, if subcontractors are to gain access to MIS data in most states, the data must first be transferred to the local-level--usually the SDA--and the SDA must then grant its subcontractors access to the data through one mechanism or another. Thus, while data redundancy is inevitable under this arrangement, it gives service providers the information they need to evaluate their programs.

Decentralized MIS Structure

The distinguishing features of the decentralized MIS structure are that 1) each SDA operates its own MIS, and 2) communication channels link SDA computer systems with the state (see Exhibit 3). SDA data are transmitted to the state either over telephone lines or through mail delivery of floppy disks. The state computer has interfaces with the UI and welfare data bases for performing net impact evaluations.

A decentralized MIS can be created in several ways, as shown in Exhibit 3. In SDA I a minicomputer holds its JTPA MIS, which includes the DBMS for the participant and financial systems as well as statistical software. The minicomputer has "multi-user software" that allows subcontractors and the state to access the data base simultaneously through terminals or PCs. These agencies communicate with the minicomputer using a telephone and a modem.

SDA II also operates a minicomputer, but it does not permit outside access to the data base. However, the state and subcontractors regularly request data from the MIS, which the SDA provides on floppy disks.

The bottom half of Exhibit 3 presents an SDA MIS using personal computers and a local area network. Although participant and financial systems are separate, both data sets are stored on a single hard disk. (The financial system could be located on a different computer.) The size of the disk varies with the size of the SDA, but disks with 50-80 megabytes of storage should be adequate for most SDAs. Personal computers located at the SDA, subcontractor and state levels form a "local area network;" each PC in the network gains access to the data base through the network's "file server." The file server, which is actually a PC with local area network software, acts as the gatekeeper. It regulates access to the data base throughout the network. Using a telephone modem, state officials and subcontractors with PCs can enter the network and access the data base. Each PC must use common DBMS and financial software to gain entry.

EXHIBIT 2
CENTRALIZED JTPA MIS

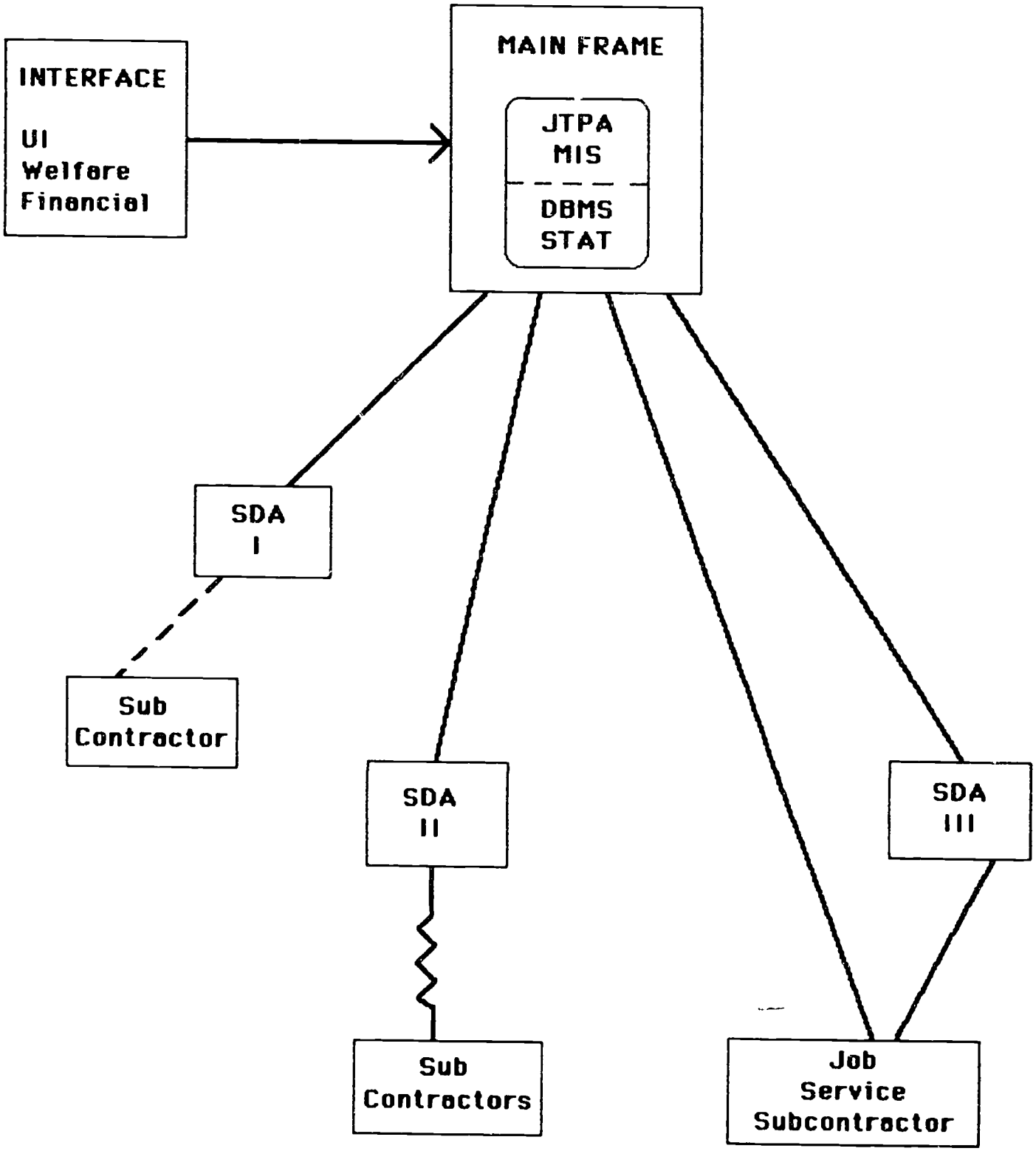

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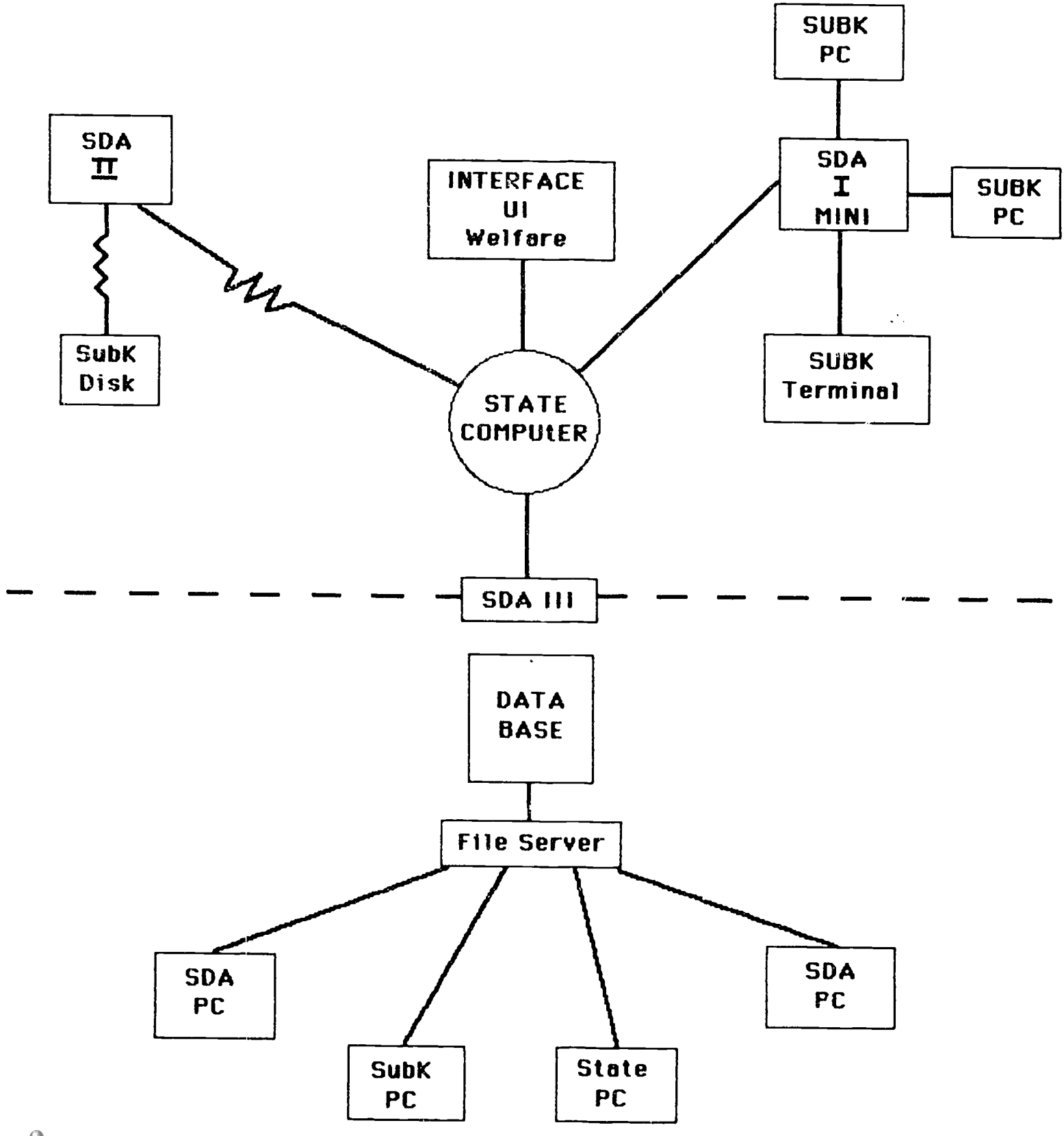
EXHIBIT 3
DECENTRALIZED JTPA MIS



File Structure

Different file structures are possible in the JTPA MIS data base. Only one file structure is described in this section; it can be used in both centralized and decentralized systems.

JTPA data bases in most states have more complex file structures than the one described here. Our intent is not to describe the ideal JTPA MIS, but rather to identify elements that are essential to performing evaluation. In short, even though your state's file structure may not exactly match the one described below, it can likely meet the information requirements for evaluation if 1) the DBMS can flexibly interrelate data, 2) all required data elements are present somewhere in the system, and 3) appropriate statistical software is also present.

For evaluation purposes the JTPA MIS contains the following six files. The variables in each file are defined at the end of this chapter.

JTPA MIS FILES

1. Participant Master File (containing application and termination information)

2. Participant Service File (containing training and support service information)

3. Participant Follow-Up File (containing information on each follow-up)

4. Employer Master File (containing information on local employers)

5. Staff Master File (containing information on SDA and subcontractor staff who serve participants)

6. Subcontractor Master File (containing information on SDA subcontractors)

The DBMS uses common identifiers to interrelate data in one file with data in another file. For example, if the Participant Master File and the Participant Service File both contain the participant's ID, the DBMS can interrelate master file data with service file data. This is essential to performing gross impact evaluation, where we are interested in correlating the services participants receive (Service File) with their outcomes (Participant Master File). The common identifiers are presented in Exhibit 4. Note that by placing the staff ID in each file, JTPA administrators can examine staff responsibilities and performance regarding intake, service delivery to participants and employers, and follow-up. By including a subcontractor ID in the Participant Services File, as another example, SDAs can examine service delivery and gross impacts for each subcontractor.

The Data Dictionary of a JTPA MIS supporting evaluation is presented in Exhibit 5. In reviewing the Dictionary, there may not be a one-to-one correspondence between the variables listed in Exhibit 1 and their definitions in the Data Dictionary. For example, "age" appears in

Exhibit 1, but "birth date" appears in the Data Dictionary. Before the impact evaluation can be performed, the Data Dictionary variables must be converted into the proper form required by the impact model. Such data conversions can usually be performed either by the DBMS or statistical software.

Most of the data elements in the Data Dictionary are collected through various forms, such as the participant's application form. However, JTPA administrators may wish to add data about local employers or perform a follow-up survey of participants. These data can also be added to the JTPA data base and be incorporated into the Data Dictionary. The next chapter discusses how.

EXHIBIT 4

DBMS FILE IDENTIFIERS

PARTICIPANT MASTER FILE	PARTICIPANT SERVICE FILE	PARTICIPANT FOLLOW-UP FILE	EMPLOYER MASTER FILE	STAFF MASTER FILE	SUBCONTRACTOR MASTER FILE
Client ID	Client ID	Client ID	Employer ID	Staff ID	Subcontractor ID
Employer ID at Placement	Employer ID (OJT/WE)	Employer ID at Follow-up	Staff ID	Subcontractor ID	
Staff ID	Staff ID	Staff ID			
	Subcontractor ID				

Supplement

Data Dictionary

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
SSN	1	9	Social Security Number: The nine digit identification number assigned to the participant by the Social Security Administration.
Application date	2	6	The calendar date when the individual completed the application, coded as: YYMMDD = calendar date, where YY = year (1984=84; 1985=85; etc.), MM = month (01,02,...12) DD = day (01,02,...31)
Enrollment date	3	6	The calendar date when the individual was enrolled as a participant, coded as above.
Birth date	4	6	The individual's date of birth, coded as: YYMMDD = calendar date, where YY = year (1984=84; 1985=85; etc.), MM = month (01,02,...12) DD = day (01,02,...31) DBMS software is used to convert the birth date into current age.
Sex	5	1	The individual's sex, coded as: 1 = Male 2 = Female
Race	6	1	Race - ethnic group: one of the following categories which most closely reflects the individual's race/ethnic group: 1 = White, not Hispanic - A person having origins in any of the original peoples of Europe, North Africa or the Middle East.

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Race (Continued)			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 (including Spain), regardless of race. Among persons from Central American countries, only those who are of Spanish origin, descent, or culture should be included in the Hispanic category. Persons from Brazil, Guiana, and Trinidad, for example, would be classified according to their race, and would not necessarily be included in the Hispanic category. Also, the Portuguese should be excluded from the Hispanic category and should be classified according to their race. 4 = Native American - A person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition. 5 = Asian or Pacific Islander- A person having origins in any of the original people of the Far East, Southwest Asia, the Indian Subcontinent (e.g., India, Pakistan, Bangladesh, Sri Lanka, Nepal, Sikkim, and Bhutan), or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, and Samoa. Hawaiian natives are to be recorded as Asian or Pacific Islanders.

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Education	7	1	The highest school grade completed under only <u>one</u> of the following categories: <u>1 = School Dropout</u> - The individual who is neither attending nor enrolled in any school and has not received a high school diploma or a General Education Development (GED) Certificate. <u>2 = Student High School or Less</u> - The individual who is enrolled in an elementary or secondary school (including elementary, junior and senior high school or equivalent), or is between school terms and intends to return to elementary or secondary school. <u>3 = High School Graduate or Equivalent, No Post High School</u> - The individual has received a high school diploma or GED Certificate, but has not attended any post-secondary vocational, technical, or academic school. <u>4 = Post-High School Attendee</u>- The individual is attending, or has attended, a post-secondary vocational, technical, or academic school.
Prior JTPA	8	1	Indicator of prior participation in JTPA, coded as: 1 = if the individual has ever participated in any JTPA funded activities, either within or outside the local area. 2 = otherwise

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Handicapped	9	1	Whether the individual has a handicap that constitutes or results in a substantial handicap to employment, coded as: 1 = Physical - The applicant has a physical handicap which may limit work activity such as deafness, hardness of hearing, speech impairment, serious difficulty in seeing or blindness, arthritis, rheumatism, state of being crippled, trouble with back, heart or chronic respiratory, digestive, or nervous system disorders. 2 = Mental - The applicant has mental handicaps which may limit work activities such as anxiety neurosis, personality disorder, epilepsy or mentally retarded on the basis of medical records, school records, or diagnosis by psychiatrists, psychologists, rehabilitation agencies, or sheltered workshops. 3 = Not Applicable - The applicant does not have a handicap which limits work activities.
Limited English	10	1	Limited English language proficiency - the individual that is not English and has the inability to communicate in English, resulting in a job handicap, coded as: 1 = Limited English 2 = otherwise

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Displaced Homemaker	11	1	An individual who: (a) has not worked in the labor force for a substantial number of years but has, during those years, worked in the home providing unpaid services for family members; and (b) (1) has been dependent on public assistance or an income of another family member, but is no longer supported by that income; or (2) is receiving public assistance on account of dependent children in the home, especially where such assistance will be terminated; and (c) is experiencing difficulty in obtaining or upgrading employment; coded as: 1 = Displaced homemaker 2 = otherwise
Displaced Worker	12	1	An individual who: (a) has been terminated or laid off or who has received a notice of termination or lay-off from employment is eligible for or has exhausted entitlement to Unemployment Compensation, and is unlikely to return to his/her previous industry or occupation; or (b) has been terminated, or has received a notice of termination of employment, as a result of any permanent closure of a plant or facility; or (c) is a long-term unemployed and has limited opportunities for employment or reemployment in the same or similar occupation in the area in which such individual resides, including any older

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Displaced Worker (Continued)			individual who may have substantial barriers to employment by reason of age; coded as: 1 = Displaced worker 2 = otherwise
Migrant/Seasonal Farm Family	13	1	The individual is a member of a migrant/seasonal farm family where: Seasonal Farmworker - means a person who, during the 12 months preceding application was employed at least 25 days in farmwork or earned at least $400 in farmwork; and who has been primarily employed in farmwork on a seasonal basis, without a constant year-round salary from one employer; Migrant Farmworker - means a seasonal farmworker who performs or has performed farmwork during the preceding 12 months which requires travel such that the worker is unable to return to his/her domicile or permanent place of residence within the same day; Farmwork - means work performed for wages in agricultural production or agricultural services as defined in the most recent edition of the Standard Industrial Classification (SIC) Code definitions included in Industries 01-Agricultural Production -Crops; 02-Agricultural Production-Livestock excluding 027-Animal Specialities; 07-Agricultural Services excluding 014-Veterinary Services, 0752-Animal Speciality Services, and 078-Landscape and Horticultural Services; and coded as: 1 = MSF family member 2 = otherwise

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Family Size	14	2	The total number of persons who are part of the applicant's family. Persons sharing a principal residence who are related to each other by blood, marriage or adoption (a step child or step parent shall be considered related by marriage). Persons not residing with a family member shall be considered a family of one. In addition, the following persons may be considered a family of one: 1. A person 18 years or older who resides with persons related by blood or adoption and who has had any income totaling more than 60 percent of the OMB Poverty Income level guidelines for a family of one within the last six months; 2. A resident in a publicly supported institution; and 3. A handicapped individual 16 years or older. 4. An older individual, as defined in Section 124(d) of the Act, who is residing with other family members. NOTE: Institution is a publicly supported facility such as a prison, mental hospital, school or group home which provides 24-hour support for residents. A handicapped individual has a physical or mental disability which for that person constitutes or results in a substantial handicap to employment.

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Family Status	15	1	The individual's status in his or her family, coded as: 1 = Single Parent with One or More Dependent(s) Under Age 6. A single, abandoned, separated, divorced, or widowed individual who has responsibility for support of one or more dependent children under age six. NOTE: If the individual is a single parent and has dependent children who are over and under age six, record in this time only. 2 = Single Parent with One or More Dependent(s) Age 6 or Over. A single, abandoned, divorced, or widowed individual who has responsibility for support of one or more dependent children age six or over. 3 = Parent in Two-Parent Family. A parent in a family of three or more where both parents are present. 4 = Other Family Member. A member of a family of two or more persons, but not a parent. This would include married persons with no dependents living in the household. 5 = Nondependent Individual. The applicant is either (1) 18 or older and living with his/her family, receiving less than 50 percent maintenance from the family and not one of the parents of the family; or

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Family Status (Continued)			(2) 14 or older and not living with his or her family and is receiving less than 50 percent maintenance (e.g., food, shelter, clothing, etc.) from the family; or (3) a foster child on behalf of whom state or local government payments are made. All such applicants should be considered as families of one for determining Economically Disadvantaged, Underemployed and Lower Living Standard Income Level Status, if the individual (except for a foster child) has been in this status for the income determination period. (Older workers and handicapped individuals 22 years of age or older are included here if the applicant is considered a family of one for purposes of eligibility.)
Teenage Parent	16	1	Any individual, under 20 years of age, who has responsibility for support of one or more dependent children, coded as: 1 = teenage parent 2 = otherwise
Veteran Status	17	1	Whether the individual served in the active military and was discharged under conditions other than dishonorable, coded as: 1 = veteran 2 = otherwise

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Public Assistance	18	1	Whether the individual is receiving public assistance, such as AFDC, Refugee Assistance, General Assistance, Food Stamps, or Foster child payments; coded as: 1 = Yes 2 = No
Welfare Case ID	19	10	The individual's welfare identification number, coded as: XXXXXXXXXX = Number
Welfare Grant Amount	20	3	Welfare dollars the individual receives monthly, coded as: XXX = dollars (expressed in dollar units)
Unemployment Compensation Status	21	1	The individual's UI status at application, coded as: 1 = Eligible Claimant. The applicant has filed a claim and has been determined monetarily eligible for, or is receiving benefit payments under one or more state or federal unemployment compensation program(s), and who has not exhausted benefit rights or whose benefit year has not ended. 2 = U.C. Exhaustee. The applicant has exhausted his/her U.C. benefit rights (not including Federal Supplemental Additional, or Extended Benefits) for which the applicant has been determined monetarily eligible. 3 = Not Applicable. The applicant is not classified as an eligible claimant or a U.C. Exhaustee.

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Amount of Unemployment Compensation	22	2	Weekly amount of unemployment compensation, coded as: XX = dollars (expressed in dollar units)
Labor Status	23	1	The individual's status in the civilian labor force, coded as: 1 = Employed - The applicant is employed full-time or part-time. A person who is working part-time is considered to be employed. This means: a. An individual who, during the seven consecutive days prior to application to a JTPA program, did any work at all: (1) as a paid employee; (2) in his/her own business, profession, or farm; or (3) worked 15 hours or more as an unpaid worker in an enterprise operated by a member of the family. b. An individual who was not working, but has a job or business from which he or she was temporarily absent because of illness, bad weather, vacation, labor management dispute, or personal reasons, whether or not paid by the employer for time off, and whether or not seeking another job. (This term includes members of the Armed Forces who have not been discharged or separated; participants in registered apprenticeship programs; and self-employed individuals.)

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Labor Status (Continued			2 = Unemployed - The applicant is an individual who did not work during the seven consecutive days prior to application, who made specific efforts to find a job within the past four weeks prior to enrollment, and who was available for work during the seven consecutive days prior to enrollment (except for temporary illness) is considered to be unemployed. A full-time student who was available for work during this seven-day period may be classified as unemployed. Also record the number of weeks the applicant has been unemployed in the immediate 26-week period prior to application. 3 = Not in Civilian Labor Force - Enter "3" if applicant is a civilian 16 years of age or over who is not classified as employed or unemployed. This term includes persons who never worked at a full-time job lasting two weeks or longer. 4 = Military employment - applicant is employed in the National Guard, Military, or Naval and Air Force Reserve.
Last Job DOT Code	24	3	The three digit Dictionary of Occupational Titles (DOT) Code for the last job in the last 15 weeks prior to application, coded as: XXX = DOT Code 888 = if no job in last 13 weeks
Last Hourly Wage	25	4	The hourly wage for the last job in the past 13 weeks prior to application, coded as: XX.XX = Wage 88.88 = no job in last 13 weeks

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Hours Per Week	26	2	Hours worked per week for the last job in the last 13 weeks prior to application, coded as: XX = hours 88 = no job in last 13 weeks
Weeks Employed	27	2	Number of weeks employed in the last 13 weeks, coded as: XX = weeks worked 88 = not employed
Weeks Unemployed	28	2	Number of weeks unemployed in the last 26 weeks prior to application (if more than 26, code as 26): XX = weeks unemployed 88 = not out-of-work
Layoff Notice	29	1	Indicates whether the individual received a layoff notice and why, coded as: 1 = Plant closure 2 = Job eliminated 3 = Other reason 4 = Did not get layoff notice
Termination Date	30	6	The calendar date when the participant completed his or her program and exited JTPA, coded as: YYMMDD = calendar date, where YY = year (1984=84; 1985=85; etc.), MM = month (01,02,...12) DD = day (01,02,...31)
Labor Force Status at Termination	31	1	The individual's status in the labor force at termination, coded as: 1 = employed full-time 2 = employed part-time 3 = unemployed 4 = not in labor force 5 = military 6 = unknown

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Termination Status	32	2	The individual's status, or reason for termination, coded as:

ADULT POSITIVE TERMINATION

10 = Entered Unsubsidized Employment. Adult participant entered (through efforts of the subrecipient or otherwise) Full-time or part-time unsubsidized employment after participation in the subrecipient's program. Unsubsidized employment means employment not funded from Funds provided under the Act. Where a wage is paid, that wage must not be lower than the applicable state or Federal minimum wage guidelines.

1. To be considered employed part-time, terminees must work 20 hours or more per work week. The following groups constitute exception to this rule, and must work 10 hours per week:

(a) in full-time school (as defined by the school); (b) severely disabled (as defined by the Department of Vocational Rehabilitation (DVR); and (c) persons aged 55 or older.

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Termination Status (Continued)			11 = Self-employment. For the purpose of Entered Unsubsidized Employment, self-employment requires earnings of at least equal to the federal minimum wage multiplied by 20 hours. Earnings can be averaged over a period of one month in calculating this amount, but some regular hours operation must be obtained. 12 = Entered Armed Forces. 13 = Entered into a registered apprenticeship. YOUTH POSITIVE TERMINATIONS 20 = Entered Unsubsidized Employment. Participant entered (through efforts of the subrecipient or otherwise) full-time or part-time unsubsidized employment after participation in the subrecipient's program. Unsubsidized employment means employment not funded from funds provided under the Act. Where a wage is paid, that wage must not be lower than the applicable state or Federal minimum wage guidelines. 1. To be considered employed part-time, terminees must work 20 hours or more per work week. The following groups constitute exceptions to this rule, and must work 10 hours per week: (a) in full-time school (as defined by the school); (b) severely disabled (as defined by the Department of Vocational Rehabilitation (DVR); and (c) persons aged 55 and older.

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Termination Status (Continued)			21 = Registered Apprenticeship. Employment, under an officially authorized apprenticeship program plan, during which a worker will receive training in a skill with not less than 2,000 hours of unsubsidized OJT and related theoretical instruction. (For youth only.) 22 = Armed Forces. Employment as a member of the Armed Forces on active duty. (For youth only.) The minimum wage requirement does not apply in this instance. 23 = Entered Non-Title II Training. Entered an employment/training program not funded under Title II of the JTPA. 24 = Youth Employability Enhancement Termination for 14-15 Year Olds. Age 14-15 completed program objective. 25 = Returned to Full-time School. Returned to full-time school, if at the time of eligibility determination, the participant was not attending school and had not obtained a high school diploma or equivalent. 26 = Completed Major Level of Education. Completed, during enrollment, a level of education achievement which had not been reached at the time of entry. Levels of educational attainment are elementary, secondary, and post-secondary.

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Termination Status (Continued)			27 = Attained Youth Employment Competencies Recognized by Private Industry Council. OTHER TERMINATIONS: ADULT AND YOUTH 30 = Other Terminations. A participant who left the SDA Grant recipient's/subrecipient's program for a successful or negative termination reason other than those above. 31 = Intertitle Transfer. Participants transferred to another title or subpart within the program operated by the SDA. 32 = Full-Time School. Entered or continued full-time in secondary or post-secondary academic or vocational school and does not fit under Term Code 25. 33 = Enter Other Employment/Training Program. Entered an employment/training program not funded under JTPA or a JTPA funded program not operated by the same SDA. NOTE: Termination types 31, 32, and 33 are considered positive terminations for Title 2B. 34 - Completed Program Objectives. Completed program objectives not involving entrance into subsidized employment and does not fit under Term Code 26.

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Termination Status (Continued)			35 = Health/Pregnancy 36 = Family Care Problems 37 = Transportation Problems 38 = Moved From Area 39 = Refused to Continue 40 = Administrative Separation 41 = Cannot Locate 42 = Found Ineligible 50 = Other
Placement DOT Code	33	3	The 3-digit Dictionary of Occupational Titles Code for the individual's job at placement, coded as: XXX = DOT code 888 = if not employed
Placement Start Date	34	6	The date when the individual starts the job, coded as: YYMMDD = start date when 888888 = not placed
Placement Hourly Wage	35	4	The hourly wage of the job at placement, coded as: XX.XX = hourly wage 88.88 = not employed
Placement Hours Per Week	36	2	Number of hours worked per week at placement, coded as: XX = weekly hours 88 = not employed
First Youth Competency Attained	37	1	Indicates whether youth attained first competency defined by PIC, coded as: 1 = Yes 2 = No 8 = Not applicable
Second Youth Competency Attained	38	1	Same as above, but for second youth competency.
Third Youth Competency Attained	39	1	Same as above, but for third youth competency.
Fourth Youth Competency Attained	40	1	Same as above, but for fourth youth competency.

DATA DICTIONARY

PARTICIPANT MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Fifth Youth Competency Attained	41	1	Same as above, but for fifth youth competency.
Sixth Youth Competency Attained	42	1	Same as above, but for sixth youth competency.
Received GED	43	1	Whether the participant received a GED, coded as: 1 = Yes 2 = No

DATA DICTIONARY

PARTICIPANT SERVICE FILE*

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
SSN	1	1	Social security number of the participant receiving the service.
Employer ID	2	--	The employer identification number, if the service is provided through an employer, such as OJT. The length of this field may vary from state to state.
Title	3	2	The JTPA Title in which the participant is enrolled, coded as: 10 = Administration 20 = Adult and Youth 30 = Older Worker 40 = Education 50 = Incentive 60 = Summer Youth 70 = Dislocated Worker
Counselor ID	4	2	The identification number (or first and last initials) of the applicant's counselor.
Subcontractor ID	5	--	The identification number of the subcontractor performing the service, if applicable. Length of field depends on state and local reporting conventions.
Screening Services	6	1	Whether the participant was screened comprehensively, including job counseling and testing, to determine what employment and training and support services he or she should receive. Here, job counseling includes assessing (including testing) the participant's aptitudes, skills, abilities and interests in relation to the labor market and training opportunities, and assisting the participant in developing job goals and objectives. Screening services is coded as: 1 = Yes 2 = No

* The "service" may be an employment and training activity or a support service. The file contains one record for each activity and service that a participant receives.

DATA DICTIONARY

PARTICIPANT SERVICE FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Activity/Support Service Type	7	3	The three-digit code for the activity/support service which the participant is enrolled in, coded as: ACTIVITY 100 - Classroom Training-Educational This category includes academic instruction in a classroom setting leading to some prescribed certification (diploma, degree) and/or is designed to prepare the participant for further training, future employment, or advancement in present employment. 200 = Classroom Training-Skills This category includes vocational instruction in a classroom setting designed to teach the work tasks of a particular job or group of jobs such as auto mechanics, health services, or clerical training. 300 = Combination of CTE and CTS This category includes classroom instruction that is considered both academic and vocational training. 400 = On-The-Job Training Training conducted in a work setting to enable individuals to learn a skill and qualify for a particular occupation through demonstration and practice is considered on-the-job training.

DATA DICTIONARY

PARTICIPANT SERVICE FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Activity/Support Service Type (Continued)			500 = Work Experience Participants are involved in short term or part-time work assignments with an employing agency. 600 = Job Search Assistance This category includes any service or activity that helps a participant seek, locate, apply for and obtain a job. It can include job clubs/classes/clinics/workshops in job-finding skills, orientation to the labor market, job development, referrals to job openings, and relocation assistance. 666 = Other activity. NOTE: You may have several more activity codes than the ones listed here. If so, you will need to categorize them into the above groups. SUPPORT SERVICE 705 = Transportation 710 = Health Care 715 = Handicapped Services 720 = Child Care 725 = Meals/Food 730 = Temporary Shelter 735 = Financial Counseling 740 = Clothes 750 = Other
Start Date	8	6	The actual date the participant entered the activity or began receiving the support service, coded as: YYMMDD = date

DATA DICTIONARY

PARTICIPANT SERVICE FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
DOT Code	9	3	The three-digit Dictionary of Occupational Titles Code for the training the participant receives, coded as: XXX = DOT code 888 = Not applicable (e.g., entry is for a support service.)
Total Hours NOTE: Weeks could also be used to measure length of program participation.	10	3	The total number of hours that the participant was in the activity, coded as: XXX = Hours 888 = Not applicable
Daily Hours	11	2	Number of hours of training received per day, coded as: XX = Hours 88 = Not applicable
Hourly Wage	12	4	The hourly wage paid to the participant during the activity, coded as: XX.XX = Wage 88.88 = Not applicable
Received Academic Credit	13	1	Whether the participant received any official academic credit for the activity, coded as: 1 = Yes 2 = Otherwise 8 = Not applicable
Activity/Support Service and Date	14	6	The date the participant leaves the activity or the support service terminates, coded as: YYMMDD = Date

DATA DICTIONARY

PARTICIPANT SERVICE FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Activity Status	15	1	The participant's status after leaving the activity, coded as: 1 = left activity and completed satisfactorily 2 = Left activity and did not complete satisfactorily 3 = Inactive 8 = Not applicable (support service)

DATA DICTIONARY

PARTICIPANT FOLLOW-UP FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
SSN	1	9	The participant's social security number, coded as: XXXXXXXXX = SSN
Follow-up Week	2	2	Follow-up is the organized procedure of communicating with terminated participants, or employers, to determine the participant's post-JTPA status. Job retention is defined as having a job both at termination and at specific weeks following termination. Follow-up week indicates the number of weeks since termination when the follow-up is performed, coded as: XX = number of weeks
Type of Follow-up Contact	3	1	The type of contact may be coded into the following categories: 1 = Participant The terminee was successfully contacted and the terminee as able to answer what his or her labor status was (along with the other follow-up information) for a specific week following termination. 2 = Employer An employer was successfully contacted and the employer was able to establish the labor status (along with the other follow-up information) of the terminee for a specific week following termination. 3 = No Successful Contact The labor status of the terminee for a given week following termination could not be established.

DATA DICTIONARY

PARTICIPANT FOLLOW-UP FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Labor Force Status	4	1	The labor force status of the terminee at the time of contact, coded as: 1 = Employed full-time 2 = Employed part-time 3 = Unemployed 4 = Not in labor force 5 = Military 9 = Unknown

NOTE: Depending on the response in field 4, some or all of the remaining data elements may contain not applicable codes. "At the time of contact" means the specific week following termination, such as the 13th week.

Total Weeks Employed	5	2	Total number of weeks worked between the date of termination and the present contact, coded as: XX = Weeks
Weekly Earnings	6	3	The total weekly earnings of the terminee at the time of contact, coded as: XXX = Dollars
Same Employer?	7	1	Whether the terminee is working for the same employer as the employer at time of termination, coded as: 1 = Yes 2 = No, working for a different employer 3 = No, Unemployed or not in labor force
DOT Code	8	3	The 3-digit Dictionary of Occupational Titles Code for the terminee's job at this contact, coded as: XXX = DOT Code

DATA DICTIONARY

PARTICIPANT FOLLOW-UP FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Hours - Current Job	9	2	If employed, the number of hours worked per week at this contact, coded as: XX = Hours
Wage - Current Job	10	2	If employed, the hourly wage of the terminee at this contact, coded as: XX.YY = Wage, where XX are dollar units and YY are cents.
Hours - Last Job	11	2	If not working, the number of hours worked per week at last job, coded as: XX = Hours 88 = Never employed since termination
Wage - Last Job	12		If not working, the hourly wage at last job, coded as: XX.XX = Wage 88.88 = Never worked since termination
DOT Code - Last Job	13	3	The three-digit DOT code of the terminee's last job, coded as: XXX = DOT Code 888 = Never worked since termination
Public Assistance	14	1	Receiving public assistance at time of contact, coded as: 1 = Yes 2 = No
Monthly Amount of AFDC	15	3	If receiving public assistance, the terminee's monthly AFDC grant, coded as: XXX = Dollars (expressed in dollar units)

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Monthly Amount of General Assistance	16	3	If receiving public assistance, the terminee's monthly general assistance grant, coded as: XXX = Dollars (expressed in dollar units)
Monthly Amount of Refugee Assistance	17	3	If receiving public assistance, the terminee's monthly general assistance grant, coded as: XXX = Dollars (expressed in dollar units)
Monthly Amount of SSI	18	3	If receiving public assistance, the terminee's monthly SSI grant, coded as: XXX = Dollars (expressed in dollar units)
Monthly Amount of Other Assistance	19	3	If receiving public assistance, the terminee's monthly grant from other sources, such as food stamps, coded as: XXX = Dollars (expressed in dollar units)
Weekly Amount of Unemployment Compensation	20	2	Weekly amount of unemployment compensation at contact that the terminee is receiving (if any), coded as: XXX = Dollars (expressed in dollar units)

DATA DICTIONARY

EMPLOYER MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
NOTE: This file contains, at a minimum, information for employers served by the SDA and, at a maximum, information for all employers in a local area.			
Employer ID	1	--	The identification number of the employer.
Federal Employer ID	2	--	The Federal employer identification number.
State Employer ID	3	--	The State employer identification number.
FIELD LENGTHS OF 1 - 3 ABOVE MAY VARY DEPENDING ON STATE CODING AND REPORTING REQUIREMENTS.			
Name	4	20	The name of the employer.
Mailing Address	5	40	Mailing address of the employer.
Director	6	40	The name of the person who directs the business.
Title	7	20	The title of the director(s). Up to three titles may be entered.
Contact Person	8	40	The name of the person who works directly with system staff.
Telephone	9	10	The telephone number of the employer's contact person.
Date Employer Registered	10	6	The date which an employer first used the system's services, coded as: 888888 = Has not contacted system. YYMMDD = Date
Recycling	11	2	The number of times the employer has entered the system, coded as: XX = Number ranging between zero and seventy-six.

DATA DICTIONARY

EMPLOYER MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
SIC Code	12	3	The employer's Standard Industrial Code, coded as: XXX = SIC Code
Contractor	13	1	Employer is a Federal contractor job listing firm, coded as: 1 = Yes 2 = No
Affirmative Action	14	1	Employer is subject to affirmative action reporting requirements, coded as: 1 = Yes 2 = No
Type of Employer	15	1	A public-private status of each employer, coded as: 1 = Federal 2 = State 3 = Local 4 = International or foreign government 5 = Private sector; non-private 6 = Private sector; profit
Employer Class Code	16	1	The class code of the employer, recorded as: X = Code
Business Structure	17	1	The employer's type of business structure, coded as: X = Type
Number of Places of Business	18	2	The number of locations where the employer conducts business, coded as: XX = Number

DATA DICTIONARY

EMPLOYER MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Parent/Branch Code	19	1	A variable indicating whether or not the business is a central office or a branch office, coded as: 1 = Central office 2 = branch office
Number of Employees	20	6	The number of employees working for an employer, coded as: XXXXXX = Number of employees

DATA DICTIONARY

STAFF MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Identification Number	1	--	A unique identification number assigned to all staff members in the SDA (including subcontractors), coded as (field length will vary with local coding conventions): N = Identification number
Organization Unit	2	2	The organization in the system which the staff member is affiliated with, coded as: XX = Organization number
Position	3	3	The code number for the staff member's position, coded as: XXX = Position number
Telephone			The staff member's telephone number, coded as: XXXXXXX = Telephone number

OTHER STAFF VARIABLES MAY BE ADDED AS NEEDED BY MANAGEMENT

DATA DICTIONARY

SUBCONTRACTOR MASTER FILE

FIELD NAME	FIELD NUMBER	FIELD LENGTH	DEFINITION
Subcontractor ID	1	2	A unique two-digit identification number assigned to each subcontractor.
Name	2	20	The name of the subcontractor organization.
Street Address	3	40	The subcontractor's mailing address.
City	4	20	The subcontractor's city (as defined by the Postal Service).
State	5	2	The two-letter abbreviation for the subcontractor's state.
Zip Code	6	9	The subcontractor's five or nine-letter zip code.
Telephone	7	10	The subcontractor's main telephone number (including area code).
Contact	8	20	The name of the person at the subcontractor's who is the official contact for the SDA.
Contact telephone number	9	10	The contact's telephone number (including area code).

CHAPTER 2
SURVEY DATA

CHAPTER 2. SURVEY DATA

SDAs and subcontractors collect enrollment, service and follow-up data on participants as part of their day-to-day operations. These administrative data, which are the core of the JTPA MIS, can often satisfy data requirements of the gross and net impact models. However, managers sometimes wish to know more about employers and participants than what the MIS can tell them. To collect this information, managers must conduct their own surveys of employers and participants. Some examples of these surveys are presented in the gross impact and process evaluation guides. In this chapter general procedures are described for entering these data into the JTPA MIS. Once entered, managers may either examine the survey data independently, looking for trends and relationships in the data, or combine the survey data with other MIS data in the impact evaluation models. Obviously, if managers can incorporate most of their information needs into the day-to-day data collection procedures of the agency, conducting separate periodic employer and participant surveys would be unnecessary.

This chapter does not discuss mail and telephone survey methods; these are discussed thoroughly elsewhere.[2] Instead procedures for creating a computer file containing the survey data are described. The survey file can be analyzed separately, or it can be entered into the DBMS and interrelated with other MIS data.

STEP I: PREPARE A CODEBOOK

Our goal is to construct a data file containing the survey data. Like most computer files, a survey data file consists of cases (or records), each case containing the information from one respondent (e.g., an employer, a participant, etc.). Each case, or record on the data file is divided into a number of fields, and each field contains the respondent's answer to a specific question on the survey. Thus, if a survey asked an employer 10 questions, each case on the data file would have 10 fields. Fields must appear in the same order across all cases, and any given field must be the same size (i.e., contain the same number of characters) across cases. Typically, each field on a record is called a "variable" in the file.

A codebook documents how data from the survey are stored on the data file. A codebook looks very similar to the Data Dictionary in format; it is a list of variables in the data file. For each variable, the codebook defines 1) its name, 2) a label for the variable (eight characters or less), 3) the location of the variable on the record, 4) codes for the variable, and 5) missing value designations. For example, for the variable "sex," two codes may be created, 1 and 2. A "1" indicates that the respondent is a male; a "2" indicates the respondent is a female. A "9" indicates that, for one reason or

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[2] See the references in the Gross Impact Evaluation Guide. Other useful references are the following:
Dillman, Don. Mail and Telephone Surveys. N.Y.: John Wiley and Sons, 1978. Frey, James. Survey Research by Telephone. Beverly Hills, Ca.: Sage, 1983

another, the respondent's sex is unknown (perhaps because the respondent did not answer this question in the survey). In short, the codebook is a planning exercise; it describes how the survey information will be stored on the data file.

Once created, the codebook become a blueprint for creating the data file. Specifically, the codebook will be a useful guide to data coding, entry and editing, plus selection of variables in later analyses.

STEP II: PREPARE DATA FOR ENTRY

In this step the questionnaire responses are prepared for entry into the computer. The first task is decide what questionnaires will be included or excluded from the data file. For example, in a survey of local employers, an SDA may wish to exclude nonprofit employers from the file.

The second task is determine whether all the questionnaires, or cases, are present for data entry. All too often, completed questionnaires find their way into someone's desk drawer and are never seen again.

The third task is to review each questionnaire for stray marks, multiple entries (providing more than one answer to a question), inappropriate responses (answers that fall between response categories), written clarifications of responses, or inconsistent responses (a participant aged 35 but receiving youth services).

The goal here is to reduce confusion for the person doing data entry. For example, if a participant has provided two answers to a question, the data entry operator will not know which answer to enter, slowing data entry and increasing entry costs. In this case, recoding the answer as missing (because you do not know which one of the two answers is correct) prior to data entry is warranted.

STEP III: CODING

Coding means translating data in a form that the computer cannot understand into a form that it can. This involves the following tasks. First, missing value conventions must be established for each variable on the file. If respondent does not answer a question, should the data field on the file be left blank or filled with a number? What should the number be? The objective is to assign a value that has no other meaning. (One coding scheme is presented on the first page of the Data Dictionary in Chapter 1.)

Second, verbal responses must be categorized and assigned numeric codes. For example, employers may be asked why they chose to participate in JTPA. Any response is possible. The employers' responses must be categorized and a numeric value assigned to each category. These numeric values are then entered into the data file.

These numeric codes are usually written on the returned questionnaire itself (rather than on a separate piece of paper) so they can be readily entered into the data file during data entry.

STEP IV: DATA ENTRY

Date entry means taking data from the source (e.g., a questionnaire) and entering them into the computer. If telephone survey data are collected as shown in the gross impact evaluation guide, they can usually be keyed directly off the survey instrument by the data entry operator. Data should always be verified. This means that after the data are keyed in once, they are keyed a second time to verify their accuracy.

SDA and subcontractor staff can enter survey data using the entry screens available on most DBMS. However, this approach often limits the operator's ability to verify the data (as described above). Alternatively, local agencies can pay an outside agency to perform this task.

STEP V: COMPUTER EDITING

Once the data are entered and a data file is created on the computer, the file must be edited before analysis can begin. Two tasks should be performed.

First, a frequency distribution of each variable should be generated. The frequency distributions should be inspected for the following: out-of-range values (e.g., age=98); out-of-allowable range values (e.g., sex=5); more missing values on a question than expected; and whether the average value of each variable seems reasonable.

Second, contingency cleaning should be performed. This means cross-checking the data for logical inconsistencies. For example, it is impossible for a male participant to be a displaced homemaker (in most cases), or for a participant to have an annual income of $30,000.

STEP VI: DATA ANALYSIS

After the data file is completed, you are ready to analyze your survey data using statistical software. As mentioned above, if appropriate identifiers are included on the survey data, the file can be entered into the MIS, and the survey data can be interrelated with other information in the data base.

OTHER APPLICATIONS OF THESE PROCEDURES

Steps I through VI above describe procedures for coding and storing survey data that a local agency has collected. The procedures can be applied to follow-up information on participants or other surveys that local agencies wish to conduct. The procedures can also be used for entering data collected from other sources. For example, the U.S. Census and the Bureau of Labor Statistics offer extensive information about local population characteristics and economic trends that can be included in a JTPA data base for planning, forecasting and other tasks. Similarly, many Chambers of Commerce maintain data files or directories describing all employers in a community. Adding employer information to the Data Dictionary provides SDAs and subcontractors with the ability to assess their employer services. Exhibit 6 presents hypothetical employer reports that could be generated for this purpose.

Although a DBMS can help agencies construct data files for use in evaluation, a DBMS cannot perform the statistical analyses that evaluation requires. The statistical software needed to perform this task is described in the next chapter.

Supplement

Employer Reports

Objective: to describe system performance in matching employers with workers and the flow of positions through the system.

EXHIBIT 6-1: EMPLOYER JOB FLOW REPORT

	Total Employers	Work Experience	OJT	
	PI Act %	PI Act %	PI Act %	Job Development
Vacant Posts At Beginning of Period				
New Positions				
Positions Filled				
Positions Cancelled				
Total Positions at End of Period				

ective: to document system performance
filling employer jobs and in the labor
ket.

EXHIBIT 6-2: EMPLOYER HIRE REPORT

	TOTAL MATCH PERFORMANCE									MARKET PERFORMANCE		
	Employers Needing Workers	Number of Jobs	Number of Employers	Total Referrals	Average Referrals Per Job	Jobs Filled	% of Total Jobs	Referrals to Match Ratio	Average Time to Fill	Total # New Hires	Market Penetration Rate	Placement Penetration Rate
nployer C ategories												
Total												

New Hires: The total number of persons hired by all employers in the system's service area, derived from UI data files.

Market Penetration Rate: the number of openings received divided by the number of new hires.

Placement Penetration Rate: the number of job order placements divided by the number of new hires.

Objective: to describe the worker needs of employer and the system's ability to meet them.

EXHIBIT 6-3: EMPLOYER JOB FIL. REPORT

	TRAINING JOBS				JOB DEVELOPMENT			
	Posts at Period Start	Posts Received	Posts Filled	Fill Rate (%)	Jobs at Period Start	Jobs Received	Jobs Filled	Fill Rate (%)
Total								
Source:								
Employer								
Job Development								
Job Solicitation								
Type:								
Individual								
Mass								
Federal								
Duration:								
1 - 3 days								
4 - 150 days								
150 + days								
Characteristics:								
Agricultural								
Non-agricultural								
Full-time								
Part-time								
Employer SIC Categories								

Fill Rate = Jobs Filled/Jobs Received

Objective: to describe system performance in securing jobs from employers for clients participating in other federal programs.

EXHIBIT 6-4: EMPLOYER BENEFITS REPORT

	Number of Employers Hiring Clients in:				Employers Providing Training to Clients in:			
	AFDC	UI	FOOD STAMPS	SSI	AFDC	UI	FOOD STAMPS	SSI
Employer Target Groups								
Employer SIC Groups								

EXHIBIT 7

```
       include 'jtpa1:.+'jtpad.dat'.

* USE THE 'TITLE' CARD TO GIVE YOUR PROGRAM A NAME.  IT WILL BE PRINTED
     ON THE TOP OF EACH PAGE OF OUTPUT .
TITLE JTPA DEMONSTRATION PROGRAM.


* USE THE 'DATA LIST' CARD TO TELL SPSS PC+ HOW TO READ-IN YOUR DATA SET.
* THIS CARD LISTS THE DATA ELEMENTS, OR VARIABLES, FOR EACH PARTICIPANT
  (OR CASE) ON THE INPUT FILE, ALONG WITH THE FORMAT OF THE DATA.
* THIS PROGRAM USES A 'FREE FORMAT' DATA LIST CARD; OTHER FORMATS ARE ALSO
  AVAILABLE.  PLEASE CONSULT THE SPSS PC+ MANUAL FOR MORE INFORMATION ON
  THE DATA LIST CARD AND FILE STRUCTURE REQUIREMENTS.
DATA LIST FILE 'JTPAD.DAT' FREE
/ID AGE CC(A2) SEX (A1) RACE HANDI WELFARE LTDENGL DISPL VET APPWAGE
TERM (A2) PLDOT PLWAGE TREATMT (A3) TRDOT.


* NEXT, GIVE EACH VARIABLE A LABEL TO HE[illegible]MBER THE DEFINITION OF
  THE VARIABLE NAME.  IT ALSO HELPS TO D[illegible] OUTPUT.
VARIABLE LABELS    ID 'IDENTIFICATION NUMB'
/CC 'COUNTY VS CITY RESIDENCE'
/HANDI 'HANDICAPPED STATUS'
/WELFARE 'MONTHLY WELFARE GRANT AT APPLICATION'
/LTDENGL 'LIMITED ENGLISH ABILITY'
/DISPL 'DISPLACED HOMEMAKER'
/VET 'VETERANS STATUS'
/APPWAGE 'APPLICATION WAGE'
/TERM 'TERMINATION TYPE'
/PLDOT 'PLACEMENT DOT CODE'
/PLWAGE 'PLACEMENT WAGE'
/TREATMT 'JTPA SERVICE'
/TRDOT 'SERVICE DOT CODE--IF APPLICABLE'.


* NOW, LABEL THE VALUES OF THE VARIABLES----- .
VALUE LABELS  CC 'KG' "COUNTY" 'KS' "CITY"
/SEX 'F' "FEMALE" 'M' "MALE"
/RACE 1 'WHITE' 2 'BLACK' 3 'HISPANIC' 4 'INDIAN-ALASKANATIVE'
     5 'ASIAN-PACIFIC ISL'
/HANDI 1 'PHYSICAL' 2'MENTAL' 3 'NOT APPLICABLE'
/LTDENGL   1 'YES' 2 'NO'
/DISPL  1 'YES' 2 'NO'
/VET     1 'YES' 2 'NO'.


* NEXT, CREATE A NEW VARIABLE, CALLED 'DIFFWAGE,' WHICH IS THE DIFFERENCE
  BETWEEN THE TERMINEE'S TERMINATION AND APPLICATION WAGE.
* IF DIFFWAGE IS POSITIVE, IT INDICATES THAT THE PARTICIPANT'S TERMINATION
  WAGE IS GREATER THAN HIS OR HER APPLICATION WAGE.  IF DIFFWAGE IS
  ZERO, THE APPLICATION AND TERMINATION WAGES ARE IDENTICAL.  IF DIFFWAGE
  IS NEGATIVE, THEN THE PARTICIPANT'S TERMINATION WAGE IS LOWER THAN
  THE APPLICATION WAGE.
COMPUTE DIFFWAGE=PLWAGE-APPWAGE.

* FIRST, LET'S PRODUCE FREQUENCIES FOR ALL THE VARIABLES ON THE FILE,
  ALONG WITH DESCRIPTIVE STATISTICS.
FREQUENCIES VARIABLES=AGE TO TRDOT DIFFWAGE
The raw data or transformation pass is proceeding  CASE #    0  CASE #    1  CASE #    2  CASE #    3  CASE #    4  CASE
 #    5  CASE #    6  CASE #    7  CASE #    8  CASE #    9  CASE #   10  CASE #   11  CASE #   12  CASE #   13  CA
SE #   14  CASE #   15  CASE #   16  CASE #   17  CASE #   18  CASE #   19  CASE #   20  CASE #   21  CASE #   22
```

The "include" command was used to execute the program following the "SPSS" prompt on the screen. The first file, JTPA1, contains the SPSS program, and the second file contains the data.

Comment cards (lines with an asterisk, "") are inserted to document the program.*

When SPSS hits the first procedure card, SPSS reads in the data file and performs data transformations as specified in the program. Our data file has 736 cases, each case containing 16 variables. SPSS read the data file in about 90 seconds. You can instruct SPSS and set your computer not to print these case numbers on your output.

```
  723   CASE  #  724   CASE  #  725   CASE  #  726   CASE  #  727   CASE  #  728   CASE  #  729   CASE  #  730   CASE  #  731   CASE
  #  732   CASE  #  733   CASE  #  734   CASE  #  735   CASE  #  736
SPSS/PC has written     736 cases to the active file
```

Whenever SPSS does a procedure, such as the FREQUENCIES to the left, SPSS reads the data file again. This time the data file was read in about 30 seconds.

```
FREQUENCIES VARIABLES =
AGE TO TRDOT DIFFWAGE

/STATISTICS=ALL/FORMAT=NEWPAGE ONEPAGE.

***** Memory allows a total of   2977 Values, accumulated across all Variables.
      There also may be up to     372 Value Labels for each Variable.
   CASE       0   CASE       8   CASE      16   CASE      24   CASE      32   CASE      40   CASE      48   CASE      56   CASE
 64   CASE      72   CASE      80   CASE      88   CASE      96   CASE     104   CASE     112   CASE     120   CASE     128   CASE
   136   CASE     144   CASE     152   CASE     160   CASE     168   CASE     176   CASE     184   CASE     192   CASE     200   CAS
E     208   CASE     216   CASE     224   CASE     232   CASE     240   CASE     248   CASE     256   CASE     264   CASE     272
CASE     280   CASE     288   CASE     296   CASE     304   CASE     312   CASE     320   CASE     328   CASE     336   CASE     344
   CASE     352   CASE     360   CASE     368   CASE     376   CASE     384   CASE     392   CASE     400   CASE     408   CASE
416   CASE     424   CASE     432   CASE     440   CASE     448   CASE     456   CASE     464   CASE     472   CASE     480   CASE
   488   CASE     496   CASE     504   CASE     512   CASE     520   CASE     528   CASE     536   CASE     544   CASE     552   CAS
E     560   CASE     568   CASE     576   CASE     584   CASE     592   CASE     600   CASE     608   CASE     616   CASE     624
CASE     632   CASE     640   CASE     648   CASE     656   CASE     664   CASE     672   CASE     680   CASE     688   CASE     696
   CASE     704   CASE     712   CASE     720   CASE     728   CASE     736
```

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AGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
16.00	36	5	5	32.00	18	2	77	48.00	4	1	96
17.00	52	7	12	33.00	18	2	79	50.00	3	0	96
18.00	63	9	21	34.00	16	2	82	51.00	5	1	97
19.00	70	10	30	35.00	13	2	83	52.00	3	0	97
20.00	55	7	38	36.00	18	2	86	53.00	1	0	97
21.00	36	5	42	37.00	10	1	87	54.00	4	1	98
22.00	15	2	44	38.00	5	1	88	55.00	4	1	99
23.00	27	4	48	39.00	6	1	89	56.00	3	0	99
24.00	40	5	54	40.00	12	2	90	57.00	1	0	99
25.00	24	3	57	41.00	6	1	91	58.00	2	0	99
26.00	26	4	60	42.00	7	1	92	59.00	2	0	100
27.00	36	5	65	43.00	5	1	93	60.00	1	0	100
28.00	21	3	68	44.00	6	1	93	62.00	1	0	100
29.00	18	2	71	45.00	7	1	94	63.00	1	0	100
30.00	17	2	73	46.00	3	0	95				
31.00	12	2	74	47.00	3	0	95				

JTPA DEMONSTRATION PROGRAM 1/1/80

AGE

Mean	26.523	Std Err	.358	Median	24.000
Mode	19.000	Std Dev	9.725	Variance	94.574
Kurtosis	1.306	S E Kurt	1.997	Skewness	1.294
S E Skew	.090	Range	47.000	Minimum	16.000
Maximum	63.000	Sum	19521.000		

Valid Cases 736 Missing Cases 0

JTPA DEMONSTRATION PROGRAM 1/1/80

CC COUNTY VS CITY RESIDENCE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
COUNTY	KG	412	56.0	56.0	56.0
CITY	KS	324	44.0	44.0	100.0
	TOTAL	736	100.0	100.0	

Valid Cases 736 Missing Cases 0

A frequency distribution of each variable follows, along with summary statistics for numeric variables. Note how the variable labels and value labels appear on the output.

JTPA DEMONSTRATION PROGRAM 1/1/80

SEX

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
FEMALE	F	359	48.8	48.8	48.8
MALE	M	377	51.2	51.2	100.0
	TOTAL	736	100.0	100.0	

Valid Cases 736 Missing Cases 0

JTPA DEMONSTRATION PROGRAM 1/1/80

RACE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WHITE	1.00	410	55.7	55.7	55.7
BLACK	2.00	161	21.9	21.9	77.6
HISPANIC	3.00	43	5.8	5.8	83.4
INDIAN-ALASKANATIVE	4.00	36	4.9	4.9	88.3
ASIAN-PACIFIC ISL	5.00	86	11.7	11.7	100.0
	TOTAL	736	100.0	100.0	

Mean	1.950	Std Err	.050	Median	1.000
Mode	1.000	Std Dev	1.365	Variance	1.863
Kurtosis	.335	S E Kurt	1.997	Skewness	1.314
S E Skew	.090	Range	4.000	Minimum	1.000
Maximum	5.000	Sum	1435.000		

Valid Cases 736 Missing Cases 0

JTPA DEMONSTRATION PROGRAM 1/1/80

HANDI HANDICAPPED STATUS

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
PHYSICAL	1.00	81	11.0	11.0	11.0
MENTAL	2.00	52	7.1	7.1	18.1
NOT APPLICABLE	3.00	603	81.9	81.9	100.0
	TOTAL	736	100.0	100.0	

Mean	2.709	Std Err	.024	Median	3.000
Mode	3.000	Std Dev	.653	Variance	.427
Kurtosis	2.323	S E Kurt	1.997	Skewness	-1.997
S E Skew	.090	Range	2.000	Minimum	1.000
Maximum	3.000	Sum	1994.000		

Valid Cases 736 Missing Cases 0

JTPA DEMONSTRATION PROGRAM 1/1/80

WELFARE MONTHLY WELFARE GRANT AT APPLICATION

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
0.0	551	75	75	346.00	3	0	81	476.00	32	4	96
35.00	1	0	75	348.00	1	0	81	478.00	1	0	96
110.00	1	0	75	377.00	1	0	81	500.00	1	0	96
125.00	1	0	75	380.00	1	0	81	551.00	1	0	96
181.00	2	0	76	384.00	2	0	82	561.00	13	2	98
200.00	1	0	76	385.00	57	8	89	600.00	1	0	98
214.00	1	0	76	386.00	1	0	90	620.00	1	0	98
237.00	1	0	76	415.00	1	0	90	627.00	1	0	98
254.00	2	0	76	416.00	1	0	90	631.00	1	0	98
270.00	1	0	76	425.00	1	0	90	646.00	5	1	99
295.00	4	1	77	426.00	1	0	90	726.00	1	0	99
303.00	1	0	77	428.00	1	0	90	731.00	4	1	100
304.00	23	3	80	450.00	2	0	90	737.00	1	0	100
305.00	1	0	80	462.00	2	0	91	865.00	1	0	100
318.00	1	0	80	467.00	2	0	91				
329.00	1	0	81	475.00	2	0	91				

JTPA DEMONSTRATION PROGRAM 1/1/80

WELFARE MONTHLY WELFARE GRANT AT APPLICATION

Mean	105.383	Std Err	7.078	Median	0.0
Mode	0.0	Std Dev	192.032	Variance	36876.160
Kurtosis	.922	S E Kurt	1.997	Skewness	1.513
S E Skew	.090	Range	865.000	Minimum	0.0
Maximum	865.000	Sum	77562.000		

Valid Cases 736 Missing Cases 0

JTPA DEMONSTRATION PROGRAM 1/1/80

LTDENGL LIMITED ENGLISH ABILITY

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
YES	1.00	89	12.1	12.1	12.1
NO	2.00	647	87.9	87.9	100.0
	TOTAL	736	100.0	100.0	

Mean	1.879	Std Err	.012	Median	2.000
Mode	2.000	Std Dev	.326	Variance	.106
Kurtosis	3.439	S E Kurt	1.997	Skewness	-2.330
S E Skew	.090	Range	1.000	Minimum	1.000
Maximum	2.000	Sum	1383.000		

Valid Cases 736 Missing Cases 0

JTPA DEMONSTRATION PROGRAM 1/1/80

DISPL DISPLACED HOMEMAKER

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
YES	1.00	48	6.5	6.5	6.5
NO	2.00	688	93.5	93.5	100.0
	TOTAL	736	100.0	100.0	

Mean	1	Std Err	.009	Median	2.000
Mode	[illegible]	Std Dev	.247	Variance	.061
Kurtosis	[illegible]	S E Kurt	1.997	Skewness	-3.529
S E Skew	[illegible]	Range	1.000	Minimum	1.000
Maximum	[illegible]	Sum	1424.000		

Valid Cases 736 Missing Cases 0

JTPA DEMONSTRATION PROGRAM 1/1/80

VET VETERANS STATUS

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
YES	1.00	58	7.9	7.9	7.9
NO	2.00	678	92.1	92.1	100.0
	TOTAL	736	100.0	100.0	

Mean	1.921	Std Err	.010	Median	2.000
Mode	2.000	Std Dev	.270	Variance	.073
Kurtosis	7.836	S E Kurt	1.997	Skewness	-3.133
S E Skew	.090	Range	1.000	Minimum	1.000
Maximum	2.000	Sum	1414.000		

Valid Cases 736 Missing Cases 0

JTPA DEMONSTRATION PROGRAM 1/1/80

APPWAGE APPLICATION WAGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
0.0	467	63	63	3.34	1	0	68	4.33	1	0	86
.33	3	0	64	3.35	49	7	74	4.35	1	0	86
.40	2	0	64	3.40	4	1	75	4.42	1	0	87
.46	1	0	64	3.45	5	1	76	4.50	8	1	88
.50	3	0	65	3.50	13	2	77	4.55	1	0	88
.58	3	0	65	3.55	1	0	78	4.74	1	0	88
1.00	3	0	65	3.60	6	1	78	4.75	3	0	89
1.50	3	0	66	3.62	1	0	79	4.81	1	0	89
1.70	1	0	66	3.65	5	1	79	4.90	2	0	89
1.90	1	0	66	3.70	1	0	79	5.00	26	4	92
2.46	1	0	66	3.75	10	1	81	5.07	1	0	92
2.50	1	0	66	3.80	1	0	81	5.18	1	0	93
2.85	1	0	67	3.85	2	0	81	5.20	1	0	93
3.00	3	0	67	4.00	34	5	86	5.25	5	1	93
3.10	1	0	67	4.15	1	0	86	5.40	1	0	93
3.25	1	0	67	4.20	1	0	86	5.50	3	0	94
3.33	3	0	68	4.25	1	0	86	5.56	2	0	94

JTPA DEMONSTRATION PROGRAM 1/1/80

APPWAGE APPLICATION WAGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
5.75	2	0	94	6.73	1	0	97	8.51	1	0	99
5.77	2	0	95	6.92	1	0	97	9.29	1	0	99
5.84	1	0	95	7.00	1	0	97	10.00	4	1	99
6.00	8	1	96	7.50	3	0	98	13.00	1	0	100
6.01	2	0	96	7.63	1	0	98	13.50	2	0	100
6.20	1	0	96	8.00	5	1	98	15.69	1	0	100
6.25	2	0	97	8.25	1	0	99				
6.50	1	0	97	8.27	1	0	99				

Mean	1.588	Std Err	.090	Median	0.0
Mode	0.0	Std Dev	2.434	Variance	5.926
Kurtosis	3.364	S E Kurt	1.997	Skewness	1.639
S E Skew	.059	Range	15.690	Minimum	0.0
Maximum	15.690	Sum	1168.790		

Valid Cases 736 Missing Cases 0

Can you think of why 63% of the participants had zero applicant wages? (Possible answers: unemployed adults; youth who have not entered labor force)

JTPA DEMONSTRATION PROGRAM 1/1/80

TERM TERMINATION TYPE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
FS	6	1	1	OH	19	3	20	OR	24	3	34
OA	48	7	7	OL	21	3	22	PT	5	1	34
OC	51	7	14	OM	13	2	24	OY	10	1	36
OE	9	1	15	ON	1	0	24	UE	474	64	100
OF	11	1	17	OO	44	6	30				

These termination codes are defined at the end of this appendix.

Valid Cases 736 Missing Cases 0

JTPA DEMONSTRATION PROGRAM 1/1/80

PLDOT PLACEMENT DOT CODE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
0.0	262	36	36	180.00	2	0	42	235.00	2	0	53
3.00	1	0	36	186.00	1	0	42	237.00	13	2	54
5.00	1	0	36	195.00	1	0	42	238.00	1	0	54
17.00	17	2	38	199.00	2	0	42	239.00	1	0	55
18.00	1	0	38	201.00	6	1	43	243.00	2	0	55
75.00	1	0	38	203.00	5	1	44	245.00	3	0	55
76.00	1	0	39	205.00	4	1	44	248.00	1	0	55
79.00	9	1	40	206.00	4	1	45	249.00	4	1	56
91.00	2	0	40	209.00	13	2	47	254.00	1	0	56
92.00	3	0	40	210.00	4	1	47	260.00	2	0	56
99.00	1	0	41	211.00	11	1	49	270.00	1	0	57
111.00	1	0	41	213.00	1	0	49	271.00	2	0	57
131.00	1	0	41	216.00	6	1	50	277.00	1	0	57
141.00	1	0	41	219.00	5	1	50	279.00	9	1	58
159.00	1	0	41	222.00	8	1	51	290.00	7	1	59
160.00	1	0	41	229.00	4	1	52	291.00	1	0	59
167.00	2	0	42	230.00	2	0	52	293.00	1	0	59

JTPA DEMONSTRATION PROGRAM 1/1/80

PLDOT PLACEMENT DOT CODE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
297.00	1	0	59	359.00	17	2	82	582.00	1	0	88
299.00	7	1	60	361.00	3	0	83	590.00	2	0	88
301.00	1	0	60	372.00	2	0	83	599.00	1	0	88
309.00	3	0	61	375.00	2	0	83	601.00	1	0	86
310.00	2	0	61	379.00	1	0	84	603.00	1	0	89
311.00	57	8	69	381.00	5	1	84	609.00	1	0	89
312.00	1	0	69	382.00	11	1	86	619.00	7	1	90
313.00	11	1	71	389.00	3	0	86	620.00	4	1	90
315.00	2	0	71	400.00	1	0	86	625.00	1	0	90
317.00	4	1	71	405.00	2	0	87	633.00	1	0	90
318.00	38	5	76	406.00	1	0	87	641.00	1	0	91
319.00	8	1	78	408.00	1	0	87	651.00	1	0	91
321.00	2	0	78	449.00	1	0	87	662.00	1	0	91
323.00	7	1	79	452.00	1	0	87	699.00	1	0	91
332.00	2	0	79	454.00	2	0	87	705.00	1	0	91
354.00	2	0	79	457.00	1	0	88	706.00	1	0	91
355.00	6	1	80	526.00	2	0	88	726.00	1	0	91

JTPA DEMONSTRATION PROGRAM 1/1/80

PLDOT PLACEMENT DOT CODE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
739.00	3	0	92	849.00	1	0	94	919.00	1	0	97
761.00	1	0	92	860.00	3	0	94	920.00	4	1	98
762.00	1	0	92	862.00	1	0	95	921.00	1	0	98
777.00	1	0	92	869.00	6	1	95	922.00	5	1	99
781.00	1	0	92	899.00	2	0	96	929.00	3	0	99
787.00	1	0	93	904.00	4	1	96	932.00	2	0	99
794.00	1	0	93	905.00	2	0	96	969.00	1	0	99
806.00	5	1	93	906.00	2	0	97	976.00	2	0	100
810.00	1	0	93	909.00	1	0	97	999.00	2	0	100
819.00	1	0	94	913.00	1	0	97				
824.00	2	0	94	915.00	1	0	97				

JTPA DEMONSTRATION PROGRAM 1/1/80

PLDOT PLACEMENT DOT CODE

Mean	237.966	Std Err	9.495	Median	219.000
Mode	0.0	Std Dev	257.579	Variance	66347.181
Kurtosis	.936	S E Kurt	1.997	Skewness	1.197
S E Skew	.090	Range	999.000	Minimum	0.0
Maximum	999.000	Sum	175143.000		

Valid Cases 736 Missing Cases 0

PLWAGE PLACEMENT WAGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
0.0	262	36	36	3.95	2	0	60	5.04	2	0	82
1.50	1	0	36	4.00	37	5	65	5.05	4	1	82
2.85	1	0	36	4.05	1	0	65	5.07	1	0	82
3.35	103	14	50	4.07	1	0	65	5.10	1	0	82
3.40	6	1	51	4.10	1	0	65	5.15	2	0	83
3.42	1	0	51	4.14	2	0	66	5.19	1	0	83
3.45	3	0	51	4.25	19	3	68	5.20	1	0	83
3.50	29	4	55	4.38	2	0	69	5.25	4	1	84
3.52	2	0	55	4.45	1	0	69	5.26	1	0	84
3.55	1	0	56	4.49		0	69	5.30	1	0	84
3.60	4	1	56	4.50	..	5	74	5.35	2	0	84
3.62	1	0	56	4.66	1	0	74	5.38	5	1	85
3.63	1	0	56	4.75	5	1	75	5.39	1	0	85
3.65	2	0	57	4.85	1	0	75	5.40	4	1	85
3.70	1	0	57	4.90	4	1	75	5.42	1	0	86
3.75	16	2	59	4.94	2	0	76	5.44	1	0	86
3.80	6	1	60	5.00	42	6	81	5.48	1	0	86

JTPA DEMONSTRATION PROGRAM 1/1/90

Can you guess why 36% of the participants have zero placement wages at termination? (Possible answers: Youth with positive terminations but not entering labor force; adults who have completed program but have not found a job at termination.)

PLWAGE PLACEMENT WAGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
5.50	10	1	87	6.80	1	0	94	8.80	1	0	97
5.57	1	0	87	6.89	1	0	94	8.97	1	0	98
5.75	1	0	88	6.92	2	0	94	8.98	1	0	98
5.77	2	0	88	7.00	7	1	95	9.00	2	0	98
6.00	21	3	91	7.13	1	0	95	9.34	1	0	98
6.05	1	0	91	7.18	1	0	95	9.50	2	0	98
6.15	1	0	91	7.25	1	0	95	9.94	2	0	99
6.16	1	0	91	7.27	2	0	96	10.00	1	0	99
6.17	1	0	91	7.50	1	0	96	10.60	1	0	99
6.22	2	0	91	7.80	1	0	96	10.80	1	0	99
6.35	2	0	92	7.83	1	0	96	10.83	1	0	99
6.47	3	0	92	7.86	1	0	96	10.84	2	0	99
6.49	2	0	92	7.90	1	0	96	12.02	1	0	100
6.50	5	1	93	8.00	4	1	97	12.15	1	0	100
6.55	1	0	93	8.12	1	0	97	14.72	1	0	100
6.63	1	0	93	8.55	1	0	97	16.45	1	0	100
6.71	1	0	93	8.72	1	0	97				

JTPA DEMONSTRATION PROGRAM 1/1/90

PLWAGE PLACEMENT WAGE

Mean	3.068	Std Err	.099	Median	3.400
Mode	0.0	Std Dev	2.677	Variance	7.164
Kurtosis	.737	S E Kurt	1.997	Skewness	.561
S E Skew	.090	Range	16.450	Minimum	0.0
Maximum	16.450	Sum	2258.270		

Valid Cases 736 Missing Cases 0

TREATMT JTPA SERVICE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
ABE	6	1	1	ESL	33	4	18	RST	10	1	95
ABX	1	0	1	GED	5	1	18	RWT	1	0	95
ACB	14	2	3	IRF	29	4	22	SKT	12	2	96
ADM	5	1	4	JSA	393	53	76	TKD	5	1	97
BNK	6	1	4	MDR	2	0	76	TOE	9	1	98
CHA	4	1	5	MSE	4	1	77	WIN	6	1	99
CLE	33	4	9	OER	2	0	77	WPR	5	1	100
CST	1	0	10	OFS	1	0	77	YOE	2	0	100
CTM	12	2	11	OJT	64	9	86				
DAT	16	2	13	PET	55	7	93				

Valid Cases 736 Missing Cases 0

These treatment codes are defined at the end of this appendix.

TRDOT SERVICE DOT CODE--IF APPLICABLE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
0.0	552	75	75	210.00	13	2	88	355.00	3	0	95
5.00	2	0	75	211.00	2	0	88	359.00	3	0	95
17.00	12	2	77	216.00	1	0	88	361.00	2	0	96
20.00	1	0	77	219.00	2	0	88	381.00	3	0	96
21.00	1	0	77	222.00	1	0	89	387.00	3	0	96
31.00	1	0	77	237.00	2	0	89	405.00	2	0	97
74.00	2	0	78	249.00	1	0	89	408.00	1	0	97
79.00	7	1	79	279.00	6	1	90	619.00	1	0	97
141.00	1	0	79	290.00	2	0	90	620.00	7	1	98
142.00	1	0	79	292.00	2	0	90	633.00	3	0	98
167.00	1	0	79	299.00	8	1	91	739.00	2	0	99
195.00	4	1	79	310.00	2	0	91	806.00	1	0	99
201.00	2	0	80	311.00	2	0	92	809.00	1	0	99
203.00	21	3	83	318.00	13	2	93	824.00	1	0	99
205.00	1	0	83	319.00	1	0	94	869.00	2	0	99
206.00	19	3	85	321.00	5	1	94	882.00	1	0	99
209.00	3	0	86	354.00	1	0	94	905.00	2	0	100

TRDOT SERVICE DOT CODE--IF APPLICABLE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
920.00	3	0	100								

Mean	72.825	Std Err	6.005	Median	0.0
Mode	0.0	Std Dev	162.900	Variance	26536.[illegible]8
Kurtosis	9.372	S E Kurt	1.997	Skewness	2.886
S E Skew	.090	Range	920.000	Minimum	0.0
Maximum	920.000	Sum	53599.000		

Valid Cases 736 Missing Cases 0

JTPA DEMONSTRATION PROGRAM 1/1/80

DIFFWAGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
-15.69	1	0	0	-4.50	5	1	4	-2.45	1	0	10
-10.00	3	0	1	-4.28	1	0	4	-2.42	1	0	10
-9.50	1	0	1	-4.20	1	0	5	-2.26	2	0	11
-8.25	1	0	1	-4.15	1	0	5	-2.00	2	0	11
-8.12	1	0	1	-4.00	11	1	6	-1.90	1	0	11
-8.00	1	0	1	-3.85	2	0	7	-1.73	1	0	11
-7.00	1	0	1	-3.75	3	0	7	-1.70	1	0	11
-6.25	2	0	1	-3.70	1	0	7	-1.70	1	0	12
-6.20	1	0	2	-3.65	1	0	7	-1.68	1	0	12
-6.00	3	0	2	-3.60	2	0	7	-1.65	1	0	12
-5.84	1	0	2	-3.55	1	0	8	-1.50	5	1	13
-5.75	1	0	2	-3.50	3	0	8	-1.46	1	0	13
-5.60	1	0	2	-3.35	10	1	9	-1.42	1	0	13
-5.50	1	0	3	-3.34	1	0	10	-1.27	1	0	13
-5.25	2	0	3	-3.25	1	0	10	-1.25	1	0	13
-5.00	5	1	4	-3.00	3	0	10	-1.20	1	0	13
-4.74	1	0	4	-2.49	1	0	10	-1.15	2	0	13

DIFFWAGE is the difference between the terminee's placement and application wage. If DIFFWAGE is positive, it indicates that the participant's placement wage is greater than his or her application wage. If DIFFWAGE is zero, placement and application wages are identical. If DIFFWAGE is negative, then the participant's placement wage is lower than the application wage.

JTPA DEMONSTRATION PROGRAM 1/1/80

DIFFWAGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
-1.06	2	0	14	0.0	215	29	47	.79	1	0	52
-1.05	1	0	14	.02	1	0	47	.90	2	0	53
-1.00	4	1	14	.05	1	0	48	.95	1	0	53
-.75	2	0	15	.10	3	0	48	1.00	3	0	53
-.70	1	0	15	.14	1	0	48	1.05	1	0	53
-.51	1	0	15	.15	5	1	49	1.10	1	0	53
-.50	7	1	16	.20	1	0	49	1.11	1	0	54
-.40	2	0	16	.25	4	1	49	1.15	3	1	54
-.40	1	0	16	.30	2	0	50	1.20	1	0	54
-.30	2	0	17	.33	1	0	50	1.25	1	0	54
-.27	1	0	17	.35	1	0	50	1.31	1	0	55
-.25	2	0	17	.45	1	0	50	1.35	1	0	55
-.20	3	0	17	.50	9	1	51	1.40	4	1	55
-.17	1	0	18	.55	1	0	51	1.50	7	1	56
-.15	1	0	18	.60	1	0	52	1.59	1	0	56
-.10	2	0	18	.65	1	0	52	1.64	1	0	57
-.05	1	0	18	.75	3	0	52	1.65	8	1	58

This frequency distribution and the summary statistics must be interpreted cautiously because they include youth and adults who have not found jobs at termination. However, DIFFWAGE would provide meaningful results if it included, for example, only adults with jobs at termination.

JTPA DEMONSTRATION PROGRAM 1/1/80

DIFFWAGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
1.65	1	0	58	3.35	71	10	70	4.10	1	0	80
1.69	1	0	58	3.40	4	1	70	4.25	15	2	82
1.76	1	0	58	3.42	3	0	71	4.38	2	0	82
1.88	1	0	58	3.45	1	0	71	4.42	1	0	82
1.95	1	0	58	3.50	13	2	73	4.45	1	0	82
2.00	1	0	58	3.52	2	0	73	4.50	14	2	84
2.03	1	0	59	3.54	1	0	73	4.75	3	0	85
2.35	2	0	59	3.59	2	0	73	4.85	1	0	85
2.50	1	0	59	3.60	3	0	74	4.94	2	0	85
2.85	1	0	59	3.62	1	0	74	5.00	22	3	88
2.86	1	0	59	3.63	1	0	74	5.04	2	0	88
3.00	1	0	59	3.65	2	0	74	5.05	1	0	88
3.02	1	0	60	3.75	11	1	76	5.10	1	0	89
3.05	1	0	60	3.80	2	0	76	5.15	1	0	89
3.05	1	0	60	3.85	1	0	76	5.25	1	0	89
3.07	2	0	60	4.00	24	3	79	5.30	1	0	89
3.13	1	0	60	4.07	1	0	80	5.35	2	0	89

JTPA DEMONSTRATION PROGRAM 1/1/80

DIFFWAGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
5.38	3	0	90	6.49	1	0	95	8.72	1	0	98
5.39	1	0	90	6.50	2	0	96	8.97	1	0	98
5.40	4	1	90	6.55	1	0	96	8.98	1	0	99
5.42	1	0	90	6.63	1	0	96	9.34	1	0	99
5.50	4	1	91	6.71	1	0	96	9.50	1	0	99
5.57	1	0	91	6.89	1	0	96	10.00	1	0	99
5.77	2	0	91	7.00	5	1	97	10.60	1	0	99
6.00	17	2	94	7.16	1	0	97	10.80	1	0	99
6.05	1	0	94	7.18	1	0	97	10.83	1	0	99
6.15	1	0	94	7.25	1	0	97	10.84	2	0	100
6.16	1	0	94	7.27	2	0	98	12.02	1	0	100
6.22	2	0	94	7.80	1	0	98	12.15	1	0	100
6.35	1	0	95	8.00	1	0	98	14.72	1	0	100
6.47	3	0	95	8.12	1	0	98				
6.49	2	0	95	8.55	1	0	98				

JTPA DEMONSTRATION PROGRAM 1/1/80

DIFFWAGE

Mean	1.480	Std Err	.124	Median	.400
Mode	0.0	Std Dev	3.377	Variance	11.402
Kurtosis	1.598	S E Kurt	1.997	Skewness	-.215
S E Skew	.090	Range	30.410	Minimum	-15.690
Maximum	14.720	Sum	1089.480		

Valid Cases 736 Missing Cases 0

JTPA DEMONSTRATION PROGRAM 1/1/80

This procedure was completed at 5:49:50

```
* THE FOLLOWING PROCEDURE GENERATES FREQUENCY TABLES, BARCHARTS AND HISTOGRAMS
  FOR TWO VARIABLES ON THE INPUT FILE.
FREQUENCIES VARIABLES= RACE TERM/BARCHART/HISTOGRAM/FORMAT=NEWPAGE.

***** Memory allows a total of   2977 Values, accumulated across all Variables.
      There also may be up to     372 Value Labels for each Variable.
   CASE       0   CASE       8   CASE      16   CASE      24   CASE      32   CASE      40   CASE      48   CASE      56   CASE
  64   CASE      72   CASE      80   CASE      88   CASE      96   CASE     104   CASE     112   CASE     120   CASE     128   CASE
   136   CASE     144   CASE     152   CASE     160   CASE     168   CASE     176   CASE     184   CASE     192   CASE     200   CAS
E     208   CASE     216   CASE     224   CASE     232   CASE     240   CASE     248   CASE     256   CASE     264   CASE     272
CASE     280   CASE     288   CASE     296   CASE     304   CASE     312   CASE     320   CASE     328   CASE     336   CASE     344
   CASE     352   CASE     360   CASE     368   CASE     376   CASE     384   CASE     392   CASE     400   CASE     408   CASE
416   CASE     424   CASE     432   CASE     440   CASE     448   CASE     456   CASE     464   CASE     472   CASE     480   CASE
   488   CASE     496   CASE     504   CASE     512   CASE     520   CASE     528   CASE     536   CASE     544   CASE     552   CAS
E     560   CASE     568   CASE     576   CASE     584   CASE     592   CASE     600   CASE     608   CASE     616   CASE     624
CASE     632   CASE     640   CASE     648   CASE     656   CASE     664   CASE     672   CASE     680   CASE     688   CASE     696
   CASE     704   CASE     712   CASE     720   CASE     728   CASE     736
         JTPA DEMONSTRATION PROGRAM                                       1/1/80
```

RACE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WHITE	1.00	410	55.7	55.7	55.7
BLACK	2.00	161	21.9	21.9	77.6
HISPANIC	3.00	43	5.8	5.8	83.4
INDIAN-ALASKANATIVE	4.00	36	4.9	4.9	88.3
ASIAN-PACIFIC ISL	5.00	86	11.7	11.7	100.0
	TOTAL	736	100.0	100.0	

```
              WHITE \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ 410
              BLACK \\\\\\\\\\\\\\\\\\ 161
           HISPANIC \\\\\ 43
INDIAN-ALASKANATIVE \\\\\ 36
  ASIAN-PACIFIC ISL \\\\\\\\\\ 86

Valid Cases     736      Missing Cases     0
```

100 mm
A5
1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
6.3
7.1
8.0
9.0
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890
1.0 mm
1.5 mm

JTPA DEMONSTRATION PROGRAM 1/1/80

TERM TERMINATION TYPE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	FS	6	.8	.8	.8
	OA	48	6.5	6.5	7.3
	OC	51	6.9	6.9	14.3
	OE	9	1.2	1.2	15.5
	OF	11	1.5	1.5	17.0
	OH	19	2.6	2.6	19.6
	OL	21	2.9	2.9	22.4
	OM	13	1.8	1.8	24.2
	ON	1	.1	.1	24.3
	OO	44	6.0	6.0	30.3
	OR	24	3.3	3.3	33.6
	OT	5	.7	.7	34.2
	OY	10	1.4	1.4	35.6
	UE	474	64.4	64.4	100.0
	TOTAL	736	100.0	100.0	

JTPA DEMONSTRATION PROGRAM 1/1/80

TERM TERMINATION TYPE

```
FS \\ 6
OA \\\\\\ 48
OC \\\\\\ 51
OE \\ 9
OF \\ 11
OH \\\ 19
OL \\\ 21
OM \\ 13
ON   1
OO \\\\\ 44
OR \\\ 24
OT \\ 5
OY \\ 10
UE \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ 474
```

Valid Cases 736 Missing Cases 0

JTPA DEMONSTRATION-PROGRAM 1/1/80

JTPA DEMONSTRATION PROGRAM 1/1/80

WELFARE MONTHLY WELFARE GRANT AT APPLICATION

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
0.0	183	75	75	304.00	6	2	80	475.00	1	0	88
181.00	1	0	75	380.00	1	0	81	476.00	15	6	94
200.00	1	0	76	384.00	2	1	82	500.00	1	0	95
237.00	1	0	76	385.00	11	5	86	561.00	9	4	98
254.00	1	0	77	416.00	1	0	86	646.00	3	1	100
270.00	1	0	77	425.00	1	0	87	726.00	1	0	100
295.00	1	0	77	462.00	1	0	87				
303.00	1	0	78	467.00	1	0	88				

Here are some FREQUENCIES calculated for a subgroup of participants. The PROCESS IF command was used to select out only participants over age 21 with positive terminations. Note that the number of cases has declined to 244.

JTPA DEMONSTRATION PROGRAM 1/1/80

WELFARE MONTHLY WELFARE GRANT AT APPLICATION

```
Count  Midpoint
 183       19 3\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
   0       62 3
   0      105 3
   0      148 3
   2      191 3\
   2      234 3\
   2      277 3\
   7      320 3\\
   3      363 3\
  13      406 3\\\
   2      449 3\
  17      492 3\\\\
   0      535 3
   9      578 3\\
   0      621 3
   3      664 3\
   1      707 3
              I....+....I....+....I....+....I....+....I....+....I
              0        40        80       120       160       200
                        Histogram Frequency
```

JTPA DEMONSTRATION PROGRAM 1/1/80

WELFARE MONTHLY WELFARE GRANT AT APPLICATION

Mean	108.791	Std Dev	197.230	Minimum	0.0
Maximum	726.000				

Valid Cases 244 Missing Cases 0

JTPA DEMONSTRATION PROGRAM 1/1/80

APPWAGE APPLICATION WAGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
0.0	151	62	62	4.25	1	0	77	5.77	2	1	91
1.00	2	1	63	4.33	1	0	77	6.00	5	2	93
2.50	1	0	63	4.35	1	0	78	6.50	1	0	93
3.00	1	0	64	4.42	1	0	78	6.73	1	0	94
3.10	1	0	64	4.50	2	1	79	6.92	1	0	94
3.33	3	1	65	4.55	1	0	80	7.50	3	1	95
3.35	4	2	67	4.75	2	1	80	7.63	1	0	96
3.40	1	0	67	4.90	2	1	81	8.00	3	1	97
3.45	4	2	69	5.00	15	6	87	8.27	1	0	98
3.50	3	1	70	5.07	1	0	88	8.51	1	0	98
3.60	2	1	71	5.25	2	1	89	9.29	1	0	98
3.65	1	0	71	5.40	1	0	89	10.00	1	0	99
3.75	3	1	73	5.50	2	1	90	13.00	1	0	99
4.00	10	4	77	5.75	1	0	90	13.50	2	1	100

JTPA DEMONSTRATION PROGRAM 1/1/80

APPWAGE APPLICATION WAGE

```
  Count   Midpoint
     0        -1 3
   151         0 3\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
     2         1 3\
     0         2 3
    15         3 3\\\\
    23         4 3\\\\\\
    26         5 3\\\\\\\
    10         6 3\\\
     3         7 3\
     8         8 3\\
     2         9 3\
     1        10 3
     0        11 3
     0        12 3
     1        13 3
     2        14 3\
     0        15 3
                 I....+....I....+....I....+....I....+....I....+....I
                 0         40        80        120       160       200
                           Histogram Frequency
```

JTPA DEMONSTRATION PROGRAM 1/1/80

APPWAGE APPLICATION WAGE

Mean	1.961	Std Dev	2.850	Minimum	0.0
Maximum	13.500				

Valid Cases 244 Missing Cases 0

JTPA DEMONSTRATION PROGRAM 1/1/80

PLWAGE PLACEMENT WAGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
2.85	1	0	0	4.45	1	0	33	5.40	4	2	61
3.35	30	12	13	4.50	15	6	39	5.42	1	0	62
3.40	2	1	14	4.75	3	1	40	5.44	1	0	62
3.45	1	0	14	4.85	1	0	41	5.48	1	0	63
3.50	5	2	16	5.00	25	10	51	5.50	10	4	67
3.55	1	0	16	5.04	2	1	52	5.57	1	0	67
3.60	1	0	17	5.05	3	1	53	5.75	1	0	68
3.62	1	0	17	5.07	1	0	53	6.00	19	8	75
3.65	1	0	18	5.10	1	0	54	6.05	1	0	76
3.75	10	4	22	5.15	2	1	55	6.15	1	0	76
3.80	1	0	22	5.19	1	0	55	6.16	1	0	77
3.95	1	0	23	5.25	4	2	57	6.17	1	0	77
4.00	15	6	29	5.26	1	0	57	6.35	1	0	77
4.05	1	0	29	5.30	1	0	57	6.47	3	1	79
4.07	1	0	30	5.35	1	0	58	6.49	2	1	80
4.25	5	2	32	5.38	4	2	59	6.50	4	2	81
4.38	2	1	32	5.39	1	0	60	6.55	1	0	82

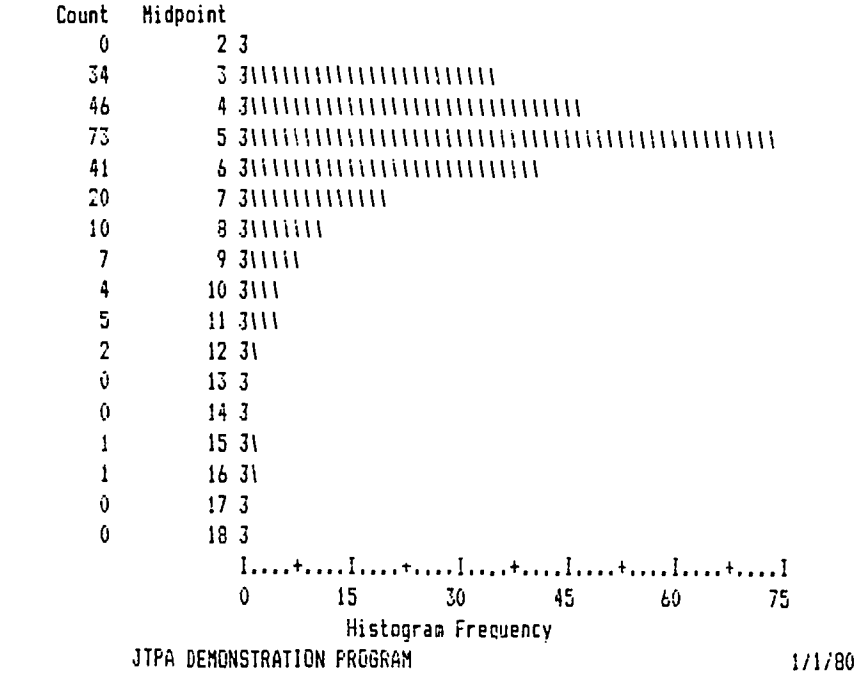
JTPA DEMONSTRATION PROGRAM 1/1/80

PLWAGE PLACEMENT WAGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
6.63	1	0	82	7.86	1	0	89	9.94	2	1	96
6.71	1	0	82	7.90	1	0	90	10.00	1	0	96
6.80	1	0	83	8.00	4	2	91	10.60	1	0	97
6.89	1	0	83	8.12	1	0	92	10.80	1	0	97
6.92	2	1	84	8.55	1	0	92	10.83	1	0	98
7.00	7	3	87	8.72	1	0	93	10.84	2	1	98
7.13	1	0	87	8.80	1	0	93	12.02	1	0	99
7.18	1	0	88	8.98	1	0	93	12.15	1	0	99
7.50	1	0	88	9.00	2	1	94	14.72	1	0	100
7.80	1	0	89	9.34	1	0	95	16.45	1	0	100
7.83	1	0	89	9.50	1	0	95				

JTPA DEMONSTRATION PROGRAM 1/1/80

PLWAGE PLACEMENT WAGE



JTPA DEMONSTRATION PROGRAM 1/1/80

PLWAGE PLACEMENT WAGE

Mean	5.442	Std Dev	2.027	Minimum	2.850
Maximum	16.450				

Valid Cases 244 Missing Cases 0

JTPA DEMONSTRATION PROGRAM 1/1/80

DIFFWAGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
-9.50	1	0	0	-.75	1	0	9	1.00	2	1	25
-8.12	1	0	1	-.70	1	0	9	1.10	1	0	25
-5.60	1	0	1	-.51	1	0	10	1.11	1	0	25
-4.28	1	0	2	-.50	2	1	11	1.15	1	0	26
-4.00	1	0	2	-.40	1	0	11	1.25	1	0	26
-3.00	2	1	3	-.17	1	0	11	1.50	4	2	28
-2.45	1	0	3	-.15	1	0	12	1.59	1	0	28
-2.42	1	0	4	-.10	2	1	13	1.65	2	1	29
-2.00	2	1	5	0.0	11	5	17	1.65	1	0	30
-1.73	1	0	5	.02	1	0	18	1.69	1	0	30
-1.50	1	0	5	.05	1	0	18	1.76	1	0	30
-1.42	1	0	6	.25	4	2	20	1.88	1	0	31
-1.27	1	0	6	.30	2	1	20	2.00	1	0	31
-1.20	1	0	7	.33	1	0	21	2.35	1	0	32
-1.15	2	1	7	.35	1	0	21	2.50	1	0	32
-1.05	1	0	8	.50	5	2	23	2.85	1	0	32
-1.00	2	1	9	.55	1	0	24	2.86	1	0	33

Because DIFFWAGE is calculated only for adults with positive terminatious, DIFFWAGE suggests how JTPA services may have influenced wage rates. Note that only 13% of the participants had termination wages lower than application wages.

JTPA DEMONSTRATION PROGRAM 1/1/80

DIFFWAGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
3.00	1	0	33	4.38	2	1	59	5.57	1	0	79
3.05	1	0	34	4.45	1	0	59	6.00	15	6	85
3.05	1	0	34	4.50	7	3	62	6.05	1	0	85
3.13	1	0	34	4.75	2	1	63	6.15	1	0	86
3.35	19	8	42	4.85	1	0	63	6.16	1	0	86
3.40	2	1	43	5.00	17	7	70	6.47	3	1	87
3.45	1	0	43	5.04	2	1	71	6.49	2	1	88
3.50	4	2	45	5.10	1	0	71	6.49	1	0	89
3.59	2	1	46	5.15	1	0	72	6.50	1	0	89
3.62	1	0	46	5.25	1	0	72	6.55	1	0	89
3.65	1	0	47	5.30	1	0	73	6.63	1	0	90
3.75	9	4	50	5.35	1	0	73	6.71	1	0	90
3.80	1	0	51	5.38	3	1	74	6.89	1	0	91
3.85	1	0	51	5.39	1	0	75	7.00	5	2	93
4.00	11	5	56	5.40	4	2	76	7.16	1	0	93
4.07	1	0	56	5.42	1	0	77	7.19	1	0	93
4.25	4	2	58	5.50	4	2	78	7.80	1	0	94

JTPA DEMONSTRATION PROGRAM 1/1/80

DIFFWAGE

VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT	VALUE	FREQ	PCT	CUM PCT
8.00	1	0	94	9.34	1	0	96	10.84	2	1	99
8.12	1	0	95	10.00	1	0	97	12.02	1	0	99
8.55	1	0	95	10.60	1	0	97	12.15	1	0	100
8.72	1	0	95	10.80	1	0	98	14.72	1	0	100
8.98	1	0	96	10.83	1	0	98				

JTPA DEMONSTRATION PROGRAM 1/1/80

DIFFWAGE

```
Count   Midpoint
    1       -9.5 3\
    1       -8.0 3\
    0       -6.5 3
    2       -5.0 3\
    3       -3.5 3\\
    8       -2.0 3\\\\\
   29        -.5 3\\\\\\\\\\\\\\\\\\\
   29        1.0 3\\\\\\\\\\\\\\\\\\\
   11        2.5 3\\\\\\\
   67        4.0 3\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
   59        5.5 3\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
   18        7.0 3\\\\\\\\\\\\
    6        8.5 3\\\\
    3       10.0 3\\
    6       11.5 3\\\\
    0       13.0 3
    1       14.5 3\
                 I....+....I....+....I....+....I....+....I....+....I
                 0         15        30        45        60        75
                           Histogram Frequency
```

Note the bell-shaped distribution of DIFFWAGE.

JTPA DEMONSTRATION PROGRAM 1/1/80

DIFFWAGE

```
Mean        3.481     Std Dev      3.312     Minimum     -9.500
Maximum    14.720

Valid Cases    244     Missing Cases     0
```

Note that the mean of DIFFWAGE is $3.48, indicating most adults in this subgroup had higher termination wages than application wages.

JTPA DEMONSTRATION PROGRAM 1/1/80

This procedure was completed at 6:23:29

```
* THIS PROCEDURE CALCULATES AVERAGE WAGES FOR EACH RACIAL/ETHNIC GROUP.
MEANS  TABLES=APPWAGE PLWAGE DIFFWAGE BY RACE.  MODULE SWAP


***** Given WORKSPACE allows for  1819 Cells with  1 Dimensions for MEANS.

   CASE      0  CASE      8  CASE     16  CASE     24  CASE     32  CASE     40  CASE     48  CASE     56  CASE
 64  CASE     72  CASE     80  CASE     88  CASE     96  CASE    104  CASE    112  CASE    120  CASE    128  CASE
   136  CASE    144  CASE    152  CASE    160  CASE    168  CASE    176  CASE    184  CASE    192  CASE    200  CAS
E    208  CASE    216  CASE    224  CASE    232  CASE    240  CASE    248  CASE    256  CASE    264  CASE    272
CASE    280  CASE    288  CASE    296  CASE    304  CASE    312  CASE    320  CASE    328  CASE    336  CASE    344
   CASE    352  CASE    360  CASE    368  CASE    376  CASE    384  CASE    392  CASE    400  CASE    408  CASE
416  CASE    424  CASE    432  CASE    440  CASE    448  CASE    456  CASE    464  CASE    472  CASE    480  CASE
   488  CASE    496  CASE    504  CASE    512  CASE    520  CASE    528  CASE    536  CASE    544  CASE    552  CAS
E    560  CASE    568  CASE    576  CASE    584  CASE    592  CASE    600  CASE    608  CASE    616  CASE    624
CASE    632  CASE    640  CASE    648  CASE    656  CASE    664  CASE    672  CASE    680  CASE    688  CASE    696
   CASE    704  CASE    712  CASE    720  CASE    728  CASE    736
         JTPA DEMONSTRATION PROGRAM                                1/1/80

Summaries of   APPWAGE    APPLICATION WAGE
By levels of   RACE

Variable      Value  Label                    Mean    Std Dev    Cases

For Entire Population                        1.5880     2.4343      736

RACE          1.00   WHITE                   1.8143     2.5669      410
RACE          2.00   BLACK                   1.2641     2.1479      161
RACE          3.00   HISPANIC                1.8851     2.4607       43
RACE          4.00   INDIAN-ALASKANATIVE      .6581     1.4195       36
RACE          5.00   ASIAN-PACIFIC ISL       1.3564     2.4739       86

  Total Cases =     736
         JTPA DEMONSTRATION PROGRAM                                1/1/80

Summaries of   PLWAGE     PLACEMENT WAGE
By levels of   RACE

Variable      Value  Label                    Mean    Std Dev    Cases

For Entire Population                        3.0683     2.6766      736

RACE          1.00   WHITE                   3.2987     2.8653      410
RACE          2.00   BLACK                   3.0242     2.3864      161
RACE          3.00   HISPANIC                2.6435     2.0628       43
RACE          4.00   INDIAN-ALASKANATIVE     2.3075     2.0694       36
RACE          5.00   ASIAN-PACIFIC ISL       2.5833     2.6307       86

  Total Cases =     736
```

This output shows the average application and placement wages for each racial/ethnic category.

JTPA DEMONSTRATION PROGRAM 1/1/80

Summaries of DIFFWAGE
By levels of RACE

Variable .	Value	Label	Mean	Std Dev	Cases
For Entire Population			1.4803	3.3767	736
RACE	1.00	WHITE	1.4844	3.6080	410
RACE	2.00	BLACK	1.7601	3.1921	161
RACE	3.00	HISPANIC	.7584	2.8493	43
RACE	4.00	INDIAN-ALASKANATIVE	1.6494	1.9097	36
RACE	5.00	ASIAN-PACIFIC ISL	1.2269	3.2825	86

Total Cases = 736

JTPA DEMONSTRATION PROGRAM 1/1/80

This procedure was completed at 5:59:57
FINISH.

End of Include file.
Errors encountered: 1
Warnings encountered 0

End of session. Please remember your KEY DISKETTE.

This MEANS procedures also performs an analysis of variance statistical test.

```
* THIS PROCEDURE CALCULATES AVERAGE WAGES FOR EACH RACIAL/ETHNIC GROUP.
MEANS  TABLES=APPWAGE PLWAGE DIFFWAGE BY RACE/STATISTICS=ALL.  MODULE SWAP


***** Given WORKSPACE allows for  1819 Cells with  1 Dimensions for MEANS.

   CASE      0  CASE      8  CASE     16  CASE     24  CASE     32  CASE     40  CASE     48  CASE     56  CASE
 64  CASE     72  CASE     80  CASE     88  CASE     96  CASE    104  CASE    112  CASE    120  CASE    128  CASE
  136  CASE    144  CASE    152  CASE    160  CASE    168  CASE    176  CASE    184  CASE    192  CASE    200  CAS
E    208  CASE    216  CASE    224  CASE    232  CASE    240  CASE    248  CASE    256  CASE    264  CASE    272
CASE    280  CASE    288  CASE    296  CASE    304  CASE    312  CASE    320  CASE    328  CASE    336  CASE    344
   CASE    352  CASE    360  CASE    368  CASE    376  CASE    384  CASE    392  CASE    400  CASE    408  CASE
416  CASE    424  CASE    432  CASE    440  CASE    448  CASE    456  CASE    464  CASE    472  CASE    480  CASE
   488  CASE    496  CASE    504  CASE    512  CASE    520  CASE    528  CASE    536  CASE    544  CASE    552  CAS
E    560  CASE    568  CASE    576  CASE    584  CASE    592  CASE    600  CASE    608  CASE    616  CASE    624
CASE    632  CASE    640  CASE    648  CASE    656  CASE    664  CASE    672  CASE    680  CASE    688  CASE    696
   CASE    704  CASE    712  CASE    720  CASE    728  CASE    736
        JTPA DEMONSTRATION PROGRAM                                  1/1/80

Summaries of   APPWAGE    APPLICATION WAGE
By levels of   RACE

Variable      Value  Label                    Mean    Std Dev    Cases

For Entire Population                       1.5880     2.4343      736

RACE          1.00   WHITE                  1.8143     2.5669      410
RACE          2.00   BLACK                  1.2641     2.1479      161
RACE          3.00   HISPANIC               1.8851     2.4607       43
RACE          4.00   INDIAN-ALASKANATIVE     .6581     1.4195       36
RACE          5.00   ASIAN-PACIFIC ISL      1.3564     2.4739       86

  Total Cases =     736
        JTPA DEMONSTRATION PROGRAM                                  1/1/80

Summaries of   APPWAGE    APPLICATION WAGE
By levels of   RACE

     Value  Label                    Mean    Std Dev  Sum of Sq    Cases

      1.00  WHITE                  1.8143     2.5669  2694.8263      410
      2.00  BLACK                  1.2641     2.1479   738.1871      161
      3.00  HISPANIC               1.8851     2.4607   254.3121       43
      4.00  INDIAN-ALASKANATIVE     .6581     1.4195    70.5274       36
      5.00  ASIAN-PACIFIC ISL      1.3564     2.4739   520.2076       86
                                  ---------------------------------------
Within Groups Total                1.5880     2.4192  4278.0604      736
```

JTPA DEMONSTRATION PROGRAM 1/1/80
Criterion Variable APPWAGE

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F	Sig.
Between Groups	77.4325	4	19.3581	3.3078	.0107
Linearity	31.2126	1	31.2126	5.3333	.0212
Dev. from Linearity	46.2199	3	15.4066	2.6326	.0490
	R = -.0847	R Squared = .0072			
Within Groups	4278.0604	731	5.8523		
	Eta = .1333	Eta Squared = .0178			

JTPA DEMONSTRATION PROGRAM 1/1/80

Summaries of PLWAGE PLACEMENT WAGE
By levels of RACE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.0683	2.6766	736
RACE	1.00	WHITE	3.2987	2.8653	410
RACE	2.00	BLACK	3.0242	2.3864	161
RACE	3.00	HISPANIC	2.6435	2.0628	43
RACE	4.00	INDIAN-ALASKANATIVE	2.3075	2.0694	36
RACE	5.00	ASIAN-PACIFIC ISL	2.5833	2.6507	86

Total Cases = 736

JTPA DEMONSTRATION PROGRAM 1/1/80

Summaries of PLWAGE PLACEMENT WAGE
By levels of RACE

Value	Label	Mean	Std Dev	Sum of Sq	Cases
1.00	WHITE	3.2987	2.8653	3357.9469	410
2.00	BLACK	3.0242	2.3864	911.1573	161
3.00	HISPANIC	2.6435	2.0628	178.7166	43
4.00	INDIAN-ALASKANATIVE	2.3075	2.0694	149.8821	36
5.00	ASIAN-PACIFIC ISL	2.5833	2.6507	597.2223	86
Within Groups Total		3.0683	2.6658	5194.9252	736

JTPA DEMONSTRATION PROGRAM 1/1/80
Criterion Variable PLWAGE

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F	Sig.
Between Groups	70.9146	4	17.7286	2.4947	.0417
Linearity	62.5586	1	62.5586	8.8029	.0031
Dev. from Linearity	8.3559	3	2.7853	.3919	.7588
	R = -.1090	R Squared = .0119			
Within Groups	5194.9252	731	7.1066		
	Eta = .1160	Eta Squared = .0135			

JTPA DEMONSTRATION PROGRAM 1/1/80

Summaries of DIFFWAGE
By levels of RACE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			1.4803	3.3767	736
RACE	1.00	WHITE	1.4844	3.6080	410
RACE	2.00	BLACK	1.7601	3.1921	161
RACE	3.00	HISPANIC	.7584	2.8493	43
RACE	4.00	INDIAN-ALASKANATIVE	1.6494	1.9097	36
RACE	5.00	ASIAN-PACIFIC ISL	1.2269	3.3825	86

Total Cases = 736

JTPA DEMONSTRATION PROGRAM 1/1/80

Summaries of DIFFWAGE
By levels of RACE

Value	Label	Mean	Std Dev	Sum of Sq	Cases
1.00	WHITE	1.4844	3.6080	5324.1829	410
2.00	BLACK	1.7601	3.1921	1630.3081	161
3.00	HISPANIC	.7584	2.8493	340.9770	43
4.00	INDIAN-ALASKANATIVE	1.6494	1.9097	127.6384	36
5.00	ASIAN-PACIFIC ISL	1.2269	3.2825	915.8469	86
Within Groups Total		1.4803	3.3775	8338.9532	736

JTPA DEMONSTRATION PROGRAM 1/1/80
Criterion Variable DIFFWAGE

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F	Sig.
Between Groups	41.5725	4	10.3931	.9111	.4569
Linearity	5.3944	1	5.3944	.4729	.4919
Dev. from Linearity	36.1781	3	12.0594	1.0571	.3686
	R = -.0254	R Squared = .0006			
Within Groups	8338.9532	731	11.4076		
	Eta = .0704	Eta Squared = .0050			

JTPA DEMONSTRATION PROGRAM 1/1/80

This procedure was completed at 6:25:56
FINISH.

End of Include file.
Errors encountered: 0
Warnings encountered 1

End of session. Please remember your KEY DISKETTE.

CROSSTABS TABLES = TERM BY RACE LTDENGL DISPL HANDI VET/STATISTICS = ALL.

The raw data or transformation pass is proceeding
SPSS/PC has written 736 cases to the active file

***** Given WORKSPACE allows for 2183 Cells with
2 Dimensions for CROSSTAB problem *****

Page 2 JTPA DEMONSTRATION PROGRAM 1/1/80

Crosstabulation: TERM TERMINATION TYPE
By RACE

Count / RACE->	WHITE 1.00	BLACK 2.00	HISPANIC 3.00	INDIAN-ALASKANAT 4.00	ASIAN-PACIFIC IS 5.00	Row Total
TERM						
FS	1	4			1	6
OA	24	10	10	2	2	48
OC	34	9			8	51
OE	4	3			2	9
OF	7	3			1	11
OH	15		1	1	2	19
OL	9	7	3	1	1	21
OM	6	3			4	13
ON		1				1
OO	22	7	1	4	10	44
OR	16	3		1	4	24
OT	3	2				5
OY	2			6	2	10
UE	267	109	28	21	49	474
Column Total	410 55.7	161 21.9	43 5.8	36 4.9	86 11.7	736 100.0

CROSSTABS is a simple, quick way of examining the data through 2-way tables.

*** NOTE: Statistics 6-11 will not be computed for tables with string variables.

Chi-Square	D.F.	Significance	Min E.F.	Cells with E.F.< 5
143.82301	52	.0000	.049 48 DF	70 (68.6%)

Statistic	Symmetric	With TERM Dependent	With RACE Dependent
Lambda	.01361	.00000	.02454
Uncertainty Coefficient	.05520	.05086	.06035

These statistics may not be meaningful because so many cells have zero values.

Statistic	Value	Significance
Cramer's V	.22103	
Contingency Coefficient	.40431	

Number of Missing Observations = 0

Crosstabulation: TERM TERMINATION TYPE
By LTDENGL LIMITED ENGLISH ABILITY

Count / LTDENGL->	YES 1.00	NO 2.00	Row Total
TERM			
FS	1	5	6
OA	14	34	48
OC	8	43	51
OE	2	7	9
OF		11	11
OH	2	17	19
OL	3	18	21
OM	3	10	13
ON		1	1
OO	9	35	44
OR	2	22	24
OT		5	5
OY	2	8	10
UE	43	431	474
Column Total	89 12.1	647 87.9	736 100.0

*** NOTE: Statistics 6-11 will not be computed for tables with string variables.

Chi-Square	D.F.	Significance	Min E.F.	Cells with E.F.< 5
26.59368	13	.0141	.121	12 OF 28 (42.9%)

Statistic	Symmetric	With TERM Dependent	With LTDENGL Dependent
Lambda	.00000	.00000	.00000
Uncertainty Coefficient	.01053	.01162	.04573

Statistic	Value	Significance
Cramer's V	.19009	
Contingency Coefficient	.18674	

Number of Missing Observations = 0

Crosstabulation: TERM TERMINATION TYPE
By DISPL DISPLACED HOMEMAKER

Count / DISPL->	YES 1.00	NO 2.00	Row Total
TERM			
FB		6	6
OA	16	32	48
OC	1	50	51
OE	1	8	9
OF	2	9	11
OH	1	18	19
OL	2	19	21
OM	2	11	13
ON		1	1
OO	2	42	44
OR	2	22	24
OT		5	5
OY	1	9	10
UE	18	456	474
Column Total	49 (6.5)	668 (93.5)	736 (100.0)

** NOTE: Statistics 6-11 will not be computed for tables with string variables.

Chi-Square	D.F.	Significance	Min E.F.	Cells with E.F.< 5
70.35575	13	.0000	.065	15 OF 29 (53.6%)

Statistic	Symmetric	With TERM Dependent	With DISPL Dependent
Lambda	.00000	.00000	.00000
Uncertainty Coefficient	.03647	.02127	.12798

Statistic	Value	Significance
Cramer's V	.30918	
Contingency Coefficient	.29538	

Number of Missing Observations = 0

Crosstabulation: TERM TERMINATION TYPE
By HANDI HANDICAPPED STATUS

Count / HANDI->	PHYSICAL 1.00	MENTAL 2.00	NOT APPLICABLE 3.00	Row Total
TERM				
FS	1		5	6
OA	6	6	36	48
OC	5		46	51
OE		3	6	9
OF			11	11
OH	5	2	12	19
OL	1	1	19	21
OM	4		9	13
ON			1	1
OO	2	2	40	4(
OR	2		22	24
OT			5	5
OY	3	1	6	10
UE	52	37	385	474
Column Total	81 11.0	52 7.1	603 81.9	736 100.0

*** NOTE: Statistics 6-11 will not be computed for tables with string variables.

Chi-Square	D.F.	Significance	Min E.F.	Cells with E.F.< 5
41.94061	26	.0249	.071	27 OF 42 (64.3%)

Statistic	Symmetric	With TERM Dependent	With HANDI Dependent
Lambda	.00000	.00000	.00000
Uncertainty Coefficient	.02997	.02111	.05162

Statistic	Value	Significance
Cramer's V	.16880	
Contingency Coefficient	.23219	

Number of Missing Observations = 0

Crosstabulation: TERM TERMINATION TYPE
By VET VETERANS STATUS

Count / VET->	1.00	2.00	Row Total
TERM			
FS		6	6
OA	2	46	48
OC		51	51
OE		9	9
OF		11	11
OH	2	17	19
OL	2	19	21
OM	1	12	13
ON		1	1
OO	4	40	44
OR	3	21	24
OT	2	3	5
OY	1	9	10
UE	41	433	474
Column Total	58	678	736
	7.9	92.1	100.0

*** NOTE: Statistics 6-11 will not be computed for tables with string variables.

Chi-Square	D.F.	Significance	Min E.F.	Cells with E.F.< 5
16.19491	13	.2388	.079	13 OF 28 (53.6%)

Statistic	Symmetric	With TERM Dependent	With VET Dependent
Lambda	.00000	.00000	.00000
Uncertainty Coefficient	.01510	.00898	.04725

Statistic	Value	Significance
Cramer's V	.14834	
Contingency Coefficient	.14673	

Number of Missing Observations = 0

```
IF (AGE GT 21 AND TERM
EQ'UE')  POSTERM = 1
```

This is an example of the regression procedure in SPSS. The "Process If" command selects out all participants over age 21 and with positive terminations. Two variables are examined, PLWAGE (placement wage, the dependent variable) and AGE (the independent variable). We might expect that the older the participant is, the higher his or her placement wage will be.

```
PROCESS IF (POSTERM EQ 1)
REGRESSION  DESCRIPTIVES/
VARIABLES = PLWAGE AGE/
DEPENDENT = PLWAGE/
METHOD = ENTER AGE.
```

```
Page   2   JTPA DEMONSTRATION PROGRAM                              1/1/80

        * * * *  M U L T I P L E   R E G R E S S I O N  * * * *


Listwise Deletion of Missing Data

             Mean   Std Dev  Label

PLWAGE      5.442    2.027  PLACEMENT WAGE
AGE        31.975    8.364

N of Cases =   244

Correlation:

             PLWAGE        AGE

PLWAGE        1.000        .104
AGE            .104       1.000
```

The correlation matrix indicates that PLWAGE and AGE have only a small correlation, .104.

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**** MULTIPLE REGRESSION ****

Equation Number 1 Dependent Variable.. PLWAGE PLACEMENT WAGE

Beginning Block Number 1. Method: Enter AGE

Variable(s) Entered on Step Number
1.. AGE

Multiple R	.10381
R Square	.01078
Adjusted R Square	.00669
Standard Error	2.02022

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	10.76025	10.76025
Residual	242	987.67663	4.08131

F = 2.63647 Signif F = .1057

---------- Variables in the Equation ----------

Variable	B	SE B	Beta	T	Sig T
AGE	.02516	.01549	.10381	1.624	.1057
(Constant)	4.63796	.51204		9.058	.0000

End Block Number 1 All requested variables entered.

The F-statistic for the regression equation is only marginally significant at .1057. The regression coefficient, .02516, is small in absolute value and , again, only marginally significant. It suggests that with each additional year of age, placement wage increases about 2.5 cents.

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This procedure was completed at 8:53:02

REFERENCES

REFERENCES

Dizard, W. P. The Coming Information Age: An Overview of Technology, Economics and Politics. NY: Longman, 1982.

Hawkins, P. The Next Economy. NY: Holt, Rinehart & Winston, 1983.

Masuda, Y. The Information Society. Tokyo, Japan: Institute for the Information Society, 1980.

Millar, R. and Millar, A. Developing Client Outcome Monitoring Systems. Washington, D.C.: The Urban Institute, 1981.

Neilson, R. E. "The Role of the Federal Government in Social Systems Development. Computers in Human Services. 1985; 1: 53-63.

Taylor, J. B. Using Microcomputers in Social Agencies. Beverly Hills, CA: Sage Publications, 1981.

END

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