

**A SUMMARY OF
THE DESIGN AND IMPLEMENTATION
OF THE NATIONAL JTPA STUDY**

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with

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EXECUTIVE SUMMARY

The Job Training Partnership Act (JTPA) is the nation's largest employment and training program for economically disadvantaged adults and youths. Its prominence — and the ongoing debate about its design, administration, and evaluation — makes the National JTPA Study an important and timely one, for it has produced the first analysis of JTPA's impacts in a diverse sample of sites. It was also the first effort to use a random assignment research design to estimate the impacts of local programs in an ongoing, voluntary, national employment and training program and included as well attempts to develop improved nonexperimental (non-random assignment) methods for estimating program impacts. Adults and out-of-school youths served under Title II-A, the largest component of the program, were the focus of the study.

Pathbreaking in many ways, the project confronted serious issues of research design and implementation. This report, summarizing material from other project reports, provides background on how the U.S. Department of Labor — the federal agency that oversees JTPA — and the researchers balanced tradeoffs faced in the study and addressed threats to its validity. It pertains to the experimental portion of the study and is intended as a companion volume to the first impact report, which provides estimates of program impacts based on 18 months of follow-up. (A subsequent report will present 30-month impact findings.)

I. The Origins and Goals of the Study

The Job Training Partnership Act of 1982 established a nationwide network of more than 600 federally funded, state-supervised, and locally operated partnerships between the public and private sectors to arrange for services intended to increase the employability of eligible adults and youths. Each year since its formal start-up in 1983, Title II-A (which was the main title of the legislation until 1993) received close to \$2 billion and enrolled from 600,000 to one million individuals — representing less than 10 percent of the JTPA-eligible population. The JTPA statute required the U.S. Department of Labor to determine whether the legislative goals of increasing employment and earnings and reducing welfare receipt were met.

In 1986, the Department initiated the National JTPA Study, a major effort to evaluate rigorously, in a limited number of local service delivery areas (SDAs) across the country, the impact that Title II-A of JTPA had on participants' employment, earnings, and welfare receipt. Following the recommendation of a technical Advisory Panel, the Department chose to conduct the study using a classical random assignment design. The Department outlined four major goals for the experimental portion of the study:

- Select up to 20 local programs that represent the diversity of the national JTPA program.
- Estimate the overall impact of JTPA Title II-A activities provided in these local programs for both the full sample and for important subgroups.
- Estimate the specific impact of important categories of activities such as on-the-job training and classroom occupational training, again for the full sample and subgroups.
- Conduct the analysis while changing the normal operations of the program as little as possible.

Between 1987 and 1989, more than 20,000 adults and out-of-school youths who applied for JTPA in 16 local areas across the country were randomly assigned to a "treatment" group eligible to receive JTPA services or to a "control" group that was not eligible for JTPA-funded services for 18 months but remained eligible for all non-JTPA-funded services in the community. This study was designed to compare credibly and reliably how well the treatment group fared compared to the control group in meeting the program's goals — thereby showing the difference, or "impact," that JTPA services made over and above what would have happened to these individuals without the program.

II. A Framework for Assessing Issues in the Study

Properly implemented, random assignment is widely viewed as providing more accurate and reliable estimates of program impacts in the specific instance studied than using statistical matching to create a comparison group. As will become apparent in this report, however, implementing a random assignment study in a group of sites that include the diversity of a complex system such as JTPA is a challenge. The choice of random assignment as a method for estimating program impacts was no panacea for eliminating all obstacles to success.

In developing and implementing the study, the Department and the researchers on the project faced many issues that posed threats to the success of the study. These threats can be grouped into those relating to the "internal validity" of the findings (i.e., the extent to which they are unbiased estimates of program impacts for the sites in the study) and to the "external validity" of the study findings (i.e., the extent to which they can be generalized to the larger population of JTPA sites). More specifically, this report addresses the following key issues confronted in this study:

- **Was random assignment implemented properly?** Was random assignment placed at the proper point to capture the major program effects to be measured?

Were normal program operations changed in important ways by introducing random assignment? Was the assignment process done in a random way, and do the observable characteristics of the control group and treatment group look the same?

- **Does the JTPA "treatment" for which impacts are estimated have operational meaning?** Was it possible to identify service strategies for which impacts could be estimated? What JTPA services did members of the treatment group receive overall and by service strategy?
- **What was the experience of the control group (the "counterfactual" for the impact estimates), and how should the impact findings be interpreted?** What was the actual service difference between the control group and the treatment group? How did this affect the interpretation of observed impacts?
- **What impacts could be detected with the available outcome data and sample size?** How was information collected on key outcomes, and what issues arose in this effort? What size program impacts could be detected with the available sample for the 18-month follow-up period?
- **To what extent are the findings from the study externally valid, that is, generalizable to the larger JTPA system?** What was the process for selecting study sites, and what does this imply about any special characteristics they may have? Do the environment in which the study sites operate, gross measures of their performance, and their administrative structure and services suggest that they are an unusual group of SDAs, or do they appear to include much of the diversity of the JTPA system?

III. Implementing Random Assignment in the Study Sites

The research design for the project had to recognize and accommodate the variety of local JTPA programs in the study sites while providing a means to address the central research questions posed by the U.S. Department of Labor. As a starting point, the researchers identified "generic" steps common to all the study sites, which potential JTPA enrollees typically followed during program intake. These generally involve: efforts by the SDA or service provider staff to recruit eligible and interested clients, application for the program and determination of eligibility, an assessment of client interests and current skills, development of a service plan and recommendation of specific services, efforts to arrange the appropriate services, enrollment in JTPA, participation in program services, and termination from the program. It is common for individuals to "exit" from the intake process at each stage. Some find a job or other training on their own; others decide that JTPA is unlikely to provide what they want; and still others may be discouraged by what staff tell them about their prospects in the program.

Three key features of this typical client flow should be emphasized. First, although JTPA funding is sufficient to serve less than 10 percent of the eligible population, many local programs in the late 1980s — a period of economic expansion — had to recruit applicants. Some study sites had to expand their recruitment efforts during the period of random assignment to meet their enrollment targets and accommodate the creation of a control group. Second, the typical intake process was designed to allow individualization of services; JTPA is not a common program model, even within a single SDA. Consequently, the research design had to accommodate many different types of service recommendations and estimate impacts for general service strategies rather than narrowly defined services. Third, the exit of applicants from the system at each step means that the placement of random assignment in the client flow would have affected who was in the sample and the percentage of those who were assigned to the treatment group and actually participated in program services. For example, if random assignment were placed early in the intake process, fewer people would have exited from the intake process, but a smaller percentage of those in the treatment group would actually participate in JTPA than if random assignment occurred later.

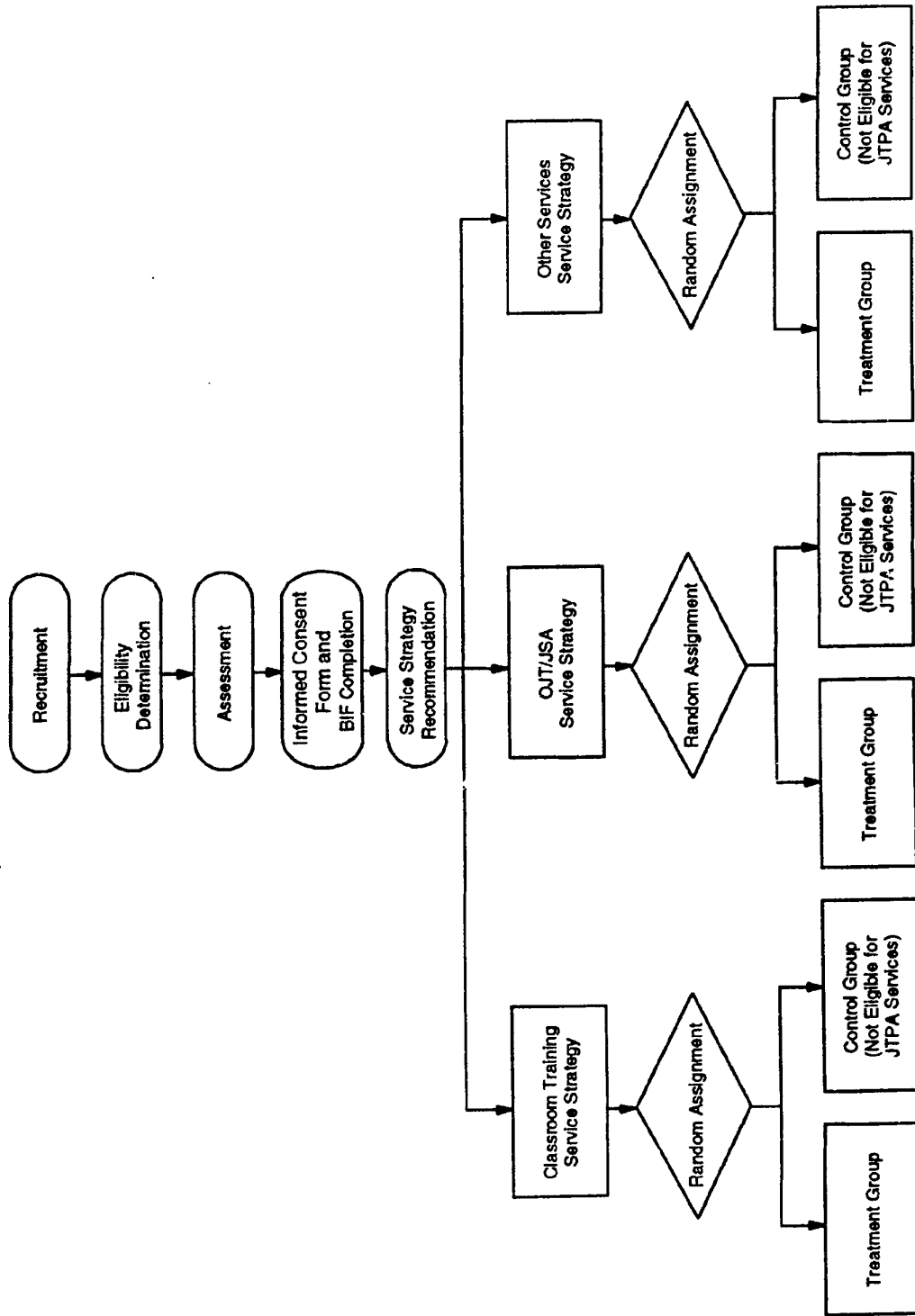
Exhibit ES.1 shows the random assignment design chosen for the impact study. Random assignment followed local staff determination of eligibility, assessment of interests and service needs, completion of an informed consent form and a Background Information Form (BIF), and recommendation of JTPA services and a service strategy. The three service strategies for which impacts were estimated were: (1) classroom training, the category for individuals recommended for classroom training in occupational skills and not for on-the-job training (OJT); (2) OJT/JSA (job search assistance), the category for individuals recommended for OJT alone or in combination with job search assistance and not for classroom training in occupational skills; and (3) other services, for all other cases.

For each service strategy, a treatment and a control group were created through a random process, which produced treatment and control groups with similar pre-random assignment characteristics, based on the information provided on the BIF. In general, this random process produced two treatment group members for each control group member. Thus, one of the most serious potential threats to the validity of the study — noncomparable groups at the beginning of the follow-up period — was not a problem.

If an individual was randomly assigned to the treatment group, local staff worked to arrange services consistent with his or her pre-random assignment service strategy recommendation. Individuals randomly assigned to the control group were unable to receive JTPA services for a period of 18 months following random assignment, but remained eligible for other services in the community and were provided with a list of these alternatives.

EXHIBIT ES.1

FINAL DESIGN FOR RANDOM ASSIGNMENT
FOLLOWING ASSESSMENT AND RECOMMENDATION OF A SERVICE STRATEGY
(USED IN THE NATIONAL JTPA STUDY)



Local program staff did follow these rules carefully, and fewer than 3 percent of the control group were enrolled in JTPA at any point in the 18-month follow-up period, thus averting a second serious potential problem. As discussed below, however, some members of the control group sought and found alternative services, and this must be taken into account in interpreting the impact findings.

This research design addressed the two central impact questions:

- **JTPA service strategy impacts** were estimated by comparing the experiences of the treatment group for each strategy with those of the control group for that strategy.
- **Overall JTPA program impacts** were estimated by combining the three treatment groups (recommended for the classroom training, OJT/JSA, and other services strategies) and comparing their experience following random assignment with a combined control group made up of the three separate control groups.

The first type of estimate measures the impacts of the three service strategies for those people local staff recommended for each. Thus, policymakers can assess the impacts of classroom-based services (primarily training in occupational skills, but also basic education), services with an emphasis on immediate employment with or without training (on-the-job training and job search), and a mixture of other services. However, this design did not produce experimental comparisons of the relative (or "differential") impacts of service strategies because assignment to each of the three treatment groups and the control group was not random. It was expected, and was the case over the implementation of the study, that the groups recommended by SDA staff for the three service strategies would differ on many baseline characteristics. To produce an experimental estimate of the differential impact of service strategies, individuals would have had to be randomly assigned to these service strategies to assure a similarity in baseline characteristics. The choice of research design rested on an implicit judgment by the Department and the researchers that testing JTPA as closely as possible to the way it normally operates was more important than producing experimental estimates of the differential impacts of the service strategies – that is, comparisons of the impacts of service strategies for similar groups.

The second type of estimate allows an assessment of how the overall JTPA program in the study sites benefited different types of individuals, but here the interpretation of the impact estimates is difficult. The research plan produced service differences between experimentals and controls within the three individual service strategies (for example, in the classroom training service strategy, the treatment group received more classroom training than the controls and in the OJT/JSA strategy they received more OJT than the controls), but when all three service strategies are combined it is difficult to describe and interpret

the nature of the service differential. Thus, as much as possible, we seek to present impacts for the specific service strategies.

Although efforts were made to change the operation of local JTPA programs as little as possible, some changes inevitably did occur. First, some of the study sites had to expand outreach efforts to recruit a sufficient applicant pool to serve the planned number of clients and to allow creation of a control group. This, in combination with the gradually declining unemployment rate in many of the sites, led them to recruit and serve a somewhat less job-ready group. Second, in some sites, the selection of a service strategy for each individual prior to random assignment may have prevented staff, in unusual cases, from changing their minds about the proper service recommendation after a person was randomly assigned to the treatment group.

Overall, however, the study did not appear to affect the nature of the services provided to members of the treatment group following assessment and random assignment. Staff continued their normal practices in referring them either to in-house services provided by SDA staff (most often job search assistance or on-the-job training) or to outside service providers.

One final issue in the implementation of random assignment concerns whether the measured pre-random assignment characteristics of the treatment and control groups were similar. The Background Information Form completed prior to random assignment collected many baseline characteristics on sample members. A multivariate discriminant analysis found that there was virtually no correlation between whether a person was a member of the treatment or control group and his or her measured baseline characteristics. Any differences in baseline characteristics between the two groups were neither substantial nor statistically significant.

IV. The Nature of the Experimental Service Comparisons

The experimental impact estimates presented in the National JTPA Study are based on a comparison of the experiences of two similar groups, both of which were found eligible and appropriate for JTPA services. As such, the estimated impacts are for the added post-assessment services made possible by access to JTPA as compared to a "background" level of other services — including JTPA assessment and other (non-JTPA) services — in which control group members participated.

Two points are vital for understanding the nature of the impact estimates. First, the treatment group did not all receive the JTPA services for which they were recommended, for reasons discussed below. Sixty-four percent of the treatment group were enrolled in JTPA at some point in the follow-up period, and the services they received were generally consistent with the service strategy designations

made by local staff prior to random assignment. Of the remaining 36 percent of the treatment group, about half received some type of JTPA assistance after random assignment that did not result in an enrollment (and generally was not intensive), while the other half received no significant post-random assignment service. Second, the impact estimates reported in the study are not for a comparison of JTPA services versus no services because some members of the control group sought and found alternatives to JTPA.

The three service strategies used in the impact analysis did represent distinct JTPA service emphases, as shown in Exhibit ES.2. The exhibit presents the key JTPA services in each strategy, using two different bases for the comparison (the entire treatment group and those in the treatment group who were enrolled in JTPA):

- **Classroom training.** Most enrollees were active in classroom-based services of some type, with classroom training in occupational skills (CT-OS) being more prevalent than basic education (BE). Eighty-six percent of adult male enrollees, 89 percent of adult female enrollees, 80 percent of male youth enrollees, and 86 percent of female youth enrollees were active in classroom training in occupational skills, basic education, or both.
- **OJT/JSA.** Most enrollees were active in on-the-job training and/or job search assistance. Eighty-seven percent of adult male enrollees, 88 percent of adult female enrollees, 85 percent of male youth enrollees, and 85 percent of female youth enrollees were active in either or both activities.
- **Other services.** The predominant types of services differed between adults and youths. Eighty-nine percent of adult male enrollees and 82 percent of adult female enrollees were active in job search assistance or miscellaneous services, while 83 percent of male youth enrollees and 80 percent of female youth enrollees were active in basic education or miscellaneous services.

A follow-up survey conducted approximately 18 months after random assignment provided information on many non-JTPA employment and training services in which members of the treatment and control groups participated. It was possible to collect reasonably complete survey data on the receipt of classroom training in occupational skills and basic education for both groups. Respondents to the survey could not or did not distinguish on-the-job training and paid work experience from regular employment, so no information is available on participation in these activities outside JTPA. However, JTPA participation in these activities by the treatment and control groups (as measured from SDA records) is probably a reasonable indicator of the treatment-control service difference because JTPA is the primary source of these activities. Finally, SDA records showed participation in JTPA-provided job search assistance and miscellaneous services. However, the survey did not provide information on non-JTPA

EXHIBIT ES.2

KEY SERVICES FOR TREATMENT GROUP MEMBERS AND ENROLLEES,
BY TARGET GROUP AND SERVICE STRATEGY

Sample and Target Group	Classroom Training	OJT/JSA	Other Services
<u>Treatment Group Members</u>			
Adult Men	61% enrolled in CT-OS or BE	49% enrolled in OJT or JSA	52% enrolled in JSA or misc. services (a)
Adult Women	65% enrolled in CT-OS or BE	49% enrolled in OJT or JSA	52% enrolled in JSA or misc. services (a)
Male Youths	60% enrolled in CT-OS or BE	49% enrolled in OJT or JSA	56% enrolled in BE or misc. services (a)
Female Youths	62% enrolled in CT-OS or BE	49% enrolled in OJT or JSA	50% enrolled in BE or misc. services (a)
<u>Enrollees</u>			
Adult Men	86% enrolled in CT-OS or BE	87% enrolled in OJT or JSA	89% enrolled in JSA or misc. services (a)
Adult Women	89% enrolled in CT-OS or BE	88% enrolled in OJT or JSA	82% enrolled in JSA or misc. services (a)
Male Youths	80% enrolled in CT-OS or BE	85% enrolled in OJT or JSA	83% enrolled in BE or misc. services (a)
Female Youths	86% enrolled in CT-OS or BE	85% enrolled in OJT or JSA	80% enrolled in BE or misc. services (a)

SOURCE: MDRC calculations from Background Information Form responses and from program enrollment and participation data from the 16 SDAs.

NOTES: Calculations for this table are based on data for all treatment group members and enrollees in the 18-month study sample.

(a) Miscellaneous program services include such activities as assessment, job-readiness preparation, vocational exploration, job shadowing, and tryout employment. In this table, miscellaneous program services also include work experience, which is identified as a separate program service in other reports on the National JTPA Study.

sources of these activities, so it is not possible to report a service difference for these activities. It is likely, though, that many members of the control group received some assistance from state Employment Services, primarily in the form of job leads.

From the available information on JTPA and non-JTPA service receipt, it is possible to characterize the service difference between the treatment and control groups. Overall, there was a difference, but it was modest in size. Despite the data problems discussed above, clear patterns of service differences for individual service strategies and target groups (male and female adults and male and female youths) do appear in the data:

- **For the classroom training service strategy**, clear treatment-control group differences in the key service — classroom training in occupational skills — did emerge for all target groups. For basic education, the treatment and control group average hours were very similar for adults and male youths, while female youths in the treatment group averaged somewhat more hours in this service than did their control group counterparts.
- **For the OJT/JSA service strategy**, using the assumption that JTPA is the primary source of on-the-job training, the treatment group averaged substantially more hours of this service than did the control group for each target group. Because of the problems of measuring non-JTPA participation in job search assistance discussed above, it was not possible to calculate an hours difference for this service.
- **For the other services strategy**, the problems encountered in measuring non-JTPA program participation in job search assistance and miscellaneous services (which are the most common services for adults) prevented calculation of service differences for these two activities. For youths, basic education replaces job search assistance as an important service. Interestingly, for female youths, there was virtually no difference in hours in basic education between the treatment group and controls, while for male youths, the control group actually participated more.

The impact estimates for the overall sample and for the three service strategies presented in the accompanying 18-month impact report must be interpreted as measuring the effect of these modest differences in services between the treatment and control groups. For example, small positive impacts would be more encouraging in light of the modest service difference than would be the case had the service difference been much larger.

The size of the available sample for impact estimates also affects the ability to detect the impact of the services under study. The overall experimental sample of 20,601 is large, as is the 18-month

impact sample of 14,441 individuals. The difference between the total number randomly assigned and the smaller impact sample for the 18-month impact report arises because of the exclusion of three groups:

- 473 "extra" treatment group members who had been randomly assigned at a ratio higher than 2 to 1 (to ease the recruitment burden on sites) were excluded from the analysis so that impact estimates would not involve complex weighing procedures.
- 3,097 people scheduled for follow-up interviews prior to 18 months after random assignment were excluded to avoid the complexities introduced by variable-length follow-up.
- 2,584 people (15 percent of the attempted surveys) were excluded because they did not respond to the 18-month survey.

A sample of more than 14,000 people is clearly adequate for estimating the impacts of the overall JTPA program for the full sample. The real question concerns how far this sample can be disaggregated into the four target groups, the service strategies, and further subgroups. Not surprisingly, despite this large sample, it is not possible to estimate impacts with precision for some combinations of target groups and service strategies.

V. Drawing Conclusions About the National JTPA System from Study Findings

An important issue is the extent to which findings from the sites in the study can be generalized to the JTPA system as a whole. In a strict statistical sense, study findings are externally valid when sites are randomly chosen and, hence, representative of what would have been found had all possible programs been studied. Prior to this study (to the best of the knowledge of the researchers working on the project), no comparable social experiment had undertaken such an approach. In light of its advantages, however, the Department and the researchers attempted to select a random sample of local JTPA programs. For a variety of reasons, the percentage of randomly selected sites that agreed to participate was low, making a "probabilistic" selection of sites infeasible. Instead, the researchers contacted local programs with a goal of recruiting sites that collectively reflected the diversity of the JTPA system rather than a narrow subsample of it.

Several criteria can serve as practical guidelines to help readers assess the extent to which the findings from these sites should be used to draw broader conclusions about the JTPA system:

- **Process of selection.** Was the process used to recruit and select sites designed or implemented in a way likely to recruit sites that would produce unusually strong or weak findings?

- **Geographic and "environmental" diversity.** Do the sites include the diversity of the overall "universe" of sites?
- **Operational diversity.** Do the sites include the diversity of administrative structure, program emphasis, client characteristics, and richness of funding and services seen in the national program?
- **Operational maturity and stability.** Are the sites established programs rather than new entities, recently reformed programs, or agencies facing unusual administrative stress?

While the process of selection was clearly not random, the researchers contacted potential sites based on their region, size, labor market conditions, and other similar characteristics rather than the strength of their JTPA programs. Obviously, no information was available on local program impacts, so this could not be used to guide the selection process. JTPA standards (based on the success of SDAs in placing participants in jobs or achieving other favorable outcomes) have routinely been used to assess the success of local programs; the experience of local programs in meeting or exceeding these standards was known at the time of site selection. However, these standards focus on program outcomes rather than impacts; the sites chosen show a distribution of performance similar to the national JTPA system; and — when the first site-level impacts were estimated — there proved to be no relationship between success in meeting key standards and site impacts.

The sites in the study, shown in Exhibit ES.3, as a group do resemble the national JTPA system in many ways, including labor market conditions and JTPA program performance. Reflecting the variety of JTPA nationally, the study sites include SDAs with varying administrative structure, types of service providers, degree of centralization of intake and service provision, and service emphasis. Additionally, the sample of individuals for which impacts are estimated is similar in age, ethnicity, and work experience to those persons served nationally by JTPA.

There are three notable exceptions to this general picture of similarity of the study sites to the national system. First, there is no large, central city among the sites, although the study does include two SDAs (Oakland and Jersey City) that share many of the labor market and demographic features of such areas. Second, no SDAs serving very small numbers of people were included in the study because of the large fixed costs of conducting the research in a site and the small contribution they would have made to the sample. Finally, the study sites provided less on-the-job training and miscellaneous services, and more classroom training in occupational skills and job search assistance, than was the case nationally at the time of the study.

EXHIBIT ES.3

KEY FACTS ABOUT THE NATIONAL JTPA STUDY SITES

Site Name	SDA Name	Census Region	Largest City	18-Month Study Sample Size
Butte, Mont.	Concentrated Employment Program, Mont.	West	Butte	477
Cedar Rapids, Iowa	East Central Iowa	Midwest	Cedar Rapids	346
Coosa Valley, Ga.	Coosa Valley, Ga.	South	Rome	1,806
Corpus Christi, Tex.	Corpus Christi/Nueces County, Tex.	South	Corpus Christi	1,498
Decatur, Ill.	Macon/De Witt Counties, Ill.	Midwest	Decatur	471
Fort Wayne, Ind.	Northeast Indiana	Midwest	Fort Wayne	2,559
Heartland, Fla.	Heartland, Fla.	South	Lakeland	597
Jackson, Miss.	Capital Area, Miss.	South	Jackson	1,375
Jersey City, N.J.	Corporation for Employ- ment and Training, Inc.	Northeast	Jersey City	1,170
Larimer County, Colo.	Larimer County, Colo.	West	Fort Collins	668
Marion, Ohio	Crawford/Hancock/Marion/ Wyandot Counties, Ohio	Midwest	Marion	1,083
Northwest Minnesota	Northwest Minnesota (Crookston and Thief River Falls)	Midwest	Thief River Falls	498
Oakland, Calif.	Oakland, Calif.	West	Oakland	1,048
Omaha, Neb.	Greater Omaha, Neb.	Midwest	Omaha	956
Providence, R.I.	Providence/Cranston, R.I.	Northeast	Providence	1,277
Springfield, Mo.	Job Council of the Ozarks, Mo.	Midwest	Springfield	1,202
All Sites				17,031

Because of the site selection process, the results from this study should not automatically be generalized to the national JTPA system as a whole. Instead, they should be seen as implementation and impact findings for a group of local programs that reflect much, but not all, of the diversity of JTPA. The analysis of program implementation and impacts contained in other reports from the project seeks to determine how client characteristics, local circumstances, and program design decisions affect key findings among the sites, allowing the reader to assess more fully the applicability of the findings to the larger JTPA system.

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The National JTPA Study was not the first time random assignment had been used to assess the impact of employment and training programs. Its successful use elsewhere was one of the reasons the U.S. Department of Labor chose this approach for the present project. However, the ambitious goals of the project, the decentralized and diverse nature of the ongoing local JTPA programs, and the desire to study the program while changing normal operations as little as possible combined to create a major challenge for the research team. Most, but not all, of the original objectives of the study have been achieved. In the course of implementing the study, much has been learned about the operation of JTPA: how SDAs structure themselves administratively to operate the program, recruit clients, and recommend and arrange services. The impact analysis, as intended, has provided estimates of the overall impact of post-assessment JTPA services and the impact of key service strategies. These estimates are available for four target groups and other key subgroups. Unfortunately, the unprecedented effort to recruit a probabilistically selected group of local SDAs was not successful, but the final study sites do include much of the diversity of the national JTPA system.

In developing and implementing the research design for this project, the Department and the research team confronted many issues that forced them to assess the relative importance of the many competing goals of the study. This report has summarized some of these key decision points, outlined the tradeoffs involved, and explained the choices made as the project moved ahead. With this background, readers can better understand the implementation and impact findings presented in the other project reports and assess for themselves the wisdom of the final research design.