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An Impact Evaluation of Workforce Development Activities

Connecticut Department of Labor
Shaun B. Cashman, Commissioner
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Shaun B. Cashman, Commissioner

Office of Research
Roger Therrien, Director

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Prepared by:
Kenneth Couch, Professor, University of Connecticut
Dana Placzek, Research Analyst, CTDOL
Garrett McDonald, Research Supervisor, CTDOL
Adele DeFrancesco, Director, Office for Performance Management, CTDOL

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Connecticut Department of Labor
200 Folly Brook Boulevard
Wethersfield, CT 06109-1114

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An Impact Evaluation of Workforce Development Activities

Executive Summary

E.1: Goals of the Study

This study provides an evaluation of the Wagner-Peyser (W-P) program in the State of Connecticut. Since these services are focused on improving employability and earnings in the labor market, the evaluation focuses on employment and earnings as program outcomes. The evaluation also provides a description of the characteristics of service recipients and the types of services received.

This study is also intended to serve as a prototype of an approach that would help unify research results across various analyses conducted for employment and training programs in the Workforce Investment System. While strictly duplicate evaluations of every program may not be feasible, the use of common measures will facilitate comparisons of program outcomes while informing continuous improvement efforts. As with the Common Measures proposed at the national level, using similar measures and evaluation processes for a variety of programs can be beneficial for the Workforce Investment System whose aim is to supply a high level of service coordination.

E.2: Major Findings

General

- The Wagner-Peyser program in Connecticut serves a large number of registrants and provides an enormous number and variety of employment services. In calendar year 2001, there were 89,868 new registrants into the program of which 67,420 (75%) received 299,406 distinctly recorded services categorized under more than four dozen activities. This only accounts for individuals who were new registrants to the program in calendar year 2001 and completed using the services by the end of June in 2002. Other clients who had initially registered earlier or whose use of services ended later would further raise the counts of total registrants and services delivered.

- Wagner-Peyser services make a difference. Those registrants who received services had employment rates that were as much as 15 percentage points higher, and estimated annual earnings as much as $3,775 higher, than those who did not receive services. Considering that limited W-P resources require that services are directed to those that need them most, the superior outcomes achieved by those who receive services compared to persons who are considered more likely to more readily obtain work makes these results even more notable.

- Among the wide variety of services offered, three were consistently associated with better outcomes for program participants: direct referrals to permanent jobs, the use of self-service resources by some participants, and the provision of labor market information to job seekers.
    - Direct referrals to existing jobs are arguably the best employment related service that can be provided to a job seeker.

- Self-service resources, including computerized listings of job openings, are also used in Connecticut as a mode of job search for some W-P clients. In general, individuals seen as more able than the typical client to obtain employment on their own are referred to these services to free staff time for direct contact with people who are in greater need of assistance. While the use of these services appears to have been effective for clients currently steered towards them, caution should be used in substituting those services for staff contact in the case of job seekers who may need more guidance.
- The provision of labor market information is useful in helping job seekers understand the realities of the local job market, what industries and occupations are offering the greatest opportunities and what education and skill training they require.

All three of these services were found to consistently have a positive impact on earnings and employment outcomes.

Employment Outcomes

- Those who used W-P services had better employment outcomes, especially when comparing their experiences immediately after leaving the program relative to the year prior to their registration. Comparing these immediate before and after periods, the estimated improvement in employment rates ranged from 11 to 15 percentage points for those who received services relative to those who did not.

- Direct job referrals, the use of self-service resources, and the provision of labor market information all had measurable impacts on employment rates. Direct job referrals, by far, had the greatest impact. An additional area of services that appeared to contribute to these positive outcomes was job search assistance, which consists of activities such as resume preparation assistance and job search planning.

Earnings Outcomes

- Most W-P registrants were unemployed at the time they received services so, as a group, their earnings declined from the time before registration relative to the post-program period. However, those who received W-P services experienced smaller losses in earnings than those who did not receive services.

- The earnings loss from one year prior to the program relative to one year afterwards for those who received services were estimated to be $3,150 to $3,775 less than for those who did not receive services.

- Among W-P registrants in the study population, roughly two-thirds were unemployed. Considering this subgroup alone, the average earnings outcome for unemployed registrants who used services again was better than for those who did not. Relative to the group of all registrants, this positive outcome for the unemployed was smaller, but still indicative of program services being effective in helping clients make better labor market transitions. Nonetheless, the estimates relative to a period three years earlier show that while W-P clients are making improvements, their labor market status is not as good as it was at an earlier time, indicating that more time, more than two years on average, is generally needed to regain prior earnings levels.

E.3: Conclusions

There is consistent evidence in this study that the services offered under the Wagner-Peyser program in the State of Connecticut offer meaningful assistance to those making job transitions. Particularly around the time of the transition itself, the services result in fairly large differences in the employment rates and earnings for those who use the program services relative to similar individuals who do not. If one looks back several years in the typical registrant's employment history, W-P services appear to help restore individuals more quickly to their former labor market standing.

The services that had a positive influence on both employment and earnings outcomes were fairly consistent. Direct job referrals, the use of self-service resources, and the provision of labor market information were consistently associated with positive employment and earnings outcomes for service recipients. Job search assistance additionally had a positive impact on the employment rates of Wagner-Peyser registrants.

Looking at the magnitude of the effects in the year prior to program registration and immediately afterwards, most would conclude that the impact on employment is larger than the impact on earnings. Those who used the available services had employment rates that were 11 to 15 percentage points higher than for individuals who did not. The earnings impacts, while not up to prior levels, were not trivial. Those who used the services, relative to those that did not, had annual earnings that were $3,150 to $3,775 higher on average.

From a policy perspective, these results indicate that focusing resources on direct job referrals and the listings of available jobs could improve the effectiveness of the public labor exchange system. Job referral services are most effective, but require a good deal of staff time. Funding limitations hamper this aspect of the program. There is also indication that self-service resources are useful for certain job seekers and maintaining these resources would be beneficial. The positive outcomes for self-service users also show that Connecticut has been effectively directing more readily employable clients to its resource rooms, computerized job listings and career exploration tools, as well as providing assisted services to those that need it. In terms of cost effectiveness, information on the labor market appears to be the most cost-effective service that has significant impact for the broadest range of job seekers.

Additional Detailed Findings

Descriptive Findings

- Of 89,868 W-P registrants in the study population, 67,420 (75%) received one or more services. These clients received an average of 4.4 services each.
- The aggregate number of services received by the study group was a staggering 299,406. This number, by any standard, is very large, as it only represents program services for individuals who registered in 2001 and received no services after June 30, 2002. It does not include other clients who would have continued receiving services following registration in a prior year, or those who registered in 2001 and continued receiving services after June 30, 2002.
- Of the 67,420 people who received services, 66 percent received strictly staff assisted services, 12 percent used self-service opportunities, while 22 percent used a combination of services.
- The overall portrait of a typical service recipient would be a high school or vocational/technical school graduate between the ages of 22 and 54. Fifty-two percent of the study group was male. Fourteen percent had less than a high school education; 31 percent had some college or a college degree. Seventy-seven percent were between the ages of 22 and 54. One of every three was black or Hispanic.
- There are no large disparities in services delivered based on demographic groupings. Services are distributed in a roughly proportionate manner across demographic groups.
- Earnings for those who do not use W-P services are consistently higher than those who do, showing that on average those in the former group have stronger labor market experiences. This would be expected given the targeted selection of persons for receipt of assisted employment services.
- Both users and non-users of services experience sizeable earnings losses from the time before they enter the program until after they exit. Those who do not use W-P services on average experienced larger losses in earnings. Alternatively, it may be the case that program services are helping the group that receive them make better transitions.
- Over time, the gap in post-program earnings between service users and non-users widens with the non-users gaining the greater advantage. The overall pattern suggests that those that do not use W-P services are more readily employable (for example, have education and/or experience in areas of demand), as evidenced by their generally stronger labor market achievements.

Statistical Findings – Earnings Outcomes

- Those who did not avail themselves of services universally had worse earnings outcomes than those who had some Wagner-Peyser services. Those who received services experienced an earnings loss that was $3,775 less than the earnings loss for the typical person who did not receive services.

  Further, those who have the greatest advantages in the labor market experience the largest declines in earnings following receipt of program services. Those with higher levels of education tend to suffer larger earnings losses than those with less education. This is largely due to the fact that those with more education held higher initial incomes.

Similarly, men tend to experience larger earnings losses than women. White service recipients also tend to experience larger earnings losses than other groups.

- In the first year after program exit, services under the categories of Testing, Job Referral, Self-Service, and Labor Market Information are associated with better earnings outcomes for recipients than others. The impacts are statistically significant for Job Referral, Self-Service and Labor Market Information.

  For two of the categories where outcomes of those who receive services are statistically better than others, Job Referral and Self-Service, it is worth mentioning that both comprise similar activities, the primary difference is whether staff are involved or not. Testing applies to a very small portion of the sample but usually is related to an employer request for skill certification and thus is similarly related to direct employment. The other service with a sizeable measured positive impact, Labor Market Information, provides knowledge about job opportunities.

- In the second year after program exit, the largest losses again were for older, more educated, white males. Across all demographic categories, those who received services had smaller net earnings losses than those that did not. Job Referrals, Self-Service and Labor Market Information are associated with statistically significant positive outcomes.

  The individual service that appears to yield the best program outcome by any measure is direct job referral. It is also evident that those who use the self-service resources also tend to have more positive outcomes than others although this is likely due to the nature of the clients who make use of them.

Statistical Findings – Employment Outcomes

- Those who received program services maintained an employment rate that was 12-15 percentage points higher than for those who did not receive services through each of the four quarters of the first year after program exit. This relatively favorable set of employment outcomes is observed across virtually all of the individual demographic groupings – age, race, gender and education level.

- The service groupings of Job Search Preparation, Job Referral, Guidance, Miscellaneous, Self-Service, and Labor Market Information all appear to be associated with improved client outcomes in terms of their employment experiences. Not all of these groups are statistically significant in every instance, but their positive outcomes and statistical significance are observed often enough to warrant mention. Services that are both positive and statistically significant in every instance are Job Referral, Self-Service, and Labor Market Information.

  - A job referral from the Department of Labor is associated with the most positive outcome for service recipients, with employment rates improved by 7.7 to 16.7 percentage points.

  - The estimated improvement associated with employment outcomes for those who use self-services ranges from 2.6 to 10.2 percentage points.

  - The provision of basic labor market information also appears to positively influence employment outcomes. The employment rate for service recipients who are provided basic labor market information improves by 1.1 to 3.3

percentage points. One of the traditional arguments for local labor exchanges was to help reduce frictional unemployment through the provision of labor market information. These estimates appear to support the contention that such policies can be effective in reducing unemployment.

- Job search preparation also appears to improve employment outcomes of service recipients. The estimated improved employment rate for those who receive this service relative to those that do not ranges from 0.9 to 2.8 percentage points. Job search preparation consists of a range of activities such as resume preparation, search planning, and job search workshops.

- Guidance and other miscellaneous services also appeared to positively influence employment rates, although the estimated improvements were generally less than one percentage point and often not statistically significant.

Some caution should be used in interpreting these results. While better outcomes are associated with individuals receiving these particular types of services, it may also be the case that more able service recipients select these service types for themselves or are routed there by program administrators. Where individuals have actively participated in choosing the services they would receive or administrators have steered clients toward specific services, the characteristics of the individuals may be as important in determining the outcomes as the services received. For example, within Connecticut, those with higher levels of education are usually steered to self-service computer-based job listings. They are seen as more immediately employable with relatively less intensive services being required. Thus, the fact that self-services are seen as having a positive outcome may depend on the group being serviced to some extent. The implication is that if all clients were steered towards self-service resources, the outcomes might not be as favorable.

Chapter 1: An Introduction to the Wagner-Peyser Program and the General Evaluation Design

This evaluation is meant to provide information about the Wagner-Peyser program and to assist with thinking about how to evaluate employment-related programs in a more unified manner. We have chosen to separately present some information regarding the Wagner-Peyser program and general thoughts about evaluation design but do not attempt to maintain a strict separation throughout the document. Indeed, we feel that Wagner-Peyser services are similar to many other types of employment-related programs and that by revealing our thinking about this evaluation as it developed, it can be instructive for how other similar program evaluations might be conducted.

In this chapter, we present some background regarding the structure and activities of the Wagner-Peyser program in Connecticut, as well as some of the basic thoughts we had regarding questions we would like to answer in the evaluation and the information that seemed to be required to perform it. The theme of the chapter is that the informational requirements of any evaluation will be fundamentally driven by the particular questions to be answered.

1.1 Wagner-Peyser Program Background

In Connecticut the Wagner-Peyser (W-P) program provides the State's public labor exchange and is a primary partner in the One-Stop Career Center System known as Connecticut Works (*CTWorks*). The selection of services provided through Wagner-Peyser and the relationship it has with others in the One-Stop setting are unique to this State. This statement is probably true in all states, since the USDOL allows them to define unique local programs within unifying guidelines. The following description appears on the Web site for the USDOL Employment and Training Administration:

> "The Wagner-Peyser Act of 1933 established a nationwide system of public employment offices, known as the Employment Service. The act was amended in 1998 to make the Employment Service part of the One-Stop Services delivery system. [The names of the many service centers across the country may be different. Some include Employment Services, Employment Security Commission, Job Service, One-Stop Center, Workforce Development Center, etc. [However], their mission is the same: to assist job seekers in finding jobs and employers in finding qualified workers and, in some areas, to provide job training and related services.

> The Employment Service is an integral part of the One Stop delivery system that provides universal access to an integrated array of labor exchange and Workforce Investment Act (WIA) services. These assist workers, job seekers and businesses to find the services they need in one stop and frequently under one roof in easy-to-find locations.
>
> As part of the One Stop service delivery system, the Employment Service focuses on providing a variety of employment-related labor exchange services. These include, but are not limited to, job search assistance, job referral and placement assistance for job seekers, re-employment services to unemployment insurance claimants, and recruitment services to employers with job openings. Services are delivered in one of three modes including self-service, facilitated self-help services [e.g., a brief instruction to help participants make use of self-services, equipment and resources] and staff-assisted service delivery approaches. Depending on the needs of the labor market other services such as assessing job seeker skill levels, abilities and aptitudes, providing career guidance when appropriate, and supplying job search workshops and referral to training may be available.
>
> [I]n addition to referring job seekers to available job openings, [other] services are offered to employers. These include assistance in developing job order requirements; matching job seeker experience with job requirements, skills and other attributes; assisting employers with special recruitment needs; arranging for Job Fairs; helping employers analyze hard-to-fill job orders; assisting with job restructuring and helping employers deal with layoffs.
>
> Job seekers who are Veterans receive priority referral to jobs and training as well as special employment services and assistance. In addition, the system provides specialized attention and service to individuals with disabilities, migrant and seasonal farm-workers, ex-offenders, youth, minorities and older workers."

In this study you will find a number of references to data on individuals who registered for unemployment insurance (UI) benefits. Connecticut operates its UI program through call centers and unemployment claims are applied for via telephone. To ensure that each UI claimant is registered for employment services, appropriate data is collected from the individual as part of the telephone initial claims process. Due to limits of resources, it is not possible to provide employment services to every registrant. To address this, the State has developed an algorithm for selecting those who would be expected to benefit most from receipt of available

employment services and they are required to see an employment counselor at a local One-Stop Center. UI claimants not selected by this process may come in as well, but many do not. The set of individuals who did not receive Wagner-Peyser services were used as the study's comparison group. The motivating purpose was to compare the experiences of those who received Wagner-Peyser services to those who did not. In the study results you will find frequent reference to the comparison group, and to UI recipients as well.

1.2 Developing an Evaluation Process and Set of Measures

This study was conducted using administrative data from the Connecticut Department of Labor's Wagner-Peyser program. It was designed to identify the relationship between Wagner-Peyser services and the subsequent labor market experiences of program participants.

To conduct the study we used administrative data, including wage records, for individuals who became program registrants in the period from January 1, 2001 through December 31, 2001. Setting this as our study group ensured that we would have access to ample pre- and post-service wage records. This made it possible to compare wages earned prior to program involvement with wages secured after receipt of services. We were also able to identify specific program services received by each registrant.

There is much to learn about this significant program, but at the same time we wanted to use our experience with the study to describe a program evaluation process that could be replicated or adapted for other employment and training (E&T) programs. We believe that the primary questions for all E&T programs are similar to those for Wagner-Peyser, which serves as the public labor exchange.

The need to access the various data sources used in the analysis was driven by the analytical questions that the evaluation sought to address. There is never a universal answer regarding what data are necessary to conduct all evaluations; however, there are some general themes that emerge that are worth emphasizing in the context of the evaluation of labor market programs.

First, as evaluations of labor market programs are typically going to involve either earnings or employment as an outcome, and possibly both, some source of continuous labor market information is necessary in order to compare the experiences of program participants before

service delivery to subsequent periods. Second, to the extent that there is a desire to relate outcomes to the services received by program clients, information on those services must be available in a form that can be attached to the labor market outcomes, be they earnings or employment. Third, labor market outcomes differ greatly based on factors such as race, gender, age, and education. This dictates that an effective evaluation must have some basic demographic information that can also be attached to the aggregated data set.

The particular informational requirements for our evaluation can perhaps best be seen in the context of the original questions we sought to answer. And clearly, a basic recommendation is simply to list the particular questions of interest to focus attention on the informational requirements of the analysis.

1.2.1 Formulating Questions

As we began thinking about the employment services offered under Wagner-Peyser, we listed the following questions of interest. These questions were fundamental as we began to think about the data requirements necessary for the evaluation. In this final report, we have not addressed all of these questions, but we have answered many.

1. Do people find work after receiving services?
2. In general, which services appear to have a positive affect on employment and wage outcomes?
3. Does the number of services received, or their duration, appear to influence a positive outcome?
4. How much do people earn when they find work after receiving employment services?
5. Do service recipients transition to growth industries?
6. Do service recipients have better labor market outcomes?
7. What are the employment outcomes for those who use self-services only?
8. What are the employment outcomes for those who get staff-provided services?
9. What types or combinations of services result in the best employment outcomes?
10. Do outcomes vary by age, gender, educational level, work history, or race and ethnicity?
11. Do W-P registrants who file claims for UI have higher rates of entry into employment than non-claimants do?
12. Do W-P registrants who file claims for UI have higher wages upon entry into employment than non-claimants do?

13. Do W-P registrants who file claims for UI have longer employment retention than non-claimants?
14. Do W-P registrants who file claims for UI have more rapid wage growth than non-claimants do?
15. Is there a relationship between pre-registration earnings and post-program outcomes?
16. Is there a relationship between pre-registration earnings and participation in services?
17. Do individuals who receive W-P services tend toward stable long-term employer-employee relationships?

In thinking about the kinds of information we would need to begin to address these questions, these were some of the dimensions of information we felt we needed to locate and aggregate into a form appropriate for analysis.

1. Number of registrants who received specific services.
2. Number of registrants employed after receiving services.
3. Employment status during the duration of the evaluation
4. Wage histories throughout the analysis period
5. Information on the duration of job retention
6. Tracking of entry and exit for the Wagner-Peyser program.
7. The number of registrants who did not receive training services.
8. Information on gender, age, education, race, and industry of employment, where available.

1.3 Collection of Administrative Data for the Analysis

1.3.1 Data Acquisition and Development

Data for the study were extracted from several Connecticut Department of Labor data sources, including UI benefits, UI tax, WIA, and W-P operational data stores. The data was cleaned and transformed as needed to provide the data foundation for the analysis and evaluation of W-P services selected as the target of this study. Selected data from all sources were compiled into a flat file to facilitate statistical analysis using SPSS software (see Appendix C: Structure of the Data Analysis File).

Major areas of data acquisition involved (1) compilation of the study population and comparison group, (2) compilation of an external comparison group, (3) compilation of earnings data for the study population and external comparison group, and (4) compilation of time-dependent demographic data. These portions of the data development process are discussed in order.

1.3.2 Compilation of the Treatment and Comparison Groups

Data were drawn from the W-P and UI historical records. A file containing information on registrants in the W-P program was merged with a similar file containing information on applicants for UI benefits. To enter the study treatment and comparison groups required that an individual be registered in the W-P program. However, a person might have a different application date for a UI claim, indicating earlier labor market difficulties. Where an individual was registered for both W-P and UI, the earlier of the two registration dates was used as their entry date into the study sample in order to better identify the beginning of their labor market difficulty. If this date was not in calendar year 2001, the record was not included in the study. Further, for those whose entry date did occur in 2001, to ensure that a person's labor market distress did not begin earlier we confirmed that no other W-P or UI activity occurred between June and December 2000. These conditions would serve to better identify their work experience prior to their need for employment services.

The study treatment population consisted of 67,420 W-P registrants that received a W-P service (see Appendix A: Service Groups). The comparison group consisted of 22,448 W-P registrants that did not receive a service.

For the study treatment group, the post-program follow-up period was determined by the completion dates of W-P service sets. A service set was defined as all services received during a time period beginning with the first recorded service and ending with the last recorded service prior to a period of 180 days during which no services were received. A new service set could begin after a lapse in services of 180 days. When an individual did have a second service set, outcomes were determined following the last completed service set. Service sets started during calendar year 2001 had to have been completed within six months of the end of the study period, i.e. by June 30, 2002, for an individual to qualify for inclusion in the study.

The comparison group consisted of those clients that established a UI benefit year and were registered with the W-P program but did not receive a W-P service. The initiation of the follow-

up period was based on the last UI benefit week compensated or the date of the last W-P contact, whichever came later. This last UI or W-P contact had to have occurred by June 30, 2002 for the individual to be included in the study. Again, this was established to better capture work experience following program exit for comparison to pre-registration work history.

1.3.3 Compilation of the External Comparison Group

Much of the analysis in this report will focus on comparisons of those W-P registrants who received services relative to those who did not. Being in either of these groups is indicative that an individual had likely experienced some labor market difficulties.

Another analytic approach was to compare the W-P treatment group to similar individuals who had been employed during the study period. Thus, we constructed an additional comparison group of individuals who were not W-P registrants or UI claimants at the time of our study. We refer to this group as our external comparison group.

In general the external comparison group was a 10 percent random sample of an administrative file of wage earners in the State of Connecticut that were not members of the W-P study treatment and comparison groups. The only requirements for entry into the external comparison group were that the individuals were employed at some time during the study period and their demographic characteristics were available. For the demographics to be available, they had to have registered with the Department of Labor for either a UI claim or employment services at some other time. The external comparison group included 23,104 individuals.

1.3.4 Compilation of Earnings Data for the Study

Quarterly earnings data for individual employer-employee relationships were extracted from the wage records that are required to be reported by employers covered under Connecticut UI Statutes. Gross earnings for each individual in the study population, along with the identification of the primary employer, were compiled by quarter from 1998 forward to the most recent quarter available.

1.3.5 Overview of the Final Analysis File

As a result of these various data collection efforts, we constructed a file that includes detailed wage histories extending back for a fairly long time frame prior to the period in which Wagner-

Peyser clients received services and for a reasonable time frame beyond the period of service delivery. That data file focuses on clients who entered W-P in the calendar year 2001 and met our definition of program exit by the date of June 30, 2002. The wage information begins three years prior to W-P registration. We similarly have as many as 12 quarters of earnings information beyond service delivery. This varies depending on the exact date of exit for each individual in the study population.

Within this aggregate file there are three basic categories of individuals. Anyone who registered for Wagner-Peyser services we have termed as being included in our study group. There are individuals in the study group who received services that we call the study treatment group, and those who registered but received no services that we term the comparison group. The third group in the file is a random sampling from wage records of all persons covered by unemployment insurance in the State of Connecticut. We refer to this third group as the external comparison group. The purpose of this third group was to provide the opportunity to contrast the experience of our study group with those of similar individuals who were active in the labor market.

Most individuals who received Wagner-Peyser services had fairly complete demographic information available as it was collected at the time of registration. Those who registered but received no services had less complete information. Finally, the external control group had the least available demographic information.

While the differential amounts of demographic information in the file created some difficulties in the analysis, this reflects some of the limitations in using administrative data to conduct program evaluations. Nonetheless, we feel that, in the end, we were able to coalesce enough information to obtain a fairly comprehensive picture of the extent and effects of Wagner-Peyser services in the State.

Chapter 2: Program Participants and Group Experiences For Wagner-Peyser Services

The most basic types of information to provide in any program evaluation include summaries of the program participants, tabulations of the services received, and descriptions of their general labor market experiences. In this chapter, we seek to provide this information before moving on to more formal evaluations of labor market outcomes associated with specific types of services.

2.1 Descriptive Information on Treatment Group Clients and Services Received

2.1.1 Services Delivered by Type to the Treatment Group

We begin with a simple count of clients, the average number of services received, and the aggregate number of services received. We show these figures, in total and broken out by demographic characteristics, in Table 1. As shown in the table, there were 67,420 persons served by the program. These individuals registered for services in calendar year 2001 and had met the definition of having completed their use of program services as of June 30, 2002.

The individuals in our study treatment group received an average of 4.4 services each. The aggregate number of services was a staggering 299,406. This number, by any standard, is very large, as it only represents program services for individuals who registered in that calendar year received no services after June 30, 2002. It does not include other clients who would have continued receiving services following registration in a prior year, nor those who registered in 2001 and continued receiving services after June 30, 2002.

The types of services most frequently delivered were the mix of services grouped under the heading **Miscellaneous**. These general services represented 21 percent of all contacts and are often introductory in nature. Among these are a general orientation, assessment interview, notification of equal opportunity rights, bonding assistance and other various types of assistance not captured in other categories.

Labor Market Information represented 20 percent of the services delivered. Information about the labor market helps job seekers plan more effective searches for job opportunities and is frequently included in the complement of information employment counselors deliver to program participants. Job seekers are provided information concerning the occupational staffing patterns, working conditions and pay of firms or industries. They are also provided the

employment outlook and wage levels for occupations, general information about the economy and labor market, career information publications and an explanation of electronic job and career information resources.

Many individuals utilize the available employment-related resources on their own. Recorded as **Self-service** activities, these accounted for 20 percent of the services received. Among these are access to information about specific job opportunities, including those that require no staff intervention for referral. Through use of the computers and career-related materials housed in the One-Stop Centers, job seekers can select certain job leads and pursue those on their own using telephones, fax machines and other resources in the One-Stop centers.

The grouping that makes up the **Job Search Preparation** set accounted for 13 percent of all the services used, and the specific service of Job Search Planning accounted for 88 percent of the group. Other types of services in this group include resume preparation, job market research and job application assistance.

Workshops supply a related service. Attendance at workshops accounted for 8 percent of the services used by program participants. Like job search preparation, workshops often cover topics pertinent to building successful job seeking skills. When considered together these two preparatory services account for 21 percent of the treatment services delivered in the study period. Workshop topics include an orientation to One-Stop center services, job search techniques, networking, resume writing, interviewing techniques, self assessment, and labor market information.

Job Referral is the category where W-P staff members provide direct job selection assistance to job seekers. It includes automated job matching services as well as job referrals and job development contacts. This category accounted for 9 percent of the recorded 299,406 instances of service delivery to the study population. It is important to remember here that, by calendar year 2001, Connecticut was evolving its Job Bank to require little or no staff intervention. As the year progressed, more and more job orders were geared to self-referral. As noted above, using self-services, a job seeker can often select an interesting lead and pursue that directly, without the involvement of Agency staff. Although referrals made through the Agency's job match and job development activities are tracked, Connecticut does not have the technology to count the self-referrals. The result is that the "Job Referral" service group

does not account for the full volume of referral activity accomplished in the centers. Nevertheless, the study treatment group had 28,335 staff-assisted job referrals, 9.5 percent of the total services received.

Referral to Supportive Services, Guidance Services, and Testing were the least frequently delivered services. Referral to supportive services accounted for five percent of the services delivered to Wagner-Peyser customers. These referrals provided participants with an opportunity to pursue **Supportive Services** (including training) from other programs. Of the 299,406 services delivered just 7,069 (2 percent) were the related but more intense **Guidance Services** provided in a one-on-one mode. These included individual counseling, career guidance, employability development plans, and case-management services. The service category least used was **Testing**. Just 697 instances of this service were reported for the calendar year amounting to less than one percent of the services delivered.

It is generally believed that most Wagner-Peyser registrants are job-ready workers looking for help with transitions to new or improved work situations. This appears to be supported by the volume of services delivered in the combined categories of Job Search Preparation, Job Referral, Workshops, and Self-Service. Together these account for 50 percent of the W-P activity in the study year. Guidance and Referral to Supportive Services that are often outside the purview of the Wagner-Peyser program are among the real minority of services delivered, but they still account for close to 7 percent of all activities.

2.1.2 Demographic Characteristics of the Treatment Group

As shown in Table 2, of the 67,420 persons who received services, 50 percent were identified as male, 44 percent were identified as female. Gender could not be identified for 6 percent of the sample.

The most common educational level attained by service recipients was high school. High school graduates represented 46 percent of the study treatment group. High school graduates plus those who had more education but not a college degree made up 63 percent of the sample. Fourteen percent had less than a high school degree. Similarly, 14 percent had a college degree or more. The typical member of the study treatment group had a high school or technical/vocational level of education.

Wagner-Peyser is most often thought of as providing employment services to active participants in the labor market. The demographic breakdown in Table 2 confirms this. Participants between the ages of 22 and 54, the prime working age range, represent 76 percent of all service recipients.

Those who registered for Wagner-Peyser services are also asked to identify their race or ethnic origin. In the treatment group, 57 percent of the sample identified themselves as white, 18 percent as black, 14 percent as Hispanic, and 2 percent as Asian.

The overall portrait of a typical service recipient would be a high school or vocational/technical graduate between the ages of 22 and 54. Beyond that statement, they might very well be male or female or ethnically identify with being white or a minority.

Another comparison one might be interested in making is whether there are large disparities in service delivery based on demographic groupings. In general, this is not the case. Men comprise 50 percent of the sample and receive 54 percent of services. Women are 44 percent of the sample and receive 45 percent of the services. Those with a high school education or some college are 63 percent of the sample and receive 67 percent of the services. Whites make up 57 percent of the sample and receive 62 percent of the services. Blacks represent 18 percent of the sample and 20 percent of the services. Asians are 2 percent of the sample and receive 2 percent of the services. So, it appears that services are distributed in a roughly proportionate manner across demographic groups.

2.1.3 Mode of Service Delivery to the Treatment Group

Table 2 also presents a distribution of the number of individuals who receive Wagner-Peyser services by the mode of delivery. Looking across the top row of the table, of the 67,420 people who received services, 66 percent received strictly staff assisted services, 12 percent used self-service opportunities, while 22 percent used a combination of services.

One can use the table to examine whether the demographic representation in the sample is fairly consistent with the mode of delivery. Where these comparisons are possible (principally for staff assisted services), there does not appear to be any particular preference exhibited for a specific type of service delivery. For example, males are 50 percent of the sample and females

are 44 percent. They respectively represent 56 and 44 percent of all persons receiving staff assisted services.

Similarly, those with a high school degree are 46 percent of the sample while those with some college are 17 percent of the sample. They respectively represent 50 and 17 percent of all persons receiving staff assisted services. Those ages 22 to 39 are 46 percent of the sample while those ages 40 to 54 are 30 percent. They respectively represent 48 and 31 percent of persons receiving staff assisted services.

Finally, whites are 57 percent of the sample, blacks are 18 percent, and Hispanics 14 percent. They respectively represent 61, 17, and 16 percent of all persons receiving staff assisted services.

Thus, within the group of staff assisted services, there appears to be a roughly proportionate distribution of individuals in accordance with their representation in the sample.

The same comparisons would not be accurate in the columns for self-service and the combination of self and staff-assisted services. The issue there is that when individuals engage in self-service activities, they are not required to submit demographic information. Thus, in those columns, the higher counts of persons that were coded as INA (information not available) make the comparisons unreliable.

2.2 Descriptive Information on the Comparison Group

During our study period, individuals who became unemployed called in to register for unemployment insurance benefits through the Telephone Initial Claims (TIC) system. As part of that registration process, relevant data were also collected to register those individuals for employment services unless they were on temporary layoff. Many of those unemployed individuals were selected to receive staff-assisted employment services based on an evaluation of their reemployment expectations. Of those not selected due to limitations on resources, they had the option to visit a One-Stop center and request services, but many chose to search for employment on their own and they comprise our study comparison group. Table 3 provides a breakdown of those W-P registrants who were unemployment insurance claimants who did not use the employment services available, along with those who did.

In the group of individuals who did not use W-P services, the sample composition is similar demographically to that of the group that did. Males represent 57 percent of those who did not use W-P services, while females comprise 43 percent of this group. Of those that were W-P service users, 50 percent were male and 44 percent female, with gender of the remainder not identified (most likely self-service users).

The distributions by education were also very similar, the one notable difference being among those with college degrees, which were 20 percent of the non-users compared to 14 percent of service users. This difference may be attributable to the large number of service users who were self-service users only for which it would be expected that a large proportion would be highly educated.

Likewise, a similar explanation can be made for the age and race distributions. The age breakdown is quite similar between the groups, with the largest difference appearing in the 22-39 year old category where they represented 46 percent of service users and 51 percent of non-users. This generational group may be more willing and able to search for work independently. Among races, the comparison is again similar, with one notable difference between whites and blacks. Among W-P services users, whites comprised 57 percent and blacks 18 percent of the group, whereas among non-users whites made up 68 percent and blacks 12 percent. Again, a large number of W-P users for which this demographic is unknown were self-service users only.

Looking across modes of service delivery, men are 56 percent of those who receive staff-assisted services only, and 47 percent of those who elect to use a combination of services. Fifty-seven percent of those who receive UI and elect to use no services are male. Women are 44 percent of those who use staff assisted services only, 53 percent of those who use a combination of staff and self-service facilities, and 43 percent of those who use no services. Again, men and women appear to make a roughly proportionate use of services and show no readily apparent taste in the type of service delivery they receive.

2.3 Descriptive Information on Earnings Histories

Some familiarity with the general earnings histories of different segments of our sample will be useful in interpreting more formal estimates presented later in the study. A series of charts are presented that show earnings leading up to registration for the treatment and comparison groups. The charts also show the stream of earnings following the exit of individuals from the

program for which they registered. We will consider this information first for the study treatment and comparison groups. Then, we will present similar charts for only the unemployed members of the study population.

Chart 1 shows median quarterly earnings for our study treatment and comparison groups before program registration and then continuing after program exit. The chart shows that both groups experience sizeable earnings losses from the time they enter the program until they exit. This would be anticipated given that many would have been employed immediately prior to their W-P registration and their unemployment would have led them to seek employment services. The chart also shows that earnings for those who do not use W-P services are consistently higher than those who do, showing that on average those in the comparison group have stronger labor market experiences. This would be expected given the targeted selection of persons for receipt of employment services.

Chart 2 breaks the aggregate group out by gender. In this graph, the median wages for males are consistently above those for females. Within the two groups, the earnings of those who elect not to use services are consistently above those who fall into our treatment group. For both the males and females, from the point of program entry to program exit, there are large earnings losses for both the treatment and comparison groups. If the focus changes to either males or females, one can see that immediately after program exit, the treatment and comparison groups' wages are more similar, which means that the comparison group on average experienced larger losses in earnings. The comparison group would be expected to have had higher prior earnings and thus have more to lose as a result of a job loss. Alternatively, it may be the case that program services are helping the treatment group make better transitions. Over time, the gap in earnings between the study treatment and comparison groups widens. The overall pattern suggests that the comparison group members are better prepared for employment opportunities (perhaps, for example, as a result of having more education and/or experience in areas of employment demand), and it is evidenced by their generally stronger labor market performances. Again, this provides an indication that services are being provided to those that need them most.

Chart 3 provides a similar breakdown based on race and national origin. The levels of the earnings among the groups are ordered as follows: White, Asian, Native American, Black, and Hispanic. For all racial groups, the treatment and comparison group members experience large

earnings losses from the point of registration to the point of exit. As was the case with gender, the races that had gaps in earnings between the treatment and comparison groups prior to registration exhibited much smaller gaps upon exiting. The gaps again widened as time passed beyond the point of program exit.

Chart 4 provides the same type of breakdown for different educational levels. Earnings levels in the graphs are ordered as one would expect. College graduates have the highest earnings and those with less than a high school education have the lowest. For any educational level, members of the comparison group have higher earnings than the treatment group. Again, differences in earnings between the treatment and comparison groups before program entry are observed as being compressed at the time of program exit. The gaps begin to reassert themselves as time passes in the post-program period. It is also interesting to note that college graduates appear to suffer the largest earnings losses as a group. This is likely due to the fact that they simply start from a higher level of earnings and would naturally have more difficulty immediately regaining their prior status.

With Chart 5, we begin our examination of the earnings paths of only those in the treatment and comparison groups who were UI claimants. The reason for considering these individuals separately is that among all registrants, both treatment and comparison groups suffer fairly large earnings losses from before registration relative to the time of their program exits. It is reasonable to expect that those registrants who were previously employed would experience larger earnings losses as their joblessness coincides with program participation.

Chart 5 shows the relative quarterly earnings streams of the treatment and comparison groups. Our expectations were that the earnings losses would be larger among individuals in this group than among all registrants. However, from the time prior to program entry until program exit, the group of registrants with active UI claims during program participation appears to have experienced earnings losses similar in magnitude to the group of all participants. If there is a notable difference in the earnings patterns observed in Chart 1 relative to Chart 5, it is that the relative magnitude of the earnings difference between treatment and comparison groups is smaller among the unemployed. It is also worth noting that the treatment group of unemployed appears to have somewhat higher wages than other W-P registrants, both before and after receiving employment services.

Chart 6 again plots the progression of quarterly wages by gender for W-P registrants who were unemployed. Again, one notable difference between Chart 2, which considered all W-P registrants, and Chart 6 is that the relative magnitude of the earnings gaps for treatment and comparison groups appear smaller among the unemployed in Chart 6. Again, this appears to be due to the unemployed having generally higher wages than all W-P registrants.

Chart 7 considers wages by race/national origin among unemployed W-P registrants. When compared to Chart 3, which plots the same information for all registrants, it is difficult to distinguish the charts from each other.

The same comment applies to a comparison of Chart 8 to Chart 4. Chart 8 considers wages by educational level among unemployed registrants. Chart 4 contains the same information for all registrants. These charts are difficult to distinguish from each other. Perhaps the only distinguishable feature is that the earnings gaps between the study groups are smaller at low educational levels among the unemployed in Chart 8 relative to all participants as shown in Chart 4.

2.4 Employment Rates Across Groups

In Charts 9 through 12, we consider the employment experiences of different demographic groups conditional on whether they were members of the study treatment or comparison group. We will later provide estimates of the difference in employment outcomes between the study treatment and comparison groups.

Chart 9 begins this examination by plotting the employment rate for members of the treatment and comparison groups from the beginning of our data coverage through quarters where we consistently have information after their exit from either the Wagner-Peyser or UI programs. There are twelve quarters of information prior to registration, which we label in the chart with the prefix “pre-“, followed by four quarters past program exit, labeled with the prefix “post-“.

In some ways, the employment information looks much like the earnings information shown in previous charts for the treatment and comparison groups. On average, prior to program entry the comparison group consistently has somewhat higher rates of employment than the treatment group. There appears to be about a 10-percentage point difference in their rates of employment prior to entry onto the W-P rolls. From the time before registration until afterwards,

both groups experience sizeable reductions in their average rate of employment. However, after exiting the program, the difference in employment rates between the groups not only falls, but the employment rate of the comparison group falls below that of the treatment group. This is certainly a notable pattern that we will investigate later in this paper.

Another notable pattern we should mention is that the rates of employment of both the treatment and the comparison group continue to decline after the time of program exit. We are not certain what is causing this pattern. This could be due to movement of individuals out of the state for whom we lose wage information. Where we do not have wage information on individuals, we do not count them as employed so mobility would result in dropping rates of employment. Or, these drops could be due to worsening employment experiences.

Chart 10 considers the pattern of employment stratified by gender and further breaks males and females out based on whether they are members of the treatment or comparison group. The same general pattern found in Chart 9 for the aggregated group is seen for both men and women. Prior to program registration, the comparison groups have higher employment rates than the treatment groups. After program exit, the observed rates of employment are lower.

Chart 11 considers the patterns of employment based on race and national origin (RNO). As with the overall pattern, the comparison group for each RNO has higher rates before program registration, but lower after program exit. The one exception is Native Americans/Alaskan Natives (NAAN). However, this may be due to the small size of this group.

Chart 12 considers the patterns of employment based on education. Here again the general pattern holds: the comparison group for each category has higher employment rates before entering the program, but lower rates after exiting the program.

2.5 Conclusion

As we transition from these descriptions of our sample to more precise measures of the experiences of those who received services relative to those who did not, what information can we carry forward that we would expect to appear in those estimations? First, all groups suffer fairly sizeable earnings losses comparing the period immediately before registration to that after program exit. Second, those who do not take advantage of program services appear to

experience larger initial losses following program exits. Finally, earnings of both groups appear to recover fairly steadily following program exit.

It also appears to be the case that the unemployed in the sample are more able than the typical W-P registrant. This is seen in the earnings paths of the comparison groups in charts for the unemployed versus all registrants. One implication of this is that estimation techniques, which compare the relative experiences of the two groups to estimate program outcomes, are likely to find smaller programmatic impacts in a sample with only unemployed registrants.

In the descriptive charts provided for employment outcomes, the comparison group starts with higher rates of employment prior to registration but has lower rates in the post-program period. Thus, we would expect to find that the employment outcomes of W-P clients to be relatively superior to those in the comparison group.

Chapter 3: Methodology

3.1 Introduction

Although this particular study will focus on the impact of Wagner-Peyser services on clients, the research presented is intended to serve the broader purpose of providing an example of a general methodological approach for program evaluation using administrative data sources. To this point, the evaluation has largely consisted of simple descriptive information on dimensions of program service delivery and characteristics of participants. However, we often would like to have sharp estimates of outcomes associated with programs. This section will describe the analytical issues involved in the use of administrative data for program evaluation where one desires to obtain estimates of program outcomes associated with service delivery.

The construction of any analysis fundamentally depends on what one would like to know. Generally, in the area of program evaluation, the academic literature has used a medical clinical metaphor to describe the analytical approach. This language is useful because the explicit contrast to a setting where a true control group is present, to whom the experiences of those who receive some service or treatment may be compared, helps to illuminate the limitations inherent in the use of administrative data. Further, this helps us understand what questions can be answered through the use of administrative data and what questions cannot.

This section of the study will first describe this clinical metaphor and its relation to program evaluation at an intuitive level. Then, proceeding at an intuitive level, the primary analytical techniques will be described along with a description of the questions for which they may provide meaningful answers. Finally, more formal equations used to estimate these relationships will be provided.

3.2 The Clinical Metaphor and Analytical Design

During the War on Poverty, which began in the 1960s, a large number of social programs began which were aimed at the alleviation of poverty. Naturally, policy makers had a desire to know, as various programs sprang into action, which of them were most effective in achieving their goals. These programs were aimed at a wide variety of outcomes: increased employment for minority youths, decreased poverty for children, higher minority educational attainment, decreased criminal recidivism, reduction of assistance on governmental programs, etc. For

each of these programs, there was some associated social problem. These social problems were often seen as originating from a specific source and resulting in a fairly regular outcome. The programs were seen as an intervention between the source of the problem and its usual outcome.

The metaphorical link between these social settings and a clinical environment is straightforward. Social maladies like unemployment represent disease within society as a whole. There are treatments in the form of social programs that we can use to try to either alleviate the symptoms of the malady or cure it. Those who participate in the program are commonly referred to as treatments. Understanding this metaphor is important in understanding the evaluation literature that, like this report, will often refer to a treatment group. In our case, this refers to the Wagner-Peyser service recipients, which we have referred to throughout this report as study group treatments.

It is also important to bear in mind that this jargon represents a metaphor and not the reality of the analytical situation. Reference to a hypothetical example of a medical experiment can provide a quick and useful contrast to research in that setting relative to the use of administrative governmental data.

Suppose, for example, that we wanted to examine the effectiveness of a new flu vaccination. We would hire a sample of individuals who were healthy and representative of the population to be vaccinated, randomly assign some to receive the shot and others to serve as controls. Subsequently, we could compare the rate of influenza among those who were given the treatment to those who did not receive it. The difference in the rates of infection across the treatments and controls would represent the reduction in the influenza rate should the vaccine be given to everyone in the population relative to what would occur in the absence of vaccination. This abstracts away from reductions in infection rates that occur because a person who is immunized cannot transfer the disease to others.

Often, social programs are run as pilot programs to see if they are effective before they are expanded. Similar to the clinical setting, we would like to know if the treatment that has been designed is effective before it is expanded to serve a larger population. For example, a social program might be designed to assist single mothers who receive public subsidies to move to financial independence. Such a program might consist of job training, childcare, health

insurance, and nutritional and housing assistance among other things. Such programs are very hopeful but also very expensive. If they are seen as ineffective, it may simply not be socially desirable to provide them. So, they are often tried on a limited basis for evaluation prior to full implementation. The question then arises: if this program were extended to everyone eligible, what would be the impact? In labor markets, the impacts that are most often examined are earnings and/or employment.

Following the clinical metaphor, to answer the question of the impact of a program if it is extended to all individuals requires the equivalent of a clinical trial that is a random evaluation. For example, to randomly evaluate a workfare program as briefly described in the previous paragraph would require that some recipients of public subsidies and their families be denied services under the experimental program in order to form a control group. Other families would receive the services to construct the treatment group. Following the intervention, differences in outcomes for the two groups can be compared. That difference would represent the impact the program would have if it were extended to the eligible population. It is perhaps worth noting that to the extent that acceptance of the services among the treatment group was less than 100 percent, this would be reflective of the likely refusal of services if the program were expanded. Thus, the corresponding reduction in the effectiveness of the program if it were universalized would be appropriately reflected in the evaluation.

Random evaluations of social programs are rarely conducted in practice, although in some areas of research they have proven extremely influential because of the accepted robustness of their results. There have been two primary concerns that typically work against the adoption of a random methodology for program evaluation, (1.) moral concerns related to the denial of benefits to the control group and (2.) the cost of the evaluation.

These two concerns are easy to understand, although it might be argued that they are misplaced. The ethical concern is that if a program is set up that could potentially yield large benefits to people, denying benefits to some is simply immoral. However, reliable research results that influence program funding and expansion would seem to be a tangible result of a randomized trial. If there is great skepticism about the value of programs and these concerns prohibit initiation of the programs, providing a limited but analytically precise evaluation of the program would seem appropriate. If the results are positive, that evidence might become the basis of universal coverage.

The concern regarding cost is that if one considers the expense of a randomized evaluation as consisting of both the benefits offered as well as the money expended on the evaluation, the cost appears very large. However, counting the value of services received by clients as part of the total cost of evaluation fails to distinguish between benefits per se as opposed to the additional expense associated with evaluating the program.

While randomized trials remain rare, there still is a genuine desire to understand the impacts of government programs on the client populations. Without random data we are typically left to proceed with administrative data. What problems arise?

Let us return again to the example of the evaluation of a workfare program. Now, let us suppose that we have been given funding to offer training to five percent of the families who receive Temporary Assistance to Needy Families (TANF). So, we decide to advertise the program at various social service centers by putting up posters, and we also solicit social workers to help identify individuals appropriate for the program.

Immediately, there are two analytical problems. The first is that by advertising the program with posters, those with the greatest motivation are most likely to come and enroll in the program. Second, it is reasonable to believe that those who work directly in social services would like to have the program expanded and if they are aware some evaluation will take place are likely to refer the most able clients to the program. These two problems are referred to in the literature as 'cream skimming' and sometimes as either 'creaming' or 'skimming'. As with separating cream (the highest quality component) from fluids in milk, creaming in social programs is a reference to systematic processes where only the most able clients receive services.

Why is creaming an important consideration? Let us continue the clinical metaphor. Suppose that we wish to use an administrative database for TANF recipients to evaluate their earnings following a period of training. To simplify the example, assume we have a continuous record of earnings before and after the training and that everyone receives the same services. So, we have data for those who received the treatment, which consists of an expanded package of benefits and training relative to those who received standard services.

We could imagine that those who received the standard services could serve as a true control group; however, this is not true. Because the program was advertised and social workers

assisted in selection of the treatment group, it is a reasonable presumption that those who received the package of services under the demonstration program were systematically more capable than those who did not. What this implies is that if an evaluation is undertaken wherein nonrandom treatments are compared to quasi-controls using administrative data, the estimated impacts will tend to overstate the true impact of the program. The reason the impact of the program would be overstated is because outcomes of more able people, which would likely be better anyway, are compared to outcomes of less able people. Using that difference in outcomes will attribute to the program an impact which in part is observed due to the differences in underlying ability rather than being due to the services received. This analytical problem is generally referred to as self-selection bias. People select themselves (or may be directed by business practices) into the treatment and control groups based on their own (or business-driven) choices and analytically this yields biases in program impact estimates. In our study of Wagner-Peyser services, those who did not receive services were influenced by both individual and business-driven selection processes and, thus, do not constitute a true control group.

What then can reasonably be inferred from estimates where quasi-control groups are used? In reality, this depends on the context of the evaluation. If the treatments and controls are quite similar, the results of a cross-group comparison may provide reasonable estimates of program impacts. If the treatments and controls seem dissimilar, then such comparisons may be of little value. Thus, if one wishes to employ this particular framework without randomized data, great care should be used to try and select a comparison group that is as similar to the treatment group as possible. The gold standard in this area of research is the randomized social experiment.

3.3 Before and After Comparisons

There are other frames of analysis that are useful with administrative data which answer simpler questions than what a program's impact would be if it were universalized. Often it is desirable to know how a client's situation changes from the time prior to program entry relative to some follow-up period after they exit. These types of program evaluations are simpler in scope and focus than a randomized trial and obviously answer a different question.

If the primary interest is in describing the client base of a program, detailing their circumstances prior to program entry, examining post-program outcomes, and relating outcomes to service measures during the program, this is a useful method of analysis using administrative data. In

the simplest case, one simply collects information over a period clearly prior to entry into the program, examines information about the outcome of interest, and makes comparisons for various subgroups. A simple example would be to look at average pre-program earnings for TANF recipients in the two years preceding a training program and compare them to the average post-program earnings in a two year follow up period. The earnings changes might be examined for those with different demographic characteristics such as level of education, family compositions, or ethnicity. Similarly, these outcomes might be examined based on the particular package of services to observe whether clients who received a specific package of services had better outcomes.

Within this framework, as it is not experimental, one should be cautious about drawing the inference that the services alone were responsible for the outcome. Whenever the client has the opportunity to choose a set of services, it is possible that the ability of the client is as important in determining the outcome as the service itself. The problem is that we do not have a comparison group constructed of individuals similar to the client that we can use as a reference to see what an individual's experience would have been in the absence of the services received.

This same consideration applies to situations where we look at outcomes associated with different services when we make before and after comparisons. Where individuals have actively participated in choosing the services they would receive or administrators have steered clients towards specific services, the characteristics of the individuals may be driving the outcomes rather than the services delivered.

Nonetheless, for descriptive purposes of program operation and outcomes, before and after comparisons are useful. The usefulness of quasi-experimental techniques (where a quasi-control group is constructed out of individuals who never use the service) is more difficult to determine because of the possibility of great disparities in ability between the treatments and the quasi-control group. When combined, if the two techniques yield a consistent picture of program performance, they can provide a richer description of the direction and magnitude of program impacts. Where the two techniques disagree, it is most appropriate to rely on before and after comparisons because of the simplicity of their construction and interpretation.

In this study, we will make use of both before and after comparisons as well as quasi-experimental estimates that compare outcomes across groups. We will discuss this in terms of outcomes for groups rather than program impacts for the reasons detailed above.

3.4 Analytical Techniques

3.4.1 Treatment-Control Comparisons

While it would be possible to conduct much of an evaluation simply constructing group means, modern analysis relies largely on the statistical technique of regression. Regression analysis, as it is called, is a technique for estimating an equation that, on average, predicts the mean of some variable. For example, we might want to have an equation that relates the difference in pre- and post-program earnings to demographic characteristics and services provided. Then we could observe which client type appeared to benefit most from the services as well as which services were associated with the best client outcomes.

The technical background for developing the estimating formulas for a regression equation is beyond the scope of what we intend to cover in this report. We would note that this is covered in many undergraduate programs in business, economics, statistics, and mathematics as well as graduate programs in virtually every modern discipline. A good reference is Introductory Econometrics by Damodar Gujarati.

The import of the technique can be easily demonstrated in the context of a randomized trial. Suppose that we were analyzing a program intended to take clients and improve employment outcomes and that the outcome we were interested in examining was earnings. Let the variable Y denote earnings. We can subscript the variable Y with the index i to refer to a specific individual and t to refer to a specific time period. So, the variable Y_{it} , would represent the earnings of a specific individual at a specific time period.

Define another variable d to denote whether a person receives the program services or not. This variable can also be subscripted by i and t to indicate that this person received services in time t. This would be written as d_{it} . This variable will take the value one beginning in the period when services were received and would retain the value of one thereafter. In periods prior to the receipt of training, the variable takes the value of zero.

Let k represent the period when training occurs and s be any period after k. In this context, s begins the post-program evaluation period. When the time period is less than k, it is the pre-program period.

Now, let us recall the clinical trial model. We see people before they get a treatment (t<k) and afterwards (t>k). There is a treatment group and a control group. We will obtain the estimate of the effectiveness of the service by comparing the experiences of the treatment group to that of the control group.

Notationally, to write down the pre and post-program earnings comparison for the control group, we would want the average difference in post and pre-program earnings. Or,

$$E(Y_{i,t>k}|d_{i,k}=0) - E(Y_{i,t<k}|d_{i,k}=0) .$$

Similarly, we would want to compare the post and pre-program earnings for those who received the treatment, or

$$E(Y_{i,t>k}|d_{i,k}=1) - E(Y_{i,t<k}|d_{i,k}=1) .$$

The difference in these two measures would represent the comparison between the earnings change of the control group and the earnings change of the treatment group. If this were a randomized setting, then this difference could be inferred to have originated from the training received. Notationally, this difference can be written as

$$\{E(Y_{i,t>k}|d_{i,k}=1) - E(Y_{i,t<k}|d_{i,k}=1)\}-\{ E(Y_{i,t>k}|d_{i,k}=0) - E(Y_{i,t<k}|d_{i,k}=0)\}$$

Typically, we want to relate changes in individual earnings to demographic factors and whether services were received. Suppose that there is some set of standard demographic factors that we have access to in our study. Denote that set of factors by the capital letter X. Imagine that each of those factors has a parameter which we will denote with the Greek letter beta, ß that relates its level to an impact on the outcome we are interested in examining, the change in earnings. Let us also use the Greek letter gamma, ?, as a parameter to capture the impact of training. Finally, let us use the Greek letter epsilon, e, to represent random ability.

We can rewrite the equation representing the average change in earnings for a treatment in the following manner:

$$E(Y_{i,t>k}|d_{i,k}=1) - E(Y_{i,t<k}|d_{i,k}=1) = X ß + ? d_{i, t>k} + e_i$$

Similarly, we can rewrite the equation representing the average change in earnings for the control group in the following manner:

$$E(Y_{i,t>k}|d_{i,k}=0) - E(Y_{i,t<k}|d_{i,k}=0) = X ß + ? d_{i, t>k} + e_i$$

For the control group, the term for treatment becomes zero because that variable always takes the value zero for that group. We will assume the X and ß terms are equal across treatments and controls although that need not be true. But in that case, the difference in earnings for the treatment and control groups can be written as

$$\{E(Y_{i,t>k}|d_{i,k}=1) - E(Y_{i,t<k}|d_{i,k}=1)\}-\{ E(Y_{i,t>k}|d_{i,k}=0) - E(Y_{i,t<k}|d_{i,k}=0)\} = ? d_{i, t>k} + e_i$$

Consider the last term in the equation for a moment. Since, we are taking a difference in the average earnings of the treatment and control group, within the term for ability is the implicit difference between the expected value of ability for the treatment group and that for the control group. Formally, this selection-bias term can be written as

$$E(e_i \mid d_{I, t>k} = 1) - E(e_i \mid d_{I, t>k} = 0) .$$

Inserting this term into the previous equation yields

$$\{E(Y_{i,t>k}|d_{i,k}=1) - E(Y_{i,t<k}|d_{i,k}=1)\}-\{ E(Y_{i,t>k}|d_{i,k}=0) - E(Y_{i,t<k}|d_{i,k}=0)\} =$$
$$? d_{i, t>k} + \{ E(e_i \mid d_{I, t>k} = 1) - E(e_i \mid d_{I, t>k} = 0)\} .$$

In a randomized evaluation, this last term becomes zero because

$$E(e_i \mid d_{I, t>k} = 1) = E(e_i \mid d_{I, t>k} = 0)$$

and the average program impact can be inferred from an estimate of the parameter ?.

In the case of a quasi-experimental evaluation where we might expect ability of the treatments to exceed those of the comparison group,

$$E(e_i \mid d_{I,\, t>k} = 1) > E(e_i \mid d_{I,\, t>k} = 0) .$$

This implies that the term in braces in the equation above would be positive. Thus, a simple difference in the earnings streams of the treatments and controls would include the impact of the program but also of the difference in ability across the groups.

This is a more formal demonstration of the point made earlier that, when clients are able to self-select the services they will receive or when administrators cream from the client pool, comparisons to the remainder of the client pool will tend to overstate the impact of the program due to self-selection bias.

3.4.2: Before and After Comparisons

The same notation and analytical framework described in the previous section can be used to explain before and after comparisons. The only modification necessary is simply to drop the control group. Thus, we employ the equation for the treatments,

$$\{E(Y_{i,t>k}|d_{i,k}=1) - E(Y_{i,t<k}|d_{i,k}=1)\} = X\,ß + \,?\, d_{i,\, t>k} + e_i$$

Again, the parameters ß relate the demographic characteristics to outcomes while the parameter ? captures the average change in outcome for those who received services. It is worth noting one last time that because there is no control group to whom those who receive services can be compared, inferring from a before and after comparison a direct program impact requires very strong informational assumptions. It would require that those who received services were observationally identical to those who did not. It would also require that those who received services were not different than those who did not in dimensions we cannot observe.

3.4.3 Practical Implementation

Implementing this framework in practice will vary somewhat in each situation. The actual form of the estimation equation is identical whether random or nonrandom data are used and

whether one is making a before and after comparison or a comparison across groups. The equation to be estimated can be written as:

$$Y_{i,t>k} - Y_{i,t<k} = X ß + ? d_{i,\ t>k} + e_i$$

To set up the data, you simply take the difference in the value of the outcome (Y) after the treatment period (k) relative to some time before and estimate the relationship to the demographic variables (X). An indicator variable, d, is included that denotes whether the person ever receives training or not. The only technical point to note is that if one is making comparisons across groups then one includes a constant in the regression formula as well as the indicator of program participation. If one is simply gauging the experience of a group whose members all receive a treatment, then the variable for program participation would be dropped. The constant in that formulation would gauge the average change in outcome independent of demographic factors.

3.4.4 Linear Probability Models

Any of the models that we have outlined thus far can also be used to evaluate employment as an outcome. For example, we could use the model that was described for evaluating earnings changes for a treatment group relative to some comparison group. Here, we reproduce the model:

$$\{E(Y_{i,t>k}|d_{i,k}=1) - E(Y_{i,t<k}|d_{i,k}=1)\}-\{ E(Y_{i,t>k}|d_{i,k}=0) - E(Y_{i,t<k}|d_{i,k}=0)\} = ? d_{i,\ t>k} + e_i$$

Instead of having earnings changes as the relevant outcomes, we would simply let Y take the value 1 if the person is employed or 0 if they are unemployed. Analytically, what one is examining here is the average change in employment from before the program until afterwards for treatments relative to the same average change for a comparison group. This will measure the difference in the change for the treatments relative to another group on average. An estimate of the parameter ? will measure the average change across the two groups.

When a variable such as employment or unemployment that takes the values of zero or one is used as a dependent variable in a regression model, it is referred to as a Linear Probability Model. The reason for this is that if one thinks of the outcome one is interested in examining in this particular case, all of its values fall between zero or one. So, if one takes the expected value of the outcome variable, which we notationally write as E(Y), then it will be the probability

of observing that outcome. The interpretation of the estimated values of the parameters (ß) also changes in this context. The reason is that the parameters now represent the change in the probability associated with a one unit change in the explanatory variables. Linear Probability Models are attractive to many researchers due to this ease of interpretation.

In terms of the practical model setup where the equation is written as:

$$Y_{i,t>k} - Y_{i,t<k} = ? d_{i,\ t>k} + e_{i\ ,}$$

one would simply take the difference in the employment indicator from a period after an individual exits the program and subtract the indicator from prior to program exit. The equation then estimates the average change in employment from before to after program participation. We can write that average notationally as $E(Y_{i,t>k} - Y_{i,t<k}|X, d)$.

The one disadvantage to this procedure is that the standard errors have been shown to be heteroskedastic. The implication is that the parameter standard errors will be larger than their achievable minimum using an alternative estimation procedure. Standard test statistics that are formed using these standard errors will tend to be conservative in finding statistically significant parameters due to this. In practice, the difference in the corrected and non-corrected standard errors is small. Here, we simply run least squares regressions and report the uncorrected standard errors.

Chapter 4: Earnings Outcomes for the Treatment and Comparison Groups

4.1 Before and After Comparisons of Earnings

To obtain an initial impression of how earnings change from before the receipt of Wagner-Peyser services to the period afterwards, we consider all individuals who were involved in the receipt of any type of service relative to those who enrolled but received no services in the same period. Those who received services are referred to as the treatment group and those who did not are considered to be in the study comparison group.

We obtained estimates of the change in earnings across the treatment and comparison groups as well as interesting demographic breakdowns using different definitions of the before and after period. Each of the measures uses total earnings for one year or two years following program exit in the differencing. The variable Diff11 makes the before and after comparison using total earnings for the year prior to enrollment in Wagner-Peyser services to the year following program exit. The variable Diff21 makes the before and after comparison using total earnings in the second year prior to program enrollment. The variable Diff31 makes the before and after comparison using total earnings in the third year prior to program enrollment. The variables Diff12, Diff22 and Diff 32 make the pre-service period comparisons to earnings in the second year after receipt of services.

The reason for constructing these different measures of program outcome is that the research literature often finds that those enrolling for employment services are experiencing employment difficulties that may not be reflective of their longer term labor market capabilities. Looking at outcomes solely relative to the year immediately prior to program entry may accurately reflect the change potentially effected by Wagner-Peyser services relative to the time period immediately prior to entry, a time of labor market difficulty for most W-P registrants. However, examination of earnings over an extended length of time is most helpful for obtaining a deeper understanding of earnings change over time. Looking at the change in earnings after the program relative to three years prior can give a reasonable indication of how much a person's earnings increased after Wagner-Peyser services relative to a stable period of employment prior to their program entry. Observing experience both one and two years, or longer, after program exit can reveal evidence of the immediate and longer term employment and earnings success of clients who have received W-P services.

4.1.1 The First Year After Program Exit

Table 4A contains estimates of changes in earnings for those who received services and those who did not in the first year after program exit using the three constructed measures Diff11, Diff21, Diff31. The major column headings of the table indicate which of the measures was used. The subheadings of treatment and comparison refer to whether a person received Wagner-Peyser services or not. The row labels refer to various demographic groupings.

The table entries themselves take the form of 'estimate [t-statistic]'. In general, the t-statistics are useful in determining whether the estimates of the change in earnings are statistically significant. If the term in brackets is greater in absolute value than 2, then the parameter is found to be different than zero (statistically significant) at the 95 percent level. As can be seen by scanning the table, virtually every entry is significantly different than zero.

The results contained in the first major column for Diff11 follow a pattern that is largely repeated in the rest of the table. The estimated change in earnings for almost every entry is negative. The only exception is for workers in the age groups from 16-19 and 20-21. This is likely due to the association of Wagner-Peyser services with a period in these individuals' lives where they went from fairly low earnings and part-time employment to full time jobs.

Also, the entries for the treatment and comparison groups separately show that those who did not avail themselves of services universally had worse earnings outcomes than those who had some Wagner-Peyser services. For example, those in the age group from 40-54 who were treatments on average suffered an earnings loss of $9,444 in the year after stopping services relative to the year before the services began. The comparable group of individuals who did not receive services suffered an even larger earnings loss of $14,858. Thus, the receipt of services appears to have been associated with a diminished earnings loss of $5,414. This figure is shown in the following column where we take the differences in average earnings of the members of the study treatment and comparison groups.

While this pattern of diminished earnings losses is maintained for every demographic pattern using Diff11, there are some other interesting patterns within the groups. The first notable pattern is that those with higher levels of education tend to suffer larger earnings losses than those with less education. This is largely due to the fact that those with more education held higher initial incomes. Similarly, men tend to experience larger earnings losses than women.

White service recipients also tend to experience larger earnings losses than other groups. For some specific groups, the difference in average earnings across treatments and comparisons are quite large.

These patterns are largely maintained for the estimates of before and after earnings changes using the Diff21 and Diff31 variables, although the patterns are not seen as universally as they are in the first column. Those in the comparison group tend to have larger earnings losses than those in the treatment group and those in dominant categories who have the greatest advantages in the labor market experience the largest declines in earnings following receipt of program services.

Tables 5A, 6A, and 7A contain estimates of the earnings changes associated with receipt of Wagner-Peyser Services using the quasi-experimental framework described in the previous chapter. Those who were registered for Wagner-Peyser services and received them are seen as our treatment group while those registered but never received services are called our comparison group. We refer to these estimates as quasi-experimental because, while we chose a logical comparison group, it is still likely that those who elected to receive services and those who did not differentiated themselves based on their election to participate in services.

Within these quasi-experimental estimates, there are several things we would like to learn. Model 1 simply helps us identify what the overall difference in earnings losses were for the treatments in the sample relative to the comparisons. The estimate for the variable Treatment indicates that those who received services experienced an earnings loss that was $3,775 less than the earnings loss for the typical person who did not.

We might think that the amount of the earnings change differs due to the demographic composition of the sample. However, Model 2 controls for the set of demographic characteristics considered in Table 1. The estimated earnings gain for treatments relative to the comparisons is affected somewhat but not to a large degree. In Model 2, the estimated earnings gain for treatments relative to comparisons is $3,150. The parameters in this model for the demographic characteristics are interpreted as how much the intercept of the model is shifted up or down. They are not interpreted as the change in earnings loss.

Rather than simply looking at the services as one large aggregate, we might want to consider whether different types of services are associated with better outcomes for those who receive them. Model 3 considers the outcomes associated with the receipt of any amount of service of a particular type. Model 4 again adds demographic information to the detailed set of variables for services contained in Model 3. Services under groups defined as Testing, Job Referral, Self-Service, and Labor Market Information are associated with better outcomes for recipients than others. Those impacts are statistically significant for Job Referral, Self-Service and Labor Market Information. (See Appendix A for a complete listing of groups and services within each group.) For two of the categories where outcomes of those who receive services are statistically better than others, Job Referral and Self-Service, it is worth mentioning that both comprise similar activities; the primary difference is whether staff are involved or not. Testing applies to a very small portion of the sample but usually is related to an employer request for skill certification and thus is similarly related to direct employment. The other service with a sizeable measured positive impact, Labor Market Information, provides knowledge about job opportunities.

Some caution should be used in interpreting these particular results. While better outcomes are associated with individuals receiving these particular types of services, it may also be the case that more able service recipients select these service types for themselves or are routed there by program administrators. For example, within Connecticut, those with higher levels of education are usually steered to self-service computer-based job listings. They are seen as more immediately employable with relatively less intensive services being required. Thus, the fact that self-services are seen as having a positive outcome may depend on the group being serviced to some extent. The implication is that if all clients were steered towards self-service resources, the outcomes might not be as favorable.

Table 6A considers the same six models as presented in table 5A. The one change in the estimation procedure is that the earnings outcome is based on the comparison to two years before service receipt relative to one year afterwards. In general, the patterns of estimated earnings changes are similar to those found in table 5A. The reduced earnings loss for those who received services is substantial relative to those who did not. This is estimated to be $2,843 in model 1 and $2,503 in model 2. Those who participated in services associated with Job Referral and Self-Service had smaller earnings losses and these impacts are measured as

statistically significant in models 3 and 4. The outcomes for those who receive Labor Market Information are also positive and statistically significant, though smaller in magnitude.

Table 7A again considers the same models as Tables 5A and 6A but uses the change in earnings from three years prior to service receipt as a comparison relative to earnings a year after service completion. It is likely that those who elect to receive Wagner-Peyser services as of a given date had better experiences three years earlier. So, as the window for comparison moves backwards, one would naturally expect smaller estimated program impacts. Models 1 and 2 still find statistically significant and positive impacts of Wagner-Peyser services, although the impacts are a good deal smaller than in Tables 5A and 6A. The estimated outcome for treatments is $546 in model 1 and $470 in model 2. Similarly, in models 3 and 4, the estimates of outcomes for treatments that receive job referrals and use self-services are estimated to be positive and statistically significant, but the magnitudes are smaller. In model 4, only direct job referrals are found to be statistically significant.

4.1.2 The Second Year After Program Exit

We similarly constructed three variables that measure the change in earnings from two years following the exit from Wagner-Peyser relative to earnings either 1, 2, or 3 years prior to the program. Those outcome variables are named Diff12, Diff22, and Diff32. Tables 4B, 5B, 6B, and 7B present a set of results in the same format as tables 4A, 5A, 6A, and 7A except that the time frame of the calculated earnings difference is altered.

Table 4B also finds that two years after exiting W-P most groups of registrants had experienced sizeable losses in earnings. The largest losses again were for older, more educated, white males. Across the table, those who received services had smaller net earnings losses than those in the comparison group. For example, in the comparison from one year prior to the program to two years afterwards shown in the column labeled Diff12, treatments ages 40-54 experienced an average earnings loss of $6,901. The average member of the comparison group in that age category experienced an average earnings loss of $10,902. In the adjacent column, labeled Diff(T-C), the net difference of $4,000 is shown. This is the net relative advantage in outcome those who received services exhibited relative to those who did not, on average.

Table 5B considers the same four models of earnings changes as table 5A. In the column labeled Model 1, the average difference in earnings from one year prior to registration relative to two years afterwards is estimated to be $3,802. In the second column, with the inclusion of basic demographic characteristics, the estimated outcome associated with receiving W-P services is $2,766. In model 3, where services are broken out by major groupings, the outcomes of Job Referrals and Self-Service remain large, positive, and statistically significant. The same result is seen in model 4.

Table 6B considers the change in earnings over the interval from two years prior to program registration relative to two years after exiting. The results for Model 1 provide an estimate of an outcome that is $2,317 better for those who received W-P services. Model 2 provides a similar estimated positive outcome of $2,207. Model 3, which considers service groupings, finds positive and statistically significant outcomes associated with categories Job Referral and Self-Service. Model 4 has similar findings in that Job Referrals and Self-Service are associated with positive outcomes. Labor Market Information is also at the margin of statistical significance in Models 3 and 4.

Table 7B reports estimates based on the difference in earnings three years prior to program registration relative to two years afterwards. As can be seen in Models 1 and 2, the estimated outcome associated with W-P is small and not statistically significant at conventional levels. It is nonetheless true that services offered in categories Job Referral and Self-Service are positive and statistically significant in Model 3. Results for Model 4 are weaker.

Chapter 5: Earnings Outcomes for Unemployed W-P Registrants

To explore the sensitivity of our estimated outcomes to the mix of unemployed and employed W-P registrants, we selected a sub-sample consisting of only those individuals who were known to be unemployed. These were identified from the study group as the 40,456 W-P registrants who had also filed claims for unemployment insurance. Two tables contained in Appendix D (Table D-1 and Table D-2) are provided for those interested in comparing these to the characteristics of the entire sample shown in Tables 1 and 2. Here, we will primarily focus on the estimated earnings outcomes for unemployed W-P registrants.

5.1 Estimated Outcomes by Demographics

Tables 8A and 8B consider the same measures of earnings difference defined in the previous chapter. The variables use the naming convention where Diff refers to the difference in earnings across periods. The first digit refers to the year prior to registration and the second digit to the year afterwards. For example, Diff12 is the earnings difference between the first year prior to program registration and the second year afterwards.

In Table 8A, earnings changes are tabulated for differences relative to the first year beyond registration using Diff11, Diff21, and Diff31. Like Table 4A, one can see that both treatments and comparisons almost universally experience sizeable earnings losses regardless of the demographic grouping. The one exception to this pattern that we have noted before is among the youngest workers. Again, earnings losses are largest among relatively old, more highly educated, white males. This same pattern is evidenced in Table 8B, which considers earnings differences based on the second post-program year using Diff12, Diff22, and Diff32.

We could make direct comparisons between the elements of Tables 8A and 8B with 4A and 4B. For example, in Table 8A, a worker aged 40-54 who received services experienced a loss in the first year prior to program registration to the first year afterwards (based on Diff11) of $11,763. A similar member of the comparison group on average experienced an earnings loss of $15,176. The associated net difference of $3,412 is shown in the adjacent column. The comparable earnings difference from Table 4A is $5,414. Based on the descriptive earnings charts presented in Chapter 2, the smaller net difference in earnings for the sub-sample of individuals who are unemployed is as expected because they would have experienced larger

earnings losses and would have more difficulty regaining their prior status than would all W-P registrants.

In a cell-by-cell examination of the comparable tables, a pattern does emerge. Although the net outcomes in all tables are overwhelmingly positive, in Table 4A relative to Table 8A, net earnings outcomes for service recipients tend to be better. In Table 4B relative to Table 8B, the outcomes for service recipients also tend to be better.

Considering the difference in samples, this outcome is natural. Those who avail themselves of services without being unemployed are more likely to be seeking to make a transition to a better employment situation without the attendant financial pressure associated with unemployment.

5.2 Estimates of Average Earnings Outcomes

The next set of tables re-estimate the models considered in Tables 5A, 5B, 6A, 6B, 7A, and 7B. The relevant earnings difference is named in the heading of the table. Table 9A considers the earnings difference from one year prior to program registration relative to one year afterwards. The enhanced outcome estimated for the treatment group relative to the comparison group is $1,404. When demographic variables are added in model 2, the estimated outcome advantage remains roughly constant at $1,451. Model 3 considers the types of services received. Again, services in categories Job Referral and Self-Service have sizeable positive outcomes, which are statistically significant. Those results are maintained in Model 4, where the demographic information is added to the estimation procedure. A smaller positive outcome with respect to Labor Market Information is also statistically significant in Model 3. Results for Model 4 are also positive, but weaker.

Table 9B extends the time frame of the differencing to consider the change from one year prior to registration relative to two years afterwards. Service recipients still show a positive outcome relative to the comparison group but the magnitude is now smaller ($748 in Model 1). When demographic information is added in Model 2, the estimated outcome is $1,096. In Models 3 and 4, service categories Job Referral and Self-Service are associated with positive and statistically significant outcomes.

Tables 10A and 10B use the outcome variables, Diff21 and Diff22, to estimate the impact of program outcomes two years prior to registration to one and two years afterwards respectively.

In 10A, the estimated outcome for service recipients in Model 1 is $1,322 and from Model 2 is $1,689. In Models 3 and 4, the outcomes associated with service groups Job Referral and Self-Service tend to be statistically significant and positive, although not universally so.

In Table 10B, the estimated outcomes are $1,056 in Model 1 and $1,644 in Model 2. With the outcome year extended to two years and the pre-program year also at two years, the impact of service categories Job Referral and Self-Service show no statistically significant impacts on measured outcomes.

Tables 11A and 11B use the variables Diff31 and Diff32 to examine outcomes for service recipients relative to three years prior to program entry. Based on the two tables and the estimates from Models 1 and 2, the estimated outcomes are negative although they are statistically significant in only two of the four cases. These results indicate that for the average person in the treatment group, even with the receipt of services their labor market situation, in terms of earnings, has not progressed over the four to five years observed.

Chapter 6: Earnings Impacts of W-P Services - A Disaggregated Analysis

6.1 Important Service Groups and Their Constituent Parts

Thus far in the analyses we have presented, a fairly common finding has been that the service groups E (Job Referrals) and H (Self-Service) have had a consistently positive and statistically significant association with outcomes for the study treatments. There is a natural desire to further disaggregate the service groupings to see if specific areas have led to this positive finding.

Individuals who are referred to use the self-service resources in the *CTWorks* centers are typically seen by Department of Labor workers as relatively more able to find work on their own and in need of less direct assistance. Disaggregated information on how these clients are using the self-services is not recorded.

Although these two groups of services were most universally found to have been associated with a positive and statistically significant outcome for the treatment group, the effect of others are of interest given their popularity both among agency workers and clients. We have included data on individuals who participated in those service activities as well as we conducted this disaggregated analysis.

We list the original group in which the disaggregated services were included and the count of individuals contained in those categories in Appendix E, Table E-1, where we also identify the activities whose outcomes we estimate separately and those we retain as a group. More information on the demographic characteristics of the individuals who received these revised categorizations of services is shown in Appendix E, Table E-2.

6.2 Estimates of Earnings Outcomes for the Treatment and Comparison Groups

Here, we provide additional estimates of the earnings outcomes associated with the disaggregated services in a format similar to that used in previous chapters. We consider the six measures of earnings differences across treatments and comparisons that we have used previously following the same naming convention. Diff refers to the difference being taken in earnings from a period following the program relative to a period prior to registration. The first following digit refers to the year prior to registration. The second digit refers to the year after

halting program services or UI benefits. For example, Diff11 refers to the difference in annual earnings from one year after exit and one year before registration.

Before examining these individual service results it is worth mentioning that some of these disaggregated results are likely due to the nature of the clients they serve. Specific types of clients are steered into activities that would best serve them and this often results in individuals clustered by their ability receiving a particular service.

In Table 12A, in Model 2, if we pay particular attention to the individual services from group E, those that appear to be associated most strongly with positive outcomes are Referred to a Permanent Job and Job Development Contacts. It is worth noting that Group H (Self-Service) is also associated with a large positive program outcome for service recipients.

When one begins comparing those results across the remaining columns that consider the addition and deletion of various variables, it becomes clear that referrals to permanent jobs and the use of the self-service resources are the services which most consistently result in positive program outcomes whether that information is represented as whether an individual was ever referred or if the count of incidences is included in the model. These results are robust to the addition and deletion of demographic information as well.

Table 12B provides the same information using the difference in earnings two years following exit relative to one year before registration. Again, in any model where the information is included, direct job referrals result in large positive impacts on earnings. The use of self-service resources also results on average in positive program outcomes for clients.

In the four remaining tables of estimates (Table 13A, Table 13B, Table 14A, Table 14B) this general pattern of results remains. The individual service that appears to yield the best program outcome by any measure we provide is direct job referral. It is also evident that those who use the self-service resources also tend to have more positive outcomes than others although this is likely due to the nature of the clients who make use of them.

Chapter 7: Employment Outcomes for the Treatment and Comparison Groups

7.1 Employment Outcomes

To investigate employment outcomes, we used the data in our wage file and coded it to reflect a value of 1 whenever a person had positive wages and zero otherwise. For any individual who appears once in the file as having had employment covered by the UI system, we can calculate whether they were similarly employed at other times. In investigating the employment outcomes, we excluded anyone from our sample that had a recorded age of less than 21 or more than 55, so that we would not unduly influence the observed rates of employment in the sample due to some individuals being at an age where they would not be expected to participate in the labor market.

The measures of the employment rate were constructed in a slightly different manner than the earnings measures. For the one, two or three years prior to registration, the average rate of employment was constructed for each individual over the relevant quarters. In the post-program period, we decided to look at the individual quarters in the first year out of the program. The reason for this was to be certain to use a period where we felt we had the best data coverage.

For the treatment and comparison groups, we were interested in first examining the before and after experiences of various demographic groupings. Tables 15A through 15D provide this information, along with basic differences across the treatment and comparison groups. For each measure of the pre- to post-service difference in employment rates, before and after comparisons are provided for the treatment and comparison groups separately. The variables take the same form as those used previously, but reflect the time periods noted above. For example, the outcome variable Diff11 in Table 15A compares the average employment rate in the year prior to program registration to the first quarter after program exit.

Looking at either the treatments or comparisons separately, the results in Tables 15A through 15D show that the various demographic groups almost universally experienced reductions in their rates of employment from before registration relative to the post-program period. For example, in the first post-program quarter relative to the year prior to registration, the results shown in table 15A for treatments shows that individuals ages 40-54 experienced a drop in their average rate of employment of 11.0 percentage points. Similarly, those ages 40-54 who did not use W-P services experienced a reduction in their rate of employment of 24.8 percentage

points. On average, this difference in the change in their rates of employment is shown in the adjacent column. The difference is 13.8 percentage points. In other words, the employment rate of those who received program services was 13.8 percentage points higher than for those who did not receive services. This relatively favorable set of employment outcomes is observed across virtually all of the individual demographic groupings shown in the tables.

7.2 Employment Outcomes Across Treatment and Comparison Groups

Similar to the analyses we have undertaken to examine cross-group differences in earnings, we can also employ the same models to examine changes in employment rates across groups. We provide those analyses in an analogous set of tables (Table 16A, Table 16B, Table 16c, Table 16d, Table 17A, Table 17B, Table 17C, Table 17D, Table 18A, Table 18B, Table 18C and Table 18D). Again, these tables all have a duplicate structure but use the measure of the change in employment rate explained earlier.

7.2.1 Differences in Employment Rates Relative to One Year Prior to Registration

Tables 16A, 16B, 16C, and 16D consider changes in employment over the four quarters, respectively, after program exit relative to the prior year. The estimates under the column labeled Model 1 in each table indicate that the members of the treatment group have a measured rate of employment that is 12-15 percentage points better than the comparison group in the first year after exiting W-P or UI registration.

Moving on to Models 3 and 4, which consider which grouping of services might best help explain this outcome, the service groups of Job Search Preparation, Job Referral, Guidance, Miscellaneous, Self-Service, and Labor Market Information all appear to be associated with improved client outcomes in terms of their employment experiences. Not all of these groups are statistically significant in each of the four tables, but their positive outcomes and statistical significance are observed often enough to warrant mention. Groups that are both positive and statistically significant in every instance of Models 3 and 4 across these four tables are the service groups of Job Referral, Self-Service, and Labor Market Information.

7.2.2 Differences in Employment Rates Relative to Two Years Prior to Registration

Tables 17A, 17B, 17C, and 17D consider changes in employment over the four quarters after program exit relative to a period two years prior to entry into the study. The estimates contained

in the columns labeled Model 1 in these tables indicate that those who receive services have employment rate outcomes that are 9 to 12 percentage points higher than those who do not.

Again, we move on to consider Models 3 and 4 across the tables to see which service groups are associated with these positive outcomes. As before, the service groupings Job Search Preparation, Job Referral, Self-Service and Labor Market Information appear to be most commonly associated with the relatively larger employment outcomes for those who received services. Service groupings Job Referral, Self-Service, and Labor Market Information are found to be statistically significant in all four tables.

7.2.3 Differences in Employment Rates Relative to Three Years Prior to Registration

Tables 18A, 18B, 18C, and 18D consider changes over the four quarters after program exit relative to three years prior to entry into the study. If one considers the columns in each table which are labeled Model 1, estimates there indicate that service recipients have employment rates that are 6.7 to 9.7 percentage points higher than members of the comparison group on average.

Moving directly to consideration of Models 3 and 4 to see which service groupings may be associated with these positive outcomes, Job Search Preparation, Job Referral, Self-Service, and Labor Market Information are all consistently associated with positive employment outcomes for those who receive services. The positive outcomes associated with these services are statistically significance in each of the four tables.

7.2.4 Magnitude of Outcomes for Service Recipients

The estimated employment impacts observed here are large. It is worth pausing for a moment to consider which of the service groups which were commonly associated with positive employment outcomes had the greatest magnitude and why that might be the case. We focus on those findings that were statistically significant.

In all of the estimates, a job referral from the Department of Labor is associated with the most positive employment outcome for a service recipient. The estimated impacts vary across the tables from 7.7 to 16.7 percentage points. This makes sense, as pursuing specific job leads is the most direct route to becoming employed.

The service group associated with the next largest employment outcome is Self-Service. The estimated improvement associated with employment outcomes for those who receive these services ranges from 2.6 to 10.2 percentage points. As we have said elsewhere in the study, there is some institutional knowledge available that clients who come to *CTWorks* offices who are viewed as very employable are often referred to the self-service resources. Thus, we view this particular result as probably being due to the abilities of the clients themselves.

Job Search Preparation also appears to improve employment outcomes of service recipients. Over the 12 tables of results, the estimated improved employment outcome for treatments relative to the comparison group ranges from 0.9 to 2.8 percentage points. Job search preparation consists of a range of activities such as resume preparation, search planning, and job search workshops.

The provision of basic labor market information also appears to positively influence employment outcomes in these estimates. Again referring to the tables of results of our study, the employment outcome for service recipients who are provided basic labor market information improves by 1.1 to 3.3 percentage points. One of the traditional arguments for local labor exchanges was to help reduce frictional unemployment through the provision of labor market information. These estimates appear to support the contention that such policies can be effective in reducing unemployment.

Chapter 8: Estimates Using an External Comparison Group

8.1 Introduction

All of the estimates presented in this paper thus far have relied on comparisons between our study treatment and comparison groups. These comparisons are useful in helping us understand the pattern of programmatic outcomes for people enrolled in the Wagner-Peyser program. However, there is an additional question of how Wagner-Peyser participants fare relative to those who remain in the labor market during the period of the study. In this chapter, we provide a brief comparison of those who received Wagner-Peyser services to those who were in the labor market during our study period. For this component of the study, we include all persons from our Wagner-Peyser analysis file who received treatment services and make a comparison to a random sample of 23,104 workers in the State who were covered by unemployment insurance and employed for some time during the study period, and for whom we had the demographic information needed to conduct the estimates.

One question that arises about the comparison we make is whether the individuals who were covered by UI for whom we had demographic information were similar to those individuals who were Wagner-Peyser registrants. One might also ask whether they are similar to individuals in the UI file for whom we did not have demographic information.

We investigated both of these issues. Statistically, we discovered that the earnings paths of individuals in the UI program who had demographic information were different than for the average individual. However, the real comparison we would like to make is between individuals who received services under Wagner-Peyser and similar individuals who did not and remained in the labor market. Thus, we made an additional comparison between the earnings paths of the study treatment group of Wagner-Peyser service recipients and the earnings paths of those from the UI file for whom we had demographic information. What we found was that, when observing earnings starting from more than about two years prior to program entry, the paths were not statistically different from each other.

This suggests that the external comparison group provides a reasonable basis for comparing the earnings change of Wagner-Peyser participants while they are not in the workforce, and afterwards. One intuitive reason why it makes sense that the earnings paths of these two groups are not that different prior to the events that lead the Wagner-Peyser clients into the

program is that those individuals in the UI file for whom we have demographic information also had to have had some programmatic contact with the system. They had to have either received UI in the past or have registered in another period for Wagner-Peyser services, or enrolled in WIA programs. Thus, if we had deliberately constructed a comparison group by choosing only those from the UI file who had demographic information, we would have likely wound up with a group of individuals similar to the Wagner-Peyser participants in our study.

8.2 Estimates

Table 19 contains parameter estimates that reveal the earnings paths of the external comparison group relative to our study treatment group. The variables that begin with the prefix 'pre' indicate quarters prior to program entry. Variables with the prefix 'dur' indicate periods when those in the study treatment group were receiving services. The variables with the prefix 'post' indicate quarters after service receipt for the study treatment group. All of the earnings comparisons are on a quarterly basis relative to the external comparison group.

The first column of Table 19 contains a set of estimates where the demographic factors have been omitted. The parameters show, for 12 quarters of earnings prior to program entry, how the earnings of the study treatments differed from those of the external comparison group. As can be seen in the table, in the period prior to registration, the earnings of the W-P registrants steadily worsened. During the period of active involvement in W-P, their earnings situation worsened more. The average quarterly difference in earnings for registrants relative to the comparison group ranges from $1,506 to $3,135 during program participation. After exiting the program, their earnings began to approach those of members of the comparison group, on average.

The second column contains similar information but also includes demographic variables. The pattern of quarterly earnings for the study treatments relative to the comparisons is somewhat different than that found in the first column. After controlling for demographic characteristics, much of the earnings difference before and after program registration disappears. Nevertheless, during the period of participation, W-P registrants have earnings that are $1,494 to $3,242 lower than the comparison group in various quarters.

The demographic variables generally take the expected sign. The parameter estimates indicate that at any point in time, whites, males, older workers, and those with higher levels of education have higher earnings. Blacks, women, and those with lower education have smaller earnings.

Chapter 9: Conclusions

The W-P program in the State of Connecticut serves a large number of registrants in a typical year and provides an enormous number and variety of services. In calendar year 2001, there were 67,420 individuals who registered and received 299,406 different specific services. Those services ranged from the provision of information about the local labor market to direct referrals to listed jobs.

The clients the program served are as varied as the services they received. There were relatively youthful as well as older registrants, men and women, individuals with less than a high school education and those with college degrees. Every major ethnic group was represented. All evidence shows that despite the great diversity of the W-P client base, services were provided fairly uniformly across any breakdown that might be considered.

Among all registrants, we found that those who received services, relative to a similar comparison group, experienced smaller losses in earnings. Most W-P registrants were unemployed at the time they received services so, as a group, they lost earnings from the time before registration relative to the post-program period. Those who received services in our sample suffered much smaller earnings losses than those who did not.

The estimates of these relatively smaller earnings losses in our study for those who received some kind of W-P service (treatment group) relative to our comparison group depended on how close to the registration date the period was that we examined. For example, when we looked at the earnings loss from one year prior to the program relative to one year afterwards, those who received services had outcomes that were estimated to be $3,150 to $3,775 better than those who did not. Similarly, when we examined the relative outcomes comparing the experiences of registrants two years prior to the program relative to one year afterwards, the outcomes were estimated to be $2,503 to $2,843 better for service recipients. But when we go back to three years prior to program registration, this estimated positive outcome one year after exiting falls to a range from $470 to $546.

W-P services appear to be effective in assisting those with labor market difficulties make transitions that are better than those they would achieve on their own. These services seem to be accessed at a time of employment difficulty for the typical registrant. If one looks back

several years in the typical registrant's employment history, W-P services appear to help restore individuals more quickly to their former labor market standing.

Among W-P registrants, roughly two-thirds are unemployed. We examined the earnings experiences of unemployed W-P registrants to see how they differed from others. We found that the average earnings outcome for an unemployed registrant who used services was better than for an individual who did not. Relative to the group of all registrants, this positive outcome for UI claimants was smaller. For example, in examining the earnings outcome from one year prior to the use of services to one year afterwards, the advantage was estimated to range from $1,404 to $1,451. The relatively positive outcome for service recipients over a period two years prior to participation relative to one year afterwards was estimated to range from $1,322 to $1,689. Relative to three years earlier, the outcomes of participants relative to those who did not use services were negative, -$848 versus -$223. We concluded that the smaller but still positive outcomes around the time of registration were indicative of program services being effective in helping clients make better labor market transitions. Nonetheless, the negative estimates relative to a period three years earlier show that while clients are making improvements, their labor market status in the first year or two after receiving W-P services is not as good as it was at an earlier time.

We also examined the earnings experiences of the group of individuals who received services relative to a group who were employed at the same time. We did this to gauge whether the services were helping these individuals catch up to similar persons who had not encountered the same labor market problems they had faced at that particular time. In general, we found that earnings of service recipients fell dramatically relative to those who remained in the labor market at the time they were receiving services. In the post-program period, the wages of the treatment group in our study were observed to begin catching up fairly rapidly to those of similar individuals who had stayed in the market.

Given these positive outcomes associated with W-P services, we examined whether specific services were associated with them. Throughout the study, we found that direct referrals to jobs, the use of self-service resources (including computerized job listings), and the provision of labor market information were most often associated with positive outcomes. One caution we would advise in interpreting this result is that while it is indeed the case that the self-service resources can effectively present job opportunities to some clients and those individuals can

use that information effectively, others may not be able to use the same information as efficiently. In the State of Connecticut, the most able W-P clients are often steered towards self-service activities in order to reserve staff time for others. Thus, it is unlikely that making self-service a universal method of job referral would result in a similarly positive outcome.

Beyond earnings, we examined the employment rates of W-P registrants. Much like earnings, we found that those who used W-P services had better employment rates when comparing their experiences immediately after the program relative to a year prior. As we looked further back in time, the magnitude of these favorable outcomes diminished. When we compared employment in the year prior to registration relative to the four quarters afterwards, the estimated relative improvement in the employment rate of those who received services relative to those who did not ranged from 11 to 15 percentage points. When we looked from two years prior to program registration relative to one year afterwards, the estimated advantage for program participants fell somewhat, ranging from 9 to 12 percentage points. As we moved the pre-program window back further in time to contrast the experience of participants three years prior to registration relative to one year afterwards, the estimated advantage fell further, ranging from 6 to 10 percentage points.

When we examined which W-P services were most often associated with these relatively positive employment outcomes for those who participated in the program, most often they were the same services associated with favorable earnings outcomes – referrals to jobs, use of self-service resources, and the provision of labor market information. One additional category also appeared to play an important role here, job search preparation services.

In contrasting the estimated outcomes for those who received services relative to those who did not, most would conclude that the magnitudes of the effects in both dimensions of employment and earnings are fairly large. Particularly around the time of labor market difficulty, ample evidence exists that W-P services positively influence both earnings and employment.

TABLES AND CHARTS

Table 1: W-P Study Treatment Group

W-P Service Recipients by Characteristic and Services Received

	Persons Served	Avg # Svc	All Services		Testing		Referrals to Support. Svces.		Workshops		Job Search Preparation		Job Referral		Guidance		Misc.		Self-Service		Labor Market Information	
					Grp A		Grp B		Grp C		Grp D		Grp E		Grp F		Grp G		Grp H		Grp I	
Total:	67,420	4.4	299,406	100%	697	0.2%	15,170	5%	25,435	8%	38,854	13%	28,335	9%	7,069	2%	63,932	21%	59,407	20%	60,507	20%
Gender:																						
Total	67,420	4.4	299,406	100%	697	100%	15,170	100%	25,435	100%	38,854	100%	28,335	100%	7,069	100%	63,932	100%	59,407	100%	60,507	100%
Male	33,727	4.8	160,274	54%	402	58%	9,521	63%	11,044	43%	20,283	52%	16,800	59%	3,891	55%	39,437	62%	25,413	43%	33,483	55%
Female	29,901	4.5	133,876	45%	295	42%	5,649	37%	14,391	57%	18,571	48%	11,535	41%	3,178	45%	24,494	38%	28,739	48%	27,024	45%
Gender INA	3,792	1.4	5,256	2%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	0%	5,255	9%	0	0%
Education:																						
Total	67,420	4.4	299,406	100%	697	100%	15,170	100%	25,435	100%	38,854	100%	28,335	100%	7,069	100%	63,932	100%	59,407	100%	60,507	100%
< HS	9,692	3.9	37,317	12%	52	7%	1,655	11%	2,801	11%	5,580	14%	4,670	16%	796	11%	7,845	12%	4,614	8%	9,304	15%
High School	31,025	4.6	141,703	47%	439	63%	7,711	51%	11,538	45%	18,781	48%	14,770	52%	3,434	49%	32,081	50%	23,071	39%	29,878	49%
> HS	11,139	5.5	61,028	20%	155	22%	3,265	22%	5,935	23%	7,782	20%	5,483	19%	1,527	22%	13,263	21%	12,455	21%	11,163	18%
College	9,294	5.2	48,011	16%	46	7%	2,387	16%	4,903	19%	6,356	16%	3,067	11%	1,235	17%	10,240	16%	10,252	17%	9,525	16%
Edu INA	6,270	1.8	11,347	4%	5	1%	152	1%	258	1%	355	1%	345	1%	77	1%	503	1%	9,015	15%	637	1%
Age:																						
Total	67,420	4.4	299,406	100%	697	100%	15,170	100%	25,435	100%	38,854	100%	28,335	100%	7,069	100%	63,932	100%	59,407	100%	60,507	100%
16 - 19	1,892	3.3	6,254	2%	7	1%	289	2%	475	2%	997	3%	865	3%	179	3%	1,316	2%	752	1%	1,374	2%
20 - 21	3,029	3.5	10,649	4%	7	1%	482	3%	782	3%	1,563	4%	1,381	5%	235	3%	2,087	3%	1,573	3%	2,539	4%
22 - 39	30,813	4.2	127,886	43%	288	41%	5,838	38%	10,825	43%	17,708	46%	12,934	46%	2,692	38%	26,463	41%	24,284	41%	26,854	44%
40 - 54	20,314	5.2	106,456	36%	331	47%	5,654	37%	9,817	39%	13,422	35%	9,655	34%	2,877	41%	23,109	36%	20,970	35%	20,621	34%
55 - 65	6,225	5.9	36,443	12%	59	8%	2,403	16%	3,121	12%	4,444	11%	2,907	10%	955	14%	9,134	14%	5,852	10%	7,568	13%
Over 65	1,062	4.9	5,188	2%	2	0%	381	3%	340	1%	622	2%	420	1%	102	1%	1,586	2%	412	1%	1,323	2%
Age INA	4,085	1.6	6,530	2%	3	0%	123	1%	75	0%	98	0%	173	1%	29	0%	237	0%	5,564	9%	228	0%
Race:																						
Total	67,420	4.4	299,406	100%	697	100%	15,170	100%	25,435	100%	38,854	100%	28,335	100%	7,069	100%	63,932	100%	59,407	100%	60,507	100%
White	38,722	4.8	184,991	62%	542	78%	10,352	68%	17,472	69%	24,685	64%	14,179	50%	4,755	67%	43,368	68%	33,633	57%	36,005	60%
Black	12,148	4.8	58,270	19%	88	13%	2,836	19%	3,931	15%	6,846	18%	7,823	28%	1,244	18%	10,702	17%	12,508	21%	12,292	20%
Hispanic	9,701	4.0	39,235	13%	48	7%	1,553	10%	3,045	12%	5,639	15%	5,237	18%	825	12%	7,555	12%	5,564	9%	9,769	16%
NAAN	191	4.8	921	0%	1	0%	46	0%	122	0%	94	0%	81	0%	23	0%	161	0%	243	0%	150	0%
Asian	1,091	4.1	4,486	1%	5	1%	175	1%	376	1%	634	2%	451	2%	115	2%	869	1%	829	1%	1,032	2%
Race INA	5,567	2.1	11,503	4%	13	2%	208	1%	489	2%	956	2%	564	2%	107	2%	1,277	2%	6,630	11%	1,259	2%

NOTE: All table entries are in format “estimate [t-statistic]”

Table 2: W-P Study Treatment Group

W-P Service Recipients by Characteristic and Mode of Service

	Total		Staff-Asst only		Self-Serv only		Staff and Self	
All registrants:	67,420	100%	44,428	66%	8,331	12%	14,661	22%
Gender:								
Total	67,420	100%	44,428	100%	8,331	100%	14,661	100%
Male	33,727	50%	24,784	56%	2,021	24%	6,922	47%
Female	29,901	44%	19,596	44%	2,566	31%	7,739	53%
INA	3,792	6%	48	0%	3,744	45%	0	0%
Education:								
Total	67,420	100%	44,428	100%	8,331	100%	14,661	100%
Less than H.S.	9,692	14%	7,506	17%	496	6%	1,690	12%
H.S. or equiv.	31,025	46%	22,164	50%	1,522	18%	7,339	50%
Some College	11,139	17%	7,420	17%	517	6%	3,202	22%
College Degree	9,294	14%	6,642	15%	369	4%	2,283	16%
INA	6,270	9%	696	2%	5,427	65%	147	1%
Age:								
Total	67,420	100%	44,428	100%	8,331	100%	14,661	100%
16 - 19	1,892	3%	1,445	3%	135	2%	312	2%
20 - 21	3,029	4%	2,199	5%	217	3%	613	4%
22 - 39	30,813	46%	21,372	48%	2,530	30%	6,911	47%
40 - 54	20,314	30%	13,704	31%	1,377	17%	5,233	36%
55 - 65	6,225	9%	4,565	10%	257	3%	1,403	10%
Over 65	1,062	2%	877	2%	35	0%	150	1%
INA	4,085	6%	266	1%	3,780	45%	39	0%
Race:								
Total	67,420	100%	44,428	100%	8,331	100%	14,661	100%
White	38,722	57%	27,313	61%	2,017	24%	9,392	64%
Black	12,148	18%	7,662	17%	1,457	17%	3,029	21%
Hispanic	9,701	14%	7,303	16%	693	8%	1,705	12%
NAAN	191	0%	113	0%	25	0%	53	0%
Asian	1,091	2%	787	2%	91	1%	213	1%
INA	5,567	8%	1,250	3%	4,048	49%	269	2%

NOTE: All table entries are in format “estimate [t-statistic]”

Table 3: W-P Study Treatment and Comparison Groups
W-P Registrants by Characteristic and Mode of Service

	Total		Comparison Group Did not use W/P Services		Treatment Group Used W-P Services							
					Total		Staff-Asst Only		Self-Serv only		Staff and Self	
All registrants:	89,868	100%	22,448	25%	67,420	75%	44,428	49%	8,331	9%	14,661	16%
Gender:												
Total	89,868	100%	22,448	100%	67,420	100%	44,428	100%	8,331	100%	14,661	100%
Male	46,487	52%	12,760	57%	33,727	50%	24,784	56%	2,021	24%	6,922	47%
Female	39,589	44%	9,688	43%	29,901	44%	19,596	44%	2,566	31%	7,739	53%
INA	3,792	4%	0	0%	3,792	6%	48	0%	3,744	45%	0	0%
Education:												
Total	89,868	100%	22,448	100%	67,420	100%	44,428	100%	8,331	100%	14,661	100%
Less than H.S.	13,006	14%	3,314	15%	9,692	14%	7,506	17%	496	6%	1,690	12%
H.S. or equiv.	41,977	47%	10,952	49%	31,025	46%	22,164	50%	1,522	18%	7,339	50%
Some College	14,738	16%	3,599	16%	11,139	17%	7,420	17%	517	6%	3,202	22%
College Degree	13,795	15%	4,501	20%	9,294	14%	6,642	15%	369	4%	2,283	16%
INA	6,352	7%	82	0%	6,270	9%	696	2%	5,427	65%	147	1%
Age:												
Total	89,868	100%	22,448	100%	67,420	100%	44,428	100%	8,331	100%	14,661	100%
16 - 19	2,493	3%	601	3%	1,892	3%	1,445	3%	135	2%	312	2%
20 - 21	4,068	5%	1,039	5%	3,029	4%	2,199	5%	217	3%	613	4%
22 - 39	42,263	47%	11,450	51%	30,813	46%	21,372	48%	2,530	30%	6,911	47%
40 - 54	27,306	30%	6,992	31%	20,314	30%	13,704	31%	1,377	17%	5,233	36%
55 - 65	8,230	9%	2,005	9%	6,225	9%	4,565	10%	257	3%	1,403	10%
Over 65	1,382	2%	320	1%	1,062	2%	877	2%	35	0%	150	1%
INA	4,126	5%	41	0%	4,085	6%	266	1%	3,780	45%	39	0%
Race:												
Total	89,868	100%	22,448	100%	67,420	100%	44,428	100%	8,331	100%	14,661	100%
White	53,875	60%	15,153	68%	38,722	57%	27,313	61%	2,017	24%	9,392	64%
Black	14,864	17%	2,716	12%	12,148	18%	7,662	17%	1,457	17%	3,029	21%
Hispanic	12,760	14%	3,059	14%	9,701	14%	7,303	16%	693	8%	1,705	12%
NAAN	289	0%	98	0%	191	0%	113	0%	25	0%	53	0%
Asian	1,523	2%	432	2%	1,091	2%	787	2%	91	1%	213	1%
INA	6,557	7%	990	4%	5,567	8%	1,250	3%	4,048	49%	269	2%

NOTE: All table entries are in format “estimate [t-statistic]”

Table 4A: Regression Estimates - Earnings Outcomes
Earnings Outcomes 1 Year After Services vs 1, 2 and 3 Years Before Services - by Demographics

	Diff 11					Diff 21					Diff 31				
Age Group	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
16 - 19	2,469	[13.54]	1,159	[4.00]	1,310	4,947	[23.51]	5,608	[16.68]	(661)	6,979	[25.24]	7,754	[18.87]	(775)
20 - 21	177	[0.94]	(413)	[-1.51]	590	3,818	[20.16]	4,230	[14.39]	(411)	6,569	[34.73]	7,886	[25.40]	(1,317)
22 - 39	(3,815)	[-34.34]	(7,349)	[-20.98]	3,534	(1,090)	[-8.23]	(3,314)	[-15.36]	2,224	1,213	[11.03]	748	[3.94]	465
40 - 54	(9,444)	[-20.18]	(14,858)	[-18.40]	5,414	(6,505)	[-27.97]	(11,584)	[-10.35]	5,078	(4,644)	[-22.89]	(6,081)	[-14.57]	1,436
55 - 65	(13,125)	[-30.07]	(16,408)	[-0.42]	3,282	(12,147)	[-26.43]	(14,724)	[-17.11]	2,577	(10,972)	[-27.21]	(11,629)	[-15.74]	657
Over 65	(6,443)	[-10.13]	(8,224)	[-6.92]	1,781	(5,795)	[-8.82]	(7,640)	[-6.11]	1,846	(6,663)	[-9.04]	(5,713)	[-5.27]	(951)

	Diff 11					Diff 21					Diff 31				
Education	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
< High School	(2,628)	[-19.35]	(3,984)	[-19.71]	1,356	(904)	[-6.01]	(2,043)	[-8.88]	1,138	4	[0.03]	(26)	[-0.10]	30
High School	(4,463)	[-45.21]	(6,330)	[-37.92]	1,867	(2,491)	[-21.47]	(3,564)	[-21.18]	1,073	(808)	[-7.75]	(727)	[-4.28]	(82)
Some College	(6,126)	[-27.56]	(8,888)	[-24.28]	2,762	(3,825)	[-14.61]	(5,247)	[-13.62]	1,422	(1,847)	[-8.52]	(1,638)	[-4.32]	(209)
College Degree	(16,499)	[-15.34]	(26,112)	[-15.20]	9,613	(10,097)	[-18.40]	(19,236)	[-9.16]	9,139	(6,362)	[-13.32]	(8,290)	[-10.04]	1,927

	Diff 11					Diff 21					Diff 31				
Gender	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
Male	(7,239)	[-24.67]	(11,146)	[-21.62]	3,906	(4,129)	[-22.33]	(7,222)	[-11.49]	3,094	(1,953)	[-12.54]	(2,066)	[-7.61]	113
Female	(4,815)	[-37.25]	(7,814)	[-31.36]	2,998	(2,810)	[-24.82]	(4,904)	[-21.61]	2,094	(1,185)	[-10.51]	(1,971)	[-9.23]	786

	Diff 11					Diff 21					Diff 31				
Race	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
White	(8,120)	[-31.32]	(11,461)	[-27.55]	3,342	(5,093)	[-30.85]	(7,538)	[-14.25]	2,445	(2,879)	[-20.55]	(2,735)	[-11.29]	(144)
Black	(2,771)	[-19.26]	(5,815)	[-19.62]	3,044	(899)	[-6.41]	(3,227)	[-9.66]	2,328	384	[2.59]	(398)	[-1.18]	782
Hispanic	(1,939)	[-13.95]	(4,005)	[-19.30]	2,066	(25)	[-0.17]	(1,485)	[-6.26]	1,460	1,446	[9.02]	964	[3.80]	481
NAAN	(3,659)	[-2.88]	(7,340)	[-2.81]	3,682	(2,320)	[-1.94]	(3,412)	[-1.34]	1,092	(594)	[-0.44]	659	[0.30]	(1,254)
Asian	(5,439)	[-7.51]	(16,460)	[-2.28]	11,021	(2,692)	[-3.30]	(13,110)	[-2.74]	10,417	(962)	[-1.21]	(4,526)	[-3.17]	3,564

Table 4B: Regression Estimates - Earnings Outcomes
Earnings Outcomes 2 Years After Services vs 1, 2 and 3 Years Before Services - by Demographics

	Diff 12					Diff 22					Diff 32				
Age Group	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
16 - 19	4,632	[19.87]	3,309	[9.50]	1,322	7,142	[27.76]	7,775	[18.89]	(633)	9,083	[28.11]	9,869	[19.87]	(786)
20 - 21	2,212	[10.76]	1,145	[3.40]	1,067	5,972	[27.53]	5,853	[16.42]	119	8,726	[38.63]	9,428	[26.45]	(702)
22 - 39	(1,472)	[-12.62]	(4,136)	[-17.83]	2,664	1,237	[9.58]	(503)	[-2.22]	1,740	3,474	[29.07]	3,414	[16.19]	60
40 - 54	(6,901)	[-22.42]	(10,902)	[-15.67]	4,000	(4,284)	[-19.82]	(8,577)	[-6.54]	4,293	(2,523)	[-13.15]	(3,459)	[-7.49]	936
55 - 65	(9,217)	[-3.31]	(15,073)	[-16.58]	5,855	(10,633)	[-23.28]	(13,315)	[-14.93]	2,682	(9,863)	[-22.99]	(10,851)	[-13.72]	988
Over 65	(5,555)	[-7.08]	(7,952)	[-6.51]	2,397	(4,283)	[-5.58]	(7,082)	[-5.60]	2,799	(5,243)	[-6.24]	(5,658)	[-4.57]	415

	Diff 12					Diff 22					Diff 32				
Education	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
< High School	(1,308)	[-9.00]	(2,901)	[-12.59]	1,593	536	[3.39]	(958)	[-3.71]	1,495	1,407	[8.17]	954	[3.43]	453
High School	(2,224)	[-4.65]	(4,654)	[-25.54]	2,430	(603)	[-5.67]	(2,017)	[-11.53]	1,414	1,007	[9.00]	804	[4.45]	203
Some College	(4,061)	[-16.90]	(5,820)	[-15.46]	1,758	(1,507)	[-5.97]	(2,288)	[-5.51]	781	311	[1.35]	1,009	[2.43]	(698)
College Degree	(10,664)	[-15.03]	(16,354)	[-12.11]	5,690	(5,569)	[-10.39]	(11,584)	[-4.64]	6,015	(1,983)	[-4.31]	(1,515)	[-1.63]	(468)

	Diff 12					Diff 22					Diff 32				
Gender	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
Male	(4,553)	[-9.17]	(7,780)	[-18.71]	3,226	(1,972)	[-11.19]	(4,475)	[-6.09]	2,503	26	[0.17]	377	[1.25]	(351)
Female	(2,478)	[-18.93]	(4,827)	[-21.55]	2,349	(484)	[-4.26]	(2,152)	[-9.15]	1,668	1,154	[9.82]	655	[2.87]	499

	Diff 12					Diff 22					Diff 32				
Race	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
White	(5,125)	[-12.22]	(7,829)	[-27.88]	2,705	(2,609)	[-16.81]	(4,627)	[-7.63]	2,018	(531)	[-3.77]	(157)	[-0.66]	(374)
Black	(1,115)	[-7.45]	(3,575)	[-11.22]	2,460	768	[4.96]	(937)	[-2.68]	1,705	1,992	[12.48]	1,748	[4.82]	244
Hispanic	(86)	[-0.57]	(1,771)	[-3.57]	1,685	1,883	[11.61]	648	[1.16]	1,235	3,444	[19.63]	3,396	[4.74]	48
NAAN	(1,460)	[-0.92]	(7,915)	[-2.92]	6,456	(347)	[-0.25]	(4,663)	[-1.38]	4,315	1,617	[1.05]	(2,223)	[-0.71]	3,839
Asian	(2,528)	[-3.48]	(12,385)	[-1.55]	9,857	433	[0.51]	(8,293)	[-1.61]	8,726	1,924	[2.32]	591	[0.46]	1,333

NOTE: All table entries are in format “estimate [t-statistic]”

Table 5A: Comparison of Regression Models - Earnings Outcomes

Earnings Outcomes 1 Year After Services vs 1 Year Before Services - Diff11

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(9,747)	[-36.13]	5,076	[7.41]	(8,291)	[-36.37]	6,213	[9.35]
Treatment	3,775	[11.63]	3,150	[9.76]				
Male			(2,425)	[-8.08]			(2,578)	[-8.53]
Female								
Gender INA			(2,526)	[-0.74]			(2,718)	[-0.79]
White								
Black			1,971	[4.72]			1,668	[3.96]
Other Race			1,865	[4.32]			1,749	[4.03]
Less Than High School								
High School			(1,217)	[-2.87]			(1,316)	[-3.10]
Some College			(2,901)	[-5.59]			(3,001)	[-5.76]
College Degree			(14,467)	[-26.46]			(14,458)	[-26.39]
Age			(280)	[-22.10]			(281)	[-22.02]
Age INA			(3,954)	[-1.27]			(4,167)	[-1.34]
Testing					1,166	[0.58]	894	[0.45]
Referrals to Support Svces.					(1,071)	[-2.22]	357	[0.75]
Workshops					(1,977)	[-3.90]	(1,009)	[-2.00]
Job Search Preparation					(273)	[-0.69]	(244)	[-0.62]
Job Referral					4,573	[10.50]	3,674	[8.50]
Guidance					(1,973)	[-2.71]	(1,259)	[-1.75]
Misc. Services					(483)	[-1.18]	214	[0.53]
Self-Service					3,937	[9.66]	2,466	[5.90]
Labor Market Information					868	[2.43]	691	[1.95]

Table 5B: Comparison of Regression Models - Earnings Outcomes

Earnings Outcomes 2 Years After Services vs 1 Year Before Services - Diff12

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(6,520)	[-18.25]	6,962	[7.63]	(5,421)	[-17.98]	8,011	[9.05]
Treatment	3,082	[7.18]	2,766	[6.43]				
Male			(2,082)	[-5.22]			(2,300)	[-5.73]
Female								
Gender INA			(1,176)	[-0.26]			(671)	[-0.15]
White								
Black			1,384	[2.49]			1,141	[2.04]
Other Race			1,667	[2.90]			1,571	[2.72]
Less Than High School								
High School			(413)	[-0.73]			(580)	[-1.02]
Some College			(1,769)	[-2.56]			(1,950)	[-2.81]
College Degree			(8,507)	[-11.63]			(8,537)	[-11.65]
Age			(293)	[-17.21]			(296)	[-17.26]
Age INA			(4,528)	[-1.11]			(4,911)	[-1.20]
Testing					2,041	[0.79]	2,332	[0.91]
Referrals to Support Svces.					(229)	[-0.36]	1,087	[1.71]
Workshops					(2,198)	[-3.31]	(1,343)	[-2.01]
Job Search Preparation					557	[1.06]	560	[1.07]
Job Referral					4,154	[7.22]	3,626	[6.29]
Guidance					(2,135)	[-2.24]	(1,646)	[-1.74]
Misc. Services					(196)	[-0.36]	420	[0.78]
Self-Service					2,810	[5.25]	1,621	[2.93]
Labor Market Information					311	[0.66]	253	[0.54]

NOTE: All table entries are in format “estimate [t-statistic]”

Table 6A: Comparison of Regression Models - Earnings Outcomes

Earnings Outcomes 1 Year After Services vs 2 Years Before Services - Diff21

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(6,242)	[-25.03]	9,763	[15.40]	(4,877)	[-23.19]	10,829	[17.60]
Treatment	2,843	[9.49]	2,503	[8.40]				
Male			(1,301)	[-4.71]			(1,479)	[-5.32]
Female								
Gender INA			(1,033)	[-0.32]			(696)	[-0.21]
White								
Black			1,194	[3.11]			1,078	[2.78]
Other Race			1,133	[2.82]			1,025	[2.53]
Less Than High School								
High School			(874)	[-2.23]			(960)	[-2.43]
Some College			(1,991)	[-4.16]			(2,028)	[-4.21]
College Degree			(9,621)	[-19.02]			(9,671)	[-19.07]
Age			(352)	[-30.26]			(352)	[-30.09]
Age INA			(7,826)	[-2.61]			(7,878)	[-2.63]
Testing					(3,728)	[-2.12]	(3,650)	[-2.10]
Referrals to Support Svces.					(962)	[-2.17]	461	[1.05]
Workshops					(2,330)	[-5.03]	(1,426)	[-3.09]
Job Search Preparation					236	[0.64]	291	[0.80]
Job Referral					2,752	[6.85]	2,055	[5.16]
Guidance					(2,432)	[-3.69]	(1,880)	[-2.89]
Misc. Services					(226)	[-0.60]	402	[1.08]
Self-Service					2,362	[6.34]	1,173	[3.07]
Labor Market Information					657	[2.00]	619	[1.90]

Table 6B: Comparison of Regression Models - Earnings Outcomes

Earnings Outcomes 2 Years After Services vs 2 Years Before Services - Diff22

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(3,480)	[-12.75]	12,406	[17.87]	(2,377)	[-10.34]	13,263	[19.68]
Treatment	2,317	[7.08]	2,207	[6.76]				
Male			(1,404)	[-4.65]			(1,531)	[-5.04]
Female								
Gender INA			(907)	[-0.26]			(450)	[-0.13]
White								
Black			862	[2.05]			821	[1.94]
Other Race			1,212	[2.76]			1,135	[2.57]
Less Than High School								
High School			(319)	[-0.74]			(404)	[-0.93]
Some College			(662)	[-1.26]			(716)	[-1.36]
College Degree			(5,094)	[-9.15]			(5,173)	[-9.27]
Age			(385)	[-29.87]			(384)	[-29.68]
Age INA			(8,764)	[-2.71]			(8,763)	[-2.71]
Testing					(2,301)	[-1.22]	(1,736)	[-0.93]
Referrals to Support Svces.					(1,296)	[-2.69]	147	[0.31]
Workshops					(1,966)	[-3.92]	(1,191)	[-2.37]
Job Search Preparation					398	[1.00]	400	[1.01]
Job Referral					1,475	[3.36]	1,048	[2.40]
Guidance					(2,235)	[-3.12]	(1,825)	[-2.58]
Misc. Services					68	[0.16]	661	[1.62]
Self-Service					1,847	[4.56]	908	[2.18]
Labor Market Information					691	[1.94]	700	[1.97]

NOTE: All table entries are in format “estimate [t-statistic]”

Table 7A: Comparison of Regression Models - Earnings Outcomes

Earnings Outcomes 1 Year After Services vs 3 Years Before Services - Diff31

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(2,026)	[-12.77]	13,953	[34.84]	(1,261)	[-9.46]	14,268	[36.72]
Treatment	546	[2.87]	470	[2.53]				
Male			(281)	[-1.63]			(419)	[-2.42]
Female								
Gender INA			2,040	[1.01]			1,967	[0.97]
White								
Black			482	[2.01]			387	[1.60]
Other Race			708	[2.78]			610	[2.38]
Less Than High School								
High School			(458)	[-1.85]			(421)	[-1.70]
Some College			(1,099)	[-3.66]			(980)	[-3.26]
College Degree			(5,030)	[-15.84]			(4,952)	[-15.57]
Age			(391)	[-53.72]			(388)	[-53.08]
Age INA			(10,210)	[-5.58]			(10,132)	[-5.54]
Testing					(6,611)	[-5.99]	(6,276)	[-5.86]
Referrals to Support Svces.					(1,288)	[-4.64]	6	[0.02]
Workshops					(2,268)	[-7.78]	(1,481)	[-5.18]
Job Search Preparation					11	[0.05]	60	[0.26]
Job Referral					1,851	[7.31]	1,363	[5.51]
Guidance					(2,214)	[-5.33]	(1,704)	[-4.22]
Misc. Services					(538)	[-2.26]	39	[0.17]
Self-Service					1,070	[4.54]	153	[0.65]
Labor Market Information					(51)	[-0.25]	50	[0.25]

Table 7B: Comparison of Regression Models - Earnings Outcomes

Earnings Outcomes 2 Years After Services vs 3 Years Before Services - Diff32

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	497	[2.98]	16,790	[40.05]	1,060	[7.58]	16,974	[41.72]
Treatment	170	[0.85]	299	[1.54]				
Male			(556)	[-3.10]			(656)	[-3.63]
Female								
Gender INA			2,108	[1.02]			2,282	[1.10]
White								
Black			152	[0.61]			149	[0.59]
Other Race			1,016	[3.82]			953	[3.57]
Less Than High School								
High School			135	[0.52]			149	[0.57]
Some College			121	[0.38]			192	[0.61]
College Degree			(814)	[-2.44]			(790)	[-2.36]
Age			(432)	[-56.03]			(429)	[-55.39]
Age INA			(11,615)	[-6.19]			(11,473)	[-6.11]
Testing					(5,673)	[-4.98]	(4,870)	[-4.40]
Referrals to Support Svces.					(1,522)	[-5.25]	(166)	[-0.59]
Workshops					(1,723)	[-5.68]	(1,026)	[-3.45]
Job Search Preparation					151	[0.63]	155	[0.66]
Job Referral					745	[2.81]	506	[1.95]
Guidance					(2,148)	[-4.97]	(1,755)	[-4.18]
Misc. Services					(243)	[-0.98]	323	[1.33]
Self-Service					511	[2.08]	(206)	[-0.83]
Labor Market Information					(17)	[-0.08]	99	[0.47]

NOTE: All table entries are in format “estimate [t-statistic]”

Table 8A: Regression Estimates - Unemployed W-P Registrants Only
Earnings Outcomes 1 Year After Services vs 1, 2 and 3 Years Before Services - by Demographics

	Diff 11					Diff 21					Diff 31				
Age Group	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
16 - 19	1,325	[4.30]	600	[1.78]	725	5,461	[14.84]	5,564	[14.78]	(103)	7,922	[17.76]	7,840	[16.83]	82
20 - 21	(1,435)	[-0.14]	(467)	[-1.58]	(969)	3,968	[14.12]	4,240	[13.25]	(271)	7,449	[26.59]	8,019	[23.73]	(571)
22 - 39	(5,709)	[-41.09]	(7,210)	[-17.55]	1,500	(2,118)	[-11.98]	(2,999)	[-12.27]	881	660	[4.68]	1,127	[5.27]	(467)
40 - 54	(11,763)	[-19.03]	(15,176)	[-16.08]	3,412	(7,865)	[-27.10]	(12,277)	[-9.07]	4,412	(5,784)	[-22.95]	(6,301)	[-13.13]	517
55 - 65	(14,738)	[-28.23]	(17,296)	[-16.23]	2,559	(13,437)	[-24.13]	(15,453)	[-14.73]	2,016	(12,077)	[-25.44]	(11,992)	[-13.98]	(85)
Over 65	(7,488)	[-9.81]	(7,265)	[-4.86]	(222)	(6,747)	[-8.25]	(6,786)	[-4.26]	38	(7,420)	[-8.17]	(5,345)	[-3.97]	(2,076)

	Diff 11					Diff 21					Diff 31				
Education	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
< High School	(4,210)	[-23.18]	(4,156)	[-17.64]	(54)	(1,678)	[-8.17]	(2,058)	[-7.62]	380	(457)	[-2.03]	(71)	[-0.24]	(386)
High School	(6,163)	[-51.00]	(6,024)	[-31.74]	(139)	(3,591)	[-23.69]	(3,209)	[-16.71]	(383)	(1,678)	[-12.85]	(393)	[-2.04]	(1,285)
Some College	(8,151)	[-30.86]	(8,772)	[-22.04]	621	(5,019)	[-16.07]	(5,177)	[-13.19]	157	(2,771)	[-10.49]	(1,750)	[-4.55]	(1,021)
College Degree	(19,628)	[-14.68]	(25,472)	[-13.64]	5,844	(12,061)	[-18.19]	(19,010)	[-8.13]	6,949	(7,822)	[-13.78]	(7,393)	[-8.29]	(429)

	Diff 11					Diff 21					Diff 31				
Gender	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
Male	(9,605)	[-23.93]	(11,241)	[-18.06]	1,636	(5,570)	[-23.01]	(7,378)	[-9.56]	1,808	(3,026)	[-15.16]	(1,919)	[-6.07]	(1,108)
Female	(7,025)	[-41.54]	(7,931)	[-30.19]	906	(4,236)	[-28.67]	(4,832)	[-19.13]	595	(2,291)	[-15.81]	(1,729)	[-7.29]	(562)

	Diff 11					Diff 21					Diff 31				
Race	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
White	(10,276)	[-30.21]	(11,461)	[-23.76]	1,185	(6,462)	[-31.03]	(7,582)	[-12.02]	1,120	(3,892)	[-22.46]	(2,512)	[-9.15]	(1,380)
Black	(5,172)	[-26.05]	(5,863)	[-17.80]	691	(2,241)	[-11.76]	(3,197)	[-8.47]	957	(674)	[-3.34]	(313)	[-0.83]	(361)
Hispanic	(3,493)	[-19.29]	(4,111)	[-17.36]	618	(753)	[-3.83]	(1,350)	[-4.95]	597	1,030	[4.88]	1,103	[3.76]	(73)
NAAN	(8,047)	[-4.86]	(6,070)	[-2.03]	(1,977)	(4,440)	[-2.81]	(2,430)	[-0.85]	(2,010)	(2,823)	[-1.78]	1,751	[0.79]	(4,573)
Asian	(7,834)	[-8.76]	(17,132)	[-1.95]	9,299	(4,089)	[-3.98]	(13,566)	[-2.31]	9,477	(2,223)	[-2.32]	(3,537)	[-2.23]	1,314

Table 8B: Regression Estimates - Unemployed W-P Registrants Only
Earnings Outcomes 2 Years After Services vs 1, 2 and 3 Years Before Services - by Demographics

	Diff 12					Diff 22					Diff 32				
Age Group	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
16 - 19	4,084	[9.88]	2,901	[7.26]	1,183	8,100	[17.87]	7,809	[17.27]	292	10,599	[19.63]	9,955	[18.14]	643
20 - 21	1,142	[4.02]	1,040	[2.88]	101	6,657	[21.97]	5,812	[15.13]	845	10,249	[32.30]	9,467	[24.81]	781
22 - 39	(2,826)	[-19.63]	(3,790)	[-14.52]	964	742	[4.46]	(15)	[-0.06]	757	3,496	[22.99]	3,968	[16.75]	(472)
40 - 54	(8,389)	[-21.47]	(10,605)	[-13.16]	2,215	(4,914)	[-19.02]	(8,662)	[-5.47]	3,748	(2,955)	[-12.81]	(3,100)	[-5.79]	145
55 - 65	(13,220)	[-24.43]	(15,462)	[-14.15]	2,242	(11,491)	[-20.97]	(13,463)	[-12.51]	1,972	(10,703)	[-21.30]	(10,591)	[-11.76]	(112)
Over 65	(6,779)	[-7.45]	(7,279)	[-5.12]	500	(5,701)	[-6.04]	(6,528)	[-4.41]	828	(6,246)	[-6.25]	(5,539)	[-4.02]	(707)

	Diff 12					Diff 22					Diff 32				
Education	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
< High School	(2,715)	[-14.45]	(2,896)	[-10.94]	181	(31)	[-0.15]	(724)	[-2.42]	692	1,099	[4.86]	1,122	[3.47]	(24)
High School	(3,903)	[-30.76]	(4,162)	[-20.52]	259	(1,174)	[-8.98]	(1,396)	[-7.21]	222	685	[5.02]	1,396	[6.91]	(711)
Some College	(5,686)	[-20.24]	(5,385)	[-13.37]	(301)	(2,323)	[-8.19]	(1,971)	[-4.72]	(352)	(239)	[-0.85]	1,257	[3.01]	(1,496)
College Degree	(12,663)	[-14.78]	(15,531)	[-10.66]	2,868	(6,625)	[-10.35]	(11,305)	[-4.06]	4,679	(2,543)	[-4.72]	(457)	[-0.45]	(2,086)

	Diff 12					Diff 22					Diff 32				
Gender	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
Male	(6,714)	[-25.06]	(7,288)	[-14.92]	574	(2,784)	[-12.60]	(4,125)	[-4.58]	1,341	(443)	[-2.26]	1,084	[3.09]	(1,527)
Female	(4,103)	[-24.62]	(4,885)	[-19.65]	782	(1,363)	[-9.34]	(1,961)	[-7.51]	598	620	[4.13]	948	[3.75]	(328)

	Diff 12					Diff 22					Diff 32				
Race	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
White	(7,041)	[-29.98]	(7,477)	[-24.17]	436	(3,409)	[-18.02]	(4,346)	[-6.02]	937	(980)	[-5.75]	373	[1.42]	(1,354)
Black	(2,871)	[-147.71]	(3,290)	[-9.42]	419	34	[0.17]	(571)	[-1.47]	606	1,589	[7.44]	2,259	[5.61]	(670)
Hispanic	(1,355)	[-7.04]	(1,316)	[-2.20]	(39)	1,512	[7.05]	1,389	[2.06]	123	3,346	[14.62]	4,225	[4.79]	(879)
NAAN	(5,387)	[-2.33]	(7,543)	[-2.38]	2,156	(1,542)	[-0.78]	(5,044)	[-1.27]	3,502	(29)	[-0.02]	(2,935)	[-0.81]	2,905
Asian	(3,856)	[-4.46]	(14,494)	[-1.50]	10,638	(119)	[-0.11]	(10,095)	[-1.61]	9,976	1,423	[1.44]	581	[0.39]	842

NOTE: All table entries are in format “estimate [t-statistic]”

Table 9A: Comparison of Regression Models - Earnings Outcomes

Unemployed W-P Registrants Only

Earnings Outcomes 1 Year After Services vs 1 Year Before Services - Diff11

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(9,811)	[-29.35]	6,206	[6.75]	(9,337)	[-31.68]	6,704	[7.41]
Treatment	1,404	[3.39]	1,451	[3.53]				
Male			(2,678)	[-6.81]			(2,769)	[-7.01]
Female								
Gender INA			5,163	[0.12]			6,061	[0.14]
White								
Black			1,465	[2.59]			1,215	[2.12]
Other Race			1,702	[2.94]			1,603	[2.75]
Less Than High School								
High School			(1,140)	[-1.96]			(1,187)	[-2.04]
Some College			(3,224)	[-4.62]			(3,277)	[-4.68]
College Degree			(15,501)	[-21.64]			(15,485)	[-21.60]
Age			(297)	[-17.65]			(301)	[-17.74]
Age INA			(6,482)	[-1.39]			(6,477)	[-1.39]
Testing					(632)	[-0.20]	(1,827)	[-0.58]
Referrals to Support Svces.					(931)	[-1.46]	446	[0.70]
Workshops					(1,807)	[-2.54]	(805)	[-1.14]
Job Search Preparation					(440)	[-0.84]	(521)	[-1.01]
Job Referral					2,925	[4.57]	2,463	[3.88]
Guidance					(1,707)	[-1.74]	(1,063)	[-1.10]
Misc. Services					(373)	[-0.69]	234	[0.44]
Self-Service					2,190	[3.55]	1,414	[2.31]
Labor Market Information					994	[2.11]	717	[1.53]

Table 9B: Comparison of Regression Models - Earnings Outcomes

Unemployed W-P Registrants Only

Earnings Outcomes 2 Years After Services vs 1 Year Before Services - Diff12

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(6,234)	[-24.87]	8,735	[12.73]	(5,859)	[-26.55]	9,096	[13.46]
Treatment	748	[2.41]	1,096	[3.57]				
Male			(2,369)	[-8.11]			(2,420)	[-8.24]
Female								
Gender INA			5,943	[0.19]			6,155	[0.20]
White								
Black			1,241	[2.94]			1,119	[2.63]
Other Race			1,666	[3.88]			1,636	[3.79]
Less Than High School								
High School			(411)	[-0.94]			(437)	[-1.00]
Some College			(1,802)	[-3.47]			(1,832)	[-3.51]
College Degree			(8,706)	[-16.21]			(8,679)	[-16.15]
Age			(327)	[-25.78]			(328)	[-25.72]
Age INA			(8,063)	[-2.37]			(8,099)	[-2.38]
Testing					1,115	[0.49]	631	[0.28]
Referrals to Support Svces.					(1,452)	[-3.06]	(133)	[-0.28]
Workshops					(1,589)	[-3.02]	(763)	[-1.47]
Job Search Preparation					(300)	[-0.77]	(397)	[-1.04]
Job Referral					1,764	[3.69]	1,693	[3.59]
Guidance					(917)	[-1.26]	(510)	[-0.71]
Misc. Services					17	[0.04]	607	[1.54]
Self-Service					1,651	[3.61]	1,161	[2.56]
Labor Market Information					308	[0.88]	139	[0.40]

NOTE: All table entries are in format “estimate [t-statistic]”

Table 10A: Comparison of Regression Models - Earnings Outcomes

Unemployed W-P Registrants Only

Earnings Outcomes 1 Year After Services vs 2 Years Before Services - Diff21

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(6,270)	[-20.19]	11,550	[13.48]	(5,622)	[-20.56]	12,115	[14.37]
Treatment	1,322	[3.44]	1,689	[4.43]				
Male			(1,555)	[-4.27]			(1,665)	[-4.55]
Female								
Gender INA			3,291	[0.08]			3,858	[0.10]
White								
Black			903	[1.72]			793	[1.49]
Other Race			1,082	[1.99]			997	[1.83]
Less Than High School								
High School			(1,011)	[-1.86]			(1,045)	[-1.92]
Some College			(2,411)	[-3.72]			(2,403)	[-3.69]
College Degree			(10,645)	[-15.94]			(10,664)	[-15.95]
Age			(386)	[-24.84]			(387)	[-24.68]
Age INA			(9,593)	[-2.14]			(9,482)	[-2.12]
Testing					(4,288)	[-1.52]	(4,933)	[-1.77]
Referrals to Support Svces.					(967)	[-1.64]	484	[0.83]
Workshops					(2,216)	[-3.39]	(1,251)	[-1.93]
Job Search Preparation					294	[0.61]	242	[0.51]
Job Referral					1,497	[2.52]	1,336	[2.27]
Guidance					(2,767)	[-3.08]	(2,219)	[-2.50]
Misc. Services					(35)	[-0.07]	592	[1.20]
Self-Service					1,254	[2.20]	669	[1.18]
Labor Market Information					705	[1.62]	591	[1.36]

Table 10B: Comparison of Regression Models - Earnings Outcomes

Unemployed W-P Registrants Only

Earnings Outcomes 2 Years After Services vs 2 Years Before Services Diff22

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(3,172)	[-9.37]	13,928	[14.89]	(2,651)	[-8.91]	14,342	[15.57]
Treatment	1,056	[2.53]	1,644	[3.95]				
Male			(1,465)	[-3.70]			(1,526)	[-3.83]
Female								
Gender INA			3,792	[0.09]			4,202	[0.10]
White			725	[1.27]				
Black			1,217	[2.07]			663	[1.15]
Other Race			(254)	[-0.43]			1,153	[1.94]
Less Than High School			(954)	[-1.35]				
High School			(5,691)	[-7.77]			(271)	[-0.45]
Some College			(414)	[-24.13]			(937)	[-1.32]
College Degree			(10,584)	[-2.21]			(5,715)	[-7.79]
Age							(413)	[-23.88]
Age INA							(10,457)	[-2.18]
Testing					(2,191)	[-0.73]	(2,376)	[-0.80]
Referrals to Support Svces.					(1,448)	[-2.27]	12	[0.02]
Workshops					(1,991)	[-2.83]	(1,158)	[-1.66]
Job Search Preparation					334	[0.64]	248	[0.48]
Job Referral					319	[0.50]	446	[0.70]
Guidance					(2,202)	[-2.28]	(1,846)	[-1.92]
Misc. Services					169	[0.31]	781	[1.46]
Self-Service					1,119	[1.82]	768	[1.26]
Labor Market Information					745	[1.58]	701	[1.49]

NOTE: All table entries are in format “estimate [t-statistic]”

Table 11A: Comparison of Regression Models - Earnings Outcomes

Unemployed W-P Registrants Only

Earnings Outcomes 1 Year After Services vs 3 Years Before Services - Diff31

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(1,836)	[-9.87]	15,681	[30.86]	(1,669)	[-10.22]	15,652	[31.31]
Treatment	(848)	[-3.70]	(223)	[-1.00]				
Male			(408)	[-1.91]			(496)	[-2.32]
Female								
Gender INA			4,407	[0.20]			3,885	[0.18]
White								
Black			204	[0.66]			133	[0.43]
Other Race			693	[2.14]			633	[1.95]
Less Than High School								
High School			(602)	[-1.87]			(544)	[-1.69]
Some College			(1,518)	[-3.97]			(1,391)	[-3.63]
College Degree			(5,462)	[-13.83]			(5,370)	[-13.59]
Age			(424)	[-46.48]			(423)	[-45.99]
Age INA			(12,434)	[-4.80]			(12,262)	[-4.74]
Testing					(6,564)	[-3.93]	(6,886)	[-4.25]
Referrals to Support Svces.					(1,355)	[-3.89]	(20)	[-0.06]
Workshops					(2,116)	[-5.46]	(1,296)	[-3.44]
Job Search Preparation					34	[0.12]	(45)	[-0.16]
Job Referral					856	[2.43]	946	[2.76]
Guidance					(2,439)	[-4.57]	(1,922)	[-3.71]
Misc. Services					(385)	[-1.30]	191	[0.66]
Self-Service					159	[0.47]	(160)	[-0.49]
Labor Market Information					(159)	[-0.61]	(89)	[-0.35]

Table 11B: Comparison of Regression Models - Earnings Outcomes

Unemployed W-P Registrants Only

Earnings Outcomes 2 Years After Services vs 3 Years Before Services - Diff32

	Model 1		Model 2		Model 3		Model 4	
regression intercept	1,023	[5.28]	18,348	[34.74]	1,149	[6.77]	18,279	[35.14]
Treatment	(966)	[-4.05]	(123)	[-0.53]				
Male			(483)	[-2.19]			(536)	[-2.42]
Female								
Gender INA			4,898	[0.22]			4,309	[0.20]
White								
Black			87	[0.27]			85	[0.26]
Other Race			1,065	[3.19]			1,035	[3.08]
Less Than High School								
High School			221	[0.66]			276	[0.82]
Some College			(123)	[-0.31]			(11)	[-0.03]
College Degree			(770)	[-1.87]			(701)	[-1.70]
Age			(464)	[-48.34]			(461)	[-47.71]
Age INA			(14,347)	[-5.50]			(14,197)	[-5.45]
Testing					(4,565)	[-2.69]	(4,450)	[-2.70]
Referrals to Support Svces.					(1,702)	[-4.73]	(310)	[-0.88]
Workshops					(1,681)	[-4.22]	(948)	[-2.44]
Job Search Preparation					50	[0.17]	(54)	[-0.19]
Job Referral					(74)	[-0.20]	291	[0.82]
Guidance					(2,028)	[-3.69]	(1,658)	[-3.11]
Misc. Services					(236)	[-0.77]	357	[1.19]
Self-Service					(38)	[-0.11]	(170)	[-0.50]
Labor Market Information					(154)	[-0.57]	(47)	[-0.18]

NOTE: All table entries are in format “estimate [t-statistic]”

Table 12A: Comparison of Regression Models - Earnings Outcomes

Earnings Outcomes for W-P Services - 1 Year After Services vs 1 Year Before Services - Diff11

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(9,747)	[-36.13]	5,076	[7.41]	(8,376)	[-36.99]	6,090	[9.10]
Treatment	3,775	[11.63]	3,150	[9.76]				
Male			(2,425)	[-8.08]			(2,582)	[-8.47]
Female								
Gender INA			(2,526)	[-0.74]			(2,938)	[-0.86]
White								
Black			1,971	[4.72]			1,656	[3.92]
Other Race			1,865	[4.32]			1,742	[4.00]
Less Than High School								
High School			(1,217)	[-2.87]			(1,258)	[-2.96]
Some College			(2,901)	[-5.59]			(2,872)	[-5.50]
College Degree			(14,467)	[-26.46]			(14,390)	[-26.23]
Age			(280)	[-22.10]			(280)	[-21.78]
Age INA			(3,954)	[-1.27]			(4,220)	[-1.36]
Group A								
Testing - all					853	[0.42]	155	[0.08]
Group B								
All Other Referrals to Support. Svces.					(3,323)	[-1.99]	(3,991)	[-2.42]
Referred to Supportive Services					100	[0.19]	1,059	[2.01]
Referred to JTPA/WIA					(1,164)	[-0.83]	(1,353)	[-0.97]
Group C								
All Other Workshops					(742)	[-0.69]	(319)	[-0.30]
Career Services Orientation					366	[0.58]	505	[0.81]
Job Search Techniques					(2,230)	[-1.51]	(1,738)	[-1.19]
Self-Assessment					1,210	[0.90]	1,002	[0.76]
Resume Writing					(1,913)	[-1.51]	(1,472)	[-1.18]
Interviewing Techniques					282	[0.20]	1,406	[0.99]
Labor Market Information					(1,627)	[-1.34]	(1,446)	[-1.20]
Transition Center Services					104	[0.11]	1,754	[1.91]
Group D								
All Other Job Search Preparation					1,533	[0.90]	1,124	[0.67]
Job Search Planning					(41)	[-0.10]	(392)	[-0.97]
Resume Preparation Assistance					(1,376)	[-1.62]	604	[0.72]
Group E								
All Other Job Referral					1,298	[0.59]	206	[0.10]
Referred to Permanent Job					3,815	[7.69]	3,130	[6.37]
Referred to Temporary Job					1,468	[1.70]	674	[0.79]
Job Development Contacts					2,425	[2.20]	1,258	[1.16]
Group F								
All Other Guidance					3,781	[0.82]	4,694	[1.03]
Individual Counseling					(705)	[-0.64]	415	[0.38]
Career Guidance					703	[0.40]	(2,598)	[-1.51]
Employability Development Plan					(2,053)	[-1.95]	(1,568)	[-1.51]
Group G								
All Other Miscellaneous Services					(2,869)	[-4.97]	80	[0.14]
Orientation					(6,764)	[-8.72]	(5,115)	[-6.66]
Assessment Interview					747	[1.79]	929	[2.26]
Group H								
Self-Service					4,524	[11.03]	2,869	[6.81]
Group I								
Provision of Specific Labor Market Info.					521	[1.43]	442	[1.23]

NOTE: All table entries are in format “estimate [t-statistic]”

Table12B: Comparison of Regression Models - Earnings Outcomes

Earnings Outcomes for W-P Services - 2 Years After Services vs 1 Year Before Services - Diff12

Variable	Model 1		Model 2		Model 3		Model 5	
regression intercept	(6,520)	[-18.25]	6,962	[7.63]	(5,505)	[-18.38]	7,994	[8.96]
Treatment	3,082	[7.18]	2,766	[6.43]				
Male			(2,082)	[-5.22]			(2,369)	[-5.85]
Female								
Gender INA			(1,176)	[-0.26]			(848)	[-0.19]
White								
Black			1,384	[2.49]			1,161	[2.07]
Other Race			1,667	[2.90]			1,600	[2.76]
Less Than High School								
High School			(413)	[-0.73]			(566)	[-0.99]
Some College			(1,769)	[-2.56]			(1,872)	[-2.69]
College Degree			(8,507)	[-11.63]			(8,506)	[-11.58]
Age			(293)	[-17.21]			(297)	[-17.15]
Age INA			(4,528)	[-1.11]			(5,080)	[-1.24]
Group A								
Testing - all					1,971	[0.75]	1,814	[0.70]
Group B								
All Other Referrals to Support. Svces.					(3,435)	[-1.58]	(3,947)	[-1.83]
Referred to Supportive Services					863	[1.23]	1,798	[2.58]
Referred to JTPA/WIA					(593)	[-0.33]	(777)	[-0.43]
Group C								
All Other Workshops					(2,064)	[-1.49]	(1,653)	[-1.20]
Career Services Orientation					(163)	[-0.20]	47	[0.06]
Job Search Techniques					(1,783)	[-0.93]	(1,434)	[-0.75]
Self-Assessment					34	[0.02]	(133)	[-0.08]
Resume Writing					(48)	[-0.03]	554	[0.34]
Interviewing Techniques					(74)	[-0.04]	755	[0.41]
Labor Market Information					(1,285)	[-0.80]	(1,187)	[-0.74]
Transition Center Services					(677)	[-0.55]	693	[0.57]
Group D								
All Other Job Search Preparation					200	[0.09]	(248)	[-0.11]
Job Search Planning					754	[1.39]	438	[0.81]
Resume Preparation Assistance					(1,573)	[-1.41]	(10)	[-0.01]
Group E								
All Other Job Referral					541	[0.19]	(213)	[-0.07]
Referred to Permanent Job					3,964	[6.03]	3,556	[5.42]
Referred to Temporary Job					93	[0.08]	(414)	[-0.36]
Job Development Contacts					1,321	[0.91]	205	[0.14]
Group F								
All Other Guidance					1,991	[0.31]	3,070	[0.49]
Individual Counseling					(1,241)	[-0.87]	(260)	[-0.18]
Career Guidance					(439)	[-0.19]	(3,656)	[-1.62]
Employability Development Plan					(1,250)	[-0.90]	(1,053)	[-0.76]
Group G								
All Other Miscellaneous Services					(2,193)	[-2.88]	648	[0.84]
Orientation					(5,418)	[-5.33]	(4,097)	[-4.04]
Assessment Interview					912	[1.67]	1,072	[1.97]
Group H								
Self-Service					3,342	[6.21]	1,991	[3.57]
Group I								
Provision of Specific Labor Market Info.					(10)	[-0.02]	6	[0.01]

NOTE: All table entries are in format “estimate [t-statistic]”

Table 13A: Comparison of Regression Models - Earnings Outcomes

Earnings Outcomes for W-P Services - 1 Year After Services vs 2 Years Before Services - Diff21

Variable	Model 1		Model 2		Model 3		Model 5	
regression intercept	(6,242)	[-25.03]	9,763	[15.39]	(4,972)	[-23.80]	10,642	[17.17]
Treatment	2,843	[9.49]	2,503	[8.40]				
Male			(1,301)	[-4.71]			(1,462)	[-5.22]
Female								
Gender INA			(1,033)	[-0.32]			(813)	[-0.25]
White								
Black			1,194	[3.11]			1,035	[2.66]
Other Race			1,133	[2.82]			983	[2.42]
Less Than High School								
High School			(874)	[-2.23]			(898)	[-2.27]
Some College			(1,991)	[-4.16]			(1,882)	[-3.90]
College Degree			(9,621)	[-19.02]			(9,582)	[-18.87]
Age			(352)	[-30.26]			(350)	[-29.68]
Age INA			(7,826)	[-2.61]			(7,920)	[-2.64]
Group A								
Testing - all					(3,982)	[-2.24]	(4,259)	[-2.42]
Group B								
All Other Referrals to Support. Svces.					(3,144)	[-2.06]	(3,434)	[-2.28]
Referred to Supportive Services					190	[0.39]	1,139	[2.36]
Referred to JTPA/WIA					(1,001)	[-0.78]	(1,183)	[-0.93]
Group C								
All Other Workshops					(1,016)	[-1.04]	(355)	[-0.37]
Career Services Orientation					(75)	[-0.13]	39	[0.07]
Job Search Techniques					(2,671)	[-1.99]	(2,199)	[-1.66]
Self-Assessment					1,062	[0.87]	882	[0.74]
Resume Writing					(2,543)	[-2.21]	(1,919)	[-1.69]
Interviewing Techniques					1,106	[0.85]	2,090	[1.62]
Labor Market Information					(709)	[-0.64]	(595)	[-0.55]
Transition Center Services					(699)	[-0.83]	649	[0.78]
Group D								
All Other Job Search Preparation					344	[0.22]	68	[0.04]
Job Search Planning					532	[1.41]	227	[0.61]
Resume Preparation Assistance					(2,364)	[-3.06]	(634)	[-0.83]
Group E								
All Other Job Referral					1,314	[0.65]	649	[0.33]
Referred to Permanent Job					2,284	[4.99]	1,694	[3.73]
Referred to Temporary Job					864	[1.09]	333	[0.42]
Job Development Contacts					1,348	[1.34]	466	[0.47]
Group F								
All Other Guidance					3,941	[0.96]	5,201	[1.29]
Individual Counseling					(934)	[-0.95]	(212)	[-0.22]
Career Guidance					554	[0.35]	(2,516)	[-1.63]
Employability Development Plan					(2,339)	[-2.43]	(1,956)	[-2.06]
Group G								
All Other Miscellaneous Services					(2,977)	[-5.64]	(175)	[-0.33]
Orientation					(5,803)	[-8.24]	(4,418)	[-6.33]
Assessment Interview					923	[2.41]	1,092	[2.88]
Group H								
Self-Service					2,864	[7.64]	1,527	[3.97]
Group I								
Provision of Specific Labor Market Info.					360	[1.08]	402	[1.21]

NOTE: All table entries are in format “estimate [t-statistic]”

Table 13B: Comparison of Regression Models - Earnings Outcomes

Earnings Outcomes for W-P Services - 2 Years After Services vs 2 Years Before Services - Diff22

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(3,480)	[-12.75]	12,406	[17.87]	(2,412)	[-10.56]	13,109	[19.29]
Treatment	2,317	[7.08]	2,207	[6.76]				
Male							(1,495)	[-4.88]
Female								
Gender INA			(1,404)	[-4.65]			(522)	[-0.15]
White			(907)	[-0.26]				
Black							781	[1.83]
Other Race			862	[2.05]			1,098	[2.48]
Less Than High School			1,212	[2.76]				
High School			(319)	[-0.74]			(349)	[-0.80]
Some College			(662)	[-1.26]			(595)	[-1.13]
College Degree			(5,094)	[-9.15]			(5,119)	[-9.16]
Age			(385)	[-29.87]			(382)	[-29.24]
Age INA			(8,764)	[-2.71]			(8,828)	[-2.73]
Group A								
Testing - all					(2,174)	[-1.14]	(2,040)	[-1.08]
Group B								
All Other Referrals to Support. Svces.					(2,468)	[-1.50]	(2,609)	[-1.60]
Referred to Supportive Services					(253)	[-0.48]	756	[1.44]
Referred to JTPA/WIA					(660)	[-0.48]	(832)	[-0.61]
Group C								
All Other Workshops					(1,893)	[-1.83]	(1,248)	[-1.22]
Career Services Orientation					(281)	[-0.45]	(171)	[-0.28]
Job Search Techniques					(2,557)	[-1.77]	(2,227)	[-1.56]
Self-Assessment					419	[0.32]	248	[0.19]
Resume Writing					(666)	[-0.54]	106	[0.09]
Interviewing Techniques					507	[0.37]	1,314	[0.96]
Labor Market Information					(386)	[-0.32]	(344)	[-0.29]
Transition Center Services					(1,067)	[-1.16]	30	[0.03]
Group D								
All Other Job Search Preparation					(672)	[-0.40]	(1,099)	[-0.66]
Job Search Planning					672	[1.63]	356	[0.87]
Resume Preparation Assistance					(1,134)	[-1.35]	296	[0.35]
Group E								
All Other Job Referral					1,432	[0.65]	1,015	[0.46]
Referred to Permanent Job					1,159	[2.31]	772	[1.55]
Referred to Temporary Job					626	[0.71]	266	[0.31]
Job Development Contacts					1,146	[1.04]	182	[0.17]
Group F								
All Other Guidance					3,910	[0.81]	5,459	[1.15]
Individual Counseling					(1,600)	[-1.50]	(859)	[-0.81]
Career Guidance					637	[0.38]	(2,611)	[-1.56]
Employability Development Plan					(1,270)	[-1.21]	(1,124)	[-1.08]
Group G					(3,507)	[-6.08]	(600)	[-1.03]
All Other Miscellaneous Services								
Orientation					(4,151)	[-5.43]	(2,999)	[-3.95]
Assessment Interview					922	[2.21]	1,077	[2.61]
Group H								
Self-Service					2,270	[5.58]	1,206	[2.88]
Group I								
Provision of Specific Labor Market Info.					476	[1.31]	553	[1.53]

NOTE: All table entries are in format “estimate [t-statistic]”

Table 14A: Comparison of Regression Models - Earnings Outcomes

Earnings Outcomes for W-P Services - 1 Year After Services vs 3 Years Before Services - Diff31

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(2,026)	[-12.77]	13,953	[34.84]	(1,372)	[-10.37]	14,053	[35.91]
Treatment	546	[2.87]	470	[2.53]				
Male			(281)	[-1.63]			(384)	[-2.20]
Female								
Gender INA			2,040	[1.01]			1,894	[0.94]
White								
Black			482	[2.01]			350	[1.45]
Other Race			708	[2.78]			576	[2.25]
Less Than High School								
High School			(458)	[-1.85]			(361)	[-1.45]
Some College			(1,099)	[-3.66]			(864)	[-2.87]
College Degree			(5,030)	[-15.84]			(4,885)	[-15.34]
Age			(391)	[-53.72]			(386)	[-52.42]
Age INA			(10,210)	[-5.58]			(10,145)	[-5.55]
Group A								
Testing - all					(6,912)	[-6.20]	(6,896)	[-6.37]
Group B								
All Other Referrals to Support. Svces.					(2,991)	[-3.17]	(2,979)	[-3.25]
Referred to Supportive Services					(407)	[-1.33]	436	[1.47]
Referred to JTPA/WIA					(626)	[-0.76]	(662)	[-0.83]
Group C					(1,439)	[-2.37]	(575)	[-0.97]
All Other Workshops								
Career Services Orientation					(406)	[-1.12]	(303)	[-0.86]
Job Search Techniques					(1,604)	[-1.89]	(1,220)	[-1.48]
Self-Assessment					738	[0.96]	546	[0.73]
Resume Writing					(3,399)	[-4.68]	(2,573)	[-3.65]
Interviewing Techniques					1,698	[2.09]	2,476	[3.14]
Labor Market Information					(803)	[-1.16]	(855)	[-1.27]
Transition Center Services					(955)	[-1.81]	(9)	[-0.02]
Group D								
All Other Job Search Preparation					(914)	[-0.93]	(1,094)	[-1.14]
Job Search Planning					313	[1.31]	58	[0.25]
Resume Preparation Assistance					(1,406)	[-2.89]	(5)	[-0.01]
Group E					588	[0.46]	321	[0.26]
All Other Job Referral								
Referred to Permanent Job					1,594	[5.54]	1,080	[3.84]
Referred to Temporary Job					134	[0.27]	(76)	[-0.16]
Job Development Contacts					1,488	[2.35]	719	[1.17]
Group F								
All Other Guidance					915	[0.34]	2,011	[0.78]
Individual Counseling					(585)	[-0.95]	3	[0.00]
Career Guidance					(44)	[-0.04]	(2,569)	[-2.66]
Employability Development Plan					(2,305)	[-3.78]	(1,947)	[-3.28]
Group G								
All Other Miscellaneous Services					(2,898)	[-8.77]	(351)	[-1.07]
Orientation					(4,692)	[-10.63]	(3,625)	[-8.43]
Assessment Interview					507	[2.09]	686	[2.92]
Group H								
Self-Service					1,475	[6.24]	460	[1.93]
Group I								
Provision of Specific Labor Market Info.					(318)	[-1.51]	(150)	[-0.73]

NOTE: All table entries are in format “estimate [t-statistic]”

Table14B: Comparison of Regression Models - Earnings Outcomes

Earnings Outcomes for W-P Services - 2 Years After Services vs 3 Years Before Services - Diff32

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	497	[2.98]	16,790	[40.05]	1,027	[7.40]	16,777	[40.89]
Treatment	170	[0.85]	299	[1.54]				
Male			(556)	[-3.10]			(589)	[-3.23]
Female								
Gender INA			2,108	[1.02]			2,242	[1.08]
White								
Black			152	[0.61]			99	[0.39]
Other Race			1,016	[3.82]			906	[3.38]
Less Than High School								
High School			135	[0.52]			208	[0.80]
Some College			121	[0.38]			295	[0.94]
College Degree			(814)	[-2.44]			(744)	[-2.22]
Age			(432)	[-56.03]			(426)	[-54.53]
Age INA			(11,615)	[-6.19]			(11,481)	[-6.12]
Group A								
Testing - all					(5,593)	[-4.86]	(5,182)	[-4.63]
Group B								
All Other Referrals to Support. Svces.					(2,180)	[-2.23]	(2,042)	[-2.15]
Referred to Supportive Services					(656)	[-2.06]	259	[0.83]
Referred to JTPA/WIA					(393)	[-0.47]	(393)	[-0.48]
Group C								
All Other Workshops					(1,886)	[-3.03]	(1,027)	[-1.70]
Career Services Orientation					(520)	[-1.38]	(403)	[-1.09]
Job Search Techniques					(1,518)	[-1.73]	(1,342)	[-1.58]
Self-Assessment					310	[0.39]	190	[0.25]
Resume Writing					(1,164)	[-1.55]	(276)	[-0.38]
Interviewing Techniques					778	[0.94]	1,450	[1.80]
Labor Market Information					(474)	[-0.66]	(544)	[-0.77]
Transition Center Services					(1,139)	[-2.07]	(367)	[-0.68]
Group D								
All Other Job Search Preparation					(2,041)	[-2.00]	(2,366)	[-2.38]
Job Search Planning					471	[1.88]	201	[0.83]
Resume Preparation Assistance					(848)	[-1.68]	328	[0.67]
Group E								
All Other Job Referral					891	[0.66]	814	[0.62]
Referred to Permanent Job					724	[2.40]	420	[1.42]
Referred to Temporary Job					(201)	[-0.38]	(287)	[-0.56]
Job Development Contacts					1,399	[2.12]	481	[0.75]
Group F								
All Other Guidance					(724)	[-0.25]	386	[0.14]
Individual Counseling					(1,163)	[-1.82]	(575)	[-0.93]
Career Guidance					223	[0.22]	(2,526)	[-2.51]
Employability Development Plan					(1,495)	[-2.35]	(1,331)	[-2.15]
Group G								
All Other Miscellaneous Services					(3,675)	[-10.62]	(922)	[-2.69]
Orientation					(3,026)	[-6.58]	(2,135)	[-4.76]
Assessment Interview					478	[1.89]	641	[2.61]
Group H								
Self-Service					842	[3.42]	46	[0.18]
Group I								
Provision of Specific Labor Market Info.					(182)	[-0.83]	(1)	[-0.01]

NOTE: All table entries are in format “estimate [t-statistic]”

Table 15A: Regression Estimates - Employment Outcomes
Employment Outcomes 1 Quarter After Services vs 1, 2 and 3 Years Before Services - by Demographics

	Diff 11					Diff 21					Diff 31				
Age Group	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
16 - 19					0.000					0.000					0.000
20 - 21					0.000					0.000					0.000
22 - 39	(0.048)	[-16.75]	(0.207)	[-51.03]	0.159	0.018	[5.66]	(0.104)	[-22.21]	0.122	0.059	[17.43]	(0.041)	[-8.08]	0.100
40 - 54	(0.110)	[-31.70]	(0.248)	[-47.64]	0.138	(0.060)	[-16.27]	(0.181)	[-31.82]	0.121	(0.027)	[-7.11]	(0.119)	[-19.90]	0.092
55 - 65					0.000					0.000					0.000
Over 65					0.000					0.000					0.000

	Diff 11					Diff 21					Diff 31				
Education	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
< High School	(0.063)	[-10.22]	(0.243)	[-27.38]	0.180	(0.018)	[-2.64]	(0.130)	[-12.69]	0.112	0.060	[8.25]	-0.058	[-5.27]	0.118
High School	(0.065)	[-20.92]	(0.204)	[-45.49]	0.139	(0.012)	[-3.54]	(0.127)	[-24.90]	0.115	0.023	[6.52]	-0.070	[-12.93]	0.093
Some College	(0.071)	[-14.02]	(0.217)	[-27.86]	0.146	(0.017)	[-3.18]	(0.134)	[-15.38]	0.117	0.015	[2.51]	-0.081	[-8.67]	0.096
College Degree	(0.128)	[-21.87]	(0.260)	[-35.44]	0.132	(0.055)	[-8.84]	(0.156)	[-19.03]	0.101	-0.009	[-1.32]	-0.083	[-9.56]	0.074

	Diff 11					Diff 21					Diff 31				
Gender	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
Male	(0.072)	[-23.65]	(0.222)	[-52.33]	0.150	(0.008)	[-2.54]	(0.129)	[-27.07]	0.121	0.026	[7.36]	(0.066)	[-13.01]	0.092
Female	(0.073)	[-22.81]	(0.224)	[-45.79]	0.151	(0.021)	[-5.94]	(0.141)	[-25.44]	0.120	0.018	[4.81]	(0.082)	[-13.81]	0.100

	Diff 11					Diff 21					Diff 31				
Race	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
White	(0.107)	[-38.44]	(0.224)	[-57.34]	0.117	(0.052)	[-17.13]	(0.148)	[-34.16]	0.096	(0.021)	[-6.60]	(0.095)	[-20.66]	0.074
Black	(0.013)	[-2.54]	(0.197)	[-21.51]	0.184	0.042	[7.81]	(0.095)	[-8.99]	0.137	0.084	[14.58]	(0.034)	[-3.00]	0.118
Hispanic	(0.013)	[-2.23]	(0.219)	[-25.47]	0.206	0.063	[9.77]	(0.094)	[-9.36]	0.157	0.111	[16.29]	(0.001)	[-0.13]	0.112
NAAN	(0.068)	[-1.54]	(0.180)	[-3.44]	0.112	0.032	[0.69]	0.006	[0.10]	0.026	0.067	[1.36]	0.115	[1.82]	(0.048)
Asian	(0.100)	[-5.37]	(0.312)	[-13.32]	0.212	(0.027)	[-1.34]	(0.162)	[-5.96]	0.135	0.034	[1.59]	(0.070)	[-2.43]	0.104

Table 15B: Regression Estimates - Employment Outcomes
Employment Outcomes 2 Quarters After Services vs 1, 2 and 3 Years Before Services - by Demographics

	Diff 12					Diff 22					Diff 32				
Age Group	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
16 - 19					0.000					0.000					0.000
20 - 21					0.000					0.000					0.000
22 - 39	(0.057)	[-20.19]	(0.182)	[-45.67]	0.125	0.008	[2.65]	(0.079)	[-17.26]	0.087	0.050	[15.04]	(0.016)	[-3.34]	0.066
40 - 54	(0.112)	[-32.62]	(0.232)	[-44.58]	0.120	(0.062)	[-17.00]	(0.165)	[-29.31]	0.103	(0.029)	[-7.75]	(0.103)	[-17.44]	0.074
55 - 65					0.000					0.000					0.000
Over 65					0.000					0.000					0.000

	Diff 12					Diff 22					Diff 32				
Education	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
< High School	(0.072)	[-11.83]	(0.195)	[-22.47]	0.123	0.008	[1.18]	(0.082)	[-8.23]	0.090	0.052	[7.26]	(0.010)	[-0.94]	0.062
High School	(0.071)	[-23.02]	(0.175)	[-40.02]	0.104	(0.018)	[-5.27]	(0.097)	[-19.63]	0.079	0.018	[5.18]	(0.041)	[-7.82]	0.059
Some College	(0.078)	[-15.57]	(0.204)	[-26.22]	0.126	(0.024)	[-4.38]	(0.122)	[-14.13]	0.098	0.008	[1.48]	(0.070)	[-7.58]	0.078
College Degree	(0.134)	[-22.89]	(0.267)	[-35.87]	0.133	(0.061)	[-9.80]	(0.164)	[-19.91]	0.103	(0.014)	[-2.15]	(0.090)	[-10.43]	0.076

	Diff 12					Diff 22					Diff 32				
Gender	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
Male	(0.085)	[-27.87]	(0.195)	[-46.78]	0.110	(0.020)	[-6.16]	(0.102)	[-21.90]	0.082	0.015	[4.30]	(0.040)	[-7.98]	0.055
Female	(0.072)	[-23.05]	(0.209)	[-42.96]	0.137	(0.021)	[-6.26]	(0.128)	[-23.24]	0.107	0.017	[4.79]	(0.069)	[-11.79]	0.086

	Diff 12					Diff 22					Diff 32				
Race	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
White	(0.110)	[-39.67]	(0.207)	[-53.46]	0.097	(0.054)	[-18.17]	(0.131)	[-30.64]	0.077	(0.023)	[-7.31]	(0.079)	[-17.37]	0.056
Black	(0.029)	[-5.86]	(0.194)	[-21.20]	0.165	0.026	[4.84]	(0.094)	[-9.10]	0.120	0.067	[11.83]	(0.032)	[-2.90]	0.099
Hispanic	(0.026)	[-4.50]	(0.165)	[-19.89]	0.139	0.049	[7.87]	(0.039)	[-4.05]	0.088	0.098	[14.81]	0.051	[4.83]	0.047

NOTE: All table entries are in format “estimate [t-statistic]”

Table 15C: Regression Estimates - Employment Outcomes
Employment Outcomes 3 Quarters After Services vs 1, 2 and 3 Years Before Services - by Demographics

	Diff 13					Diff 23					Diff 33				
Age Group	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
16 - 19					0.000					0.000					0.000
20 - 21					0.000					0.000					0.000
22 - 39	(0.072)	[-25.30]	(0.191)	[-47.47]	0.119	(0.005)	[-1.75]	(0.088)	[-19.44]	0.083	0.037	[11.13]	(0.026)	[-5.25]	0.063
40 - 54	(0.124)	[-35.75]	(0.240)	[-46.12]	0.116	(0.073)	[-20.15]	(0.174)	[-31.02]	0.101	(0.041)	[-10.79]	(0.112)	[-18.97]	0.071
55 - 65					0.000					0.000					0.000
Over 65					0.000					0.000					0.000

	Diff 13					Diff 23					Diff 33				
Education	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
< High School	(0.088)	[-14.38]	(0.208)	[-23.97]	0.120	(0.007)	[-1.05]	(0.094)	[-9.61]	0.087	0.039	[5.47]	(0.022)	[-2.11]	0.061
High School	(0.088)	[-28.27]	(0.182)	[-41.24]	0.094	(0.034)	[-10.25]	(0.105)	[-21.36]	0.071	0.002	[0.52]	(0.049)	[-9.32]	0.051
Some College	(0.083)	[-16.65]	(0.212)	[-27.13]	0.129	(0.028)	[-5.21]	(0.130)	[-15.07]	0.102	0.004	[0.70]	(0.078)	[-8.52]	0.082
College Degree	(0.145)	[-24.58]	(0.279)	[-37.14]	0.134	(0.071)	[-11.44]	(0.175)	[-21.31]	0.104	(0.024)	[-3.66]	(0.101)	[-11.75]	0.077

	Diff 13					Diff 23					Diff 33				
Gender	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
Male	(0.103)	[-33.62]	(0.210)	[-49.70]	0.107	(0.038)	[-11.56]	(0.118)	[-25.27]	0.080	(0.003)	[-0.78]	(0.054)	[-11.04]	0.051
Female	(0.081)	[-25.60]	(0.210)	[-43.12]	0.129	(0.029)	[-8.36]	(0.128)	[-23.54]	0.099	0.011	[3.01]	(0.070)	[-12.00]	0.081

	Diff 13					Diff 23					Diff 33				
Race	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
White	(0.120)	[-43.01]	(0.215)	[-55.17]	0.095	(0.064)	[-21.36]	(0.139)	[-32.61]	0.075	(0.032)	[-10.14]	(0.086)	[-19.05]	0.054
Black	(0.052)	[-10.34]	(0.199)	[-21.74]	0.147	0.004	[0.73]	(0.100)	[-9.79]	0.104	0.044	[7.82]	(0.038)	[-3.46]	0.082
Hispanic	(0.043)	[-7.44]	(0.180)	[-21.30]	0.137	0.034	[5.39]	(0.055)	[-5.73]	0.089	0.083	[12.59]	0.034	[3.25]	0.049
NAAN	(0.075)	[-1.79]	(0.202)	[-3.57]	0.127	0.026	[0.58]	(0.017)	[-0.27]	0.043	0.067	[1.45]	0.091	[1.35]	(0.024)
Asian	(0.092)	[-5.00]	(0.291)	[-12.38]	0.199	(0.019)	[-0.97]	(0.141)	[-5.15]	0.122	0.044	[2.18]	(0.051)	[-1.76]	0.095

Table15D: Regression Estimates - Employment Outcomes
Employment Outcomes 4 Quarters After Services vs 1, 2 and 3 Years Before Services - by Demographics

	Diff 14					Diff 24					Diff 34				
Age Group	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
16 - 19					0.000					0.000					0.000
20 - 21					0.000					0.000					0.000
22 - 39	(0.085)	[-29.38]	(0.205)	[-50.36]	0.120	(0.018)	[-5.95]	(0.101)	[-22.09]	0.083	0.024	[7.12]	(0.038)	[-7.73]	0.062
40 - 54	(0.136)	[-39.17]	(0.253)	[-48.12]	0.117	(0.086)	[-23.56]	(0.186)	[-32.97]	0.100	(0.053)	[-14.11]	(0.124)	[-20.90]	0.071
55 - 65					0.000					0.000					0.000
Over 65					0.000					0.000					0.000

	Diff 14					Diff 24					Diff 34				
Education	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
< High School	(0.112)	[-17.87]	(0.222)	[-25.45]	0.110	(0.031)	[-4.59]	(0.107)	[-10.88]	0.076	0.014	[1.92]	(0.033)	[-3.16]	0.047
High School	(0.100)	[-31.99]	(0.201)	[-44.94]	0.101	(0.047)	[-13.93]	(0.123)	[-24.75]	0.076	(0.011)	[-3.02]	(0.067)	[-12.66]	0.056
Some College	(0.097)	[-19.13]	(0.221)	[-28.01]	0.124	(0.042)	[-7.76]	(0.139)	[-16.17]	0.097	(0.010)	[-1.75]	(0.087)	[-9.53]	0.077
College Degree	(0.149)	[-25.30]	(0.281)	[-37.29]	0.132	(0.075)	[-12.18]	(0.177)	[-21.55]	0.102	(0.028)	[-4.38]	(0.103)	[-11.96]	0.075

	Diff 14					Diff 24					Diff 34				
Gender	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
Male	(0.120)	[-38.75]	(0.226)	[-52.98]	0.106	(0.055)	[-16.63]	(0.133)	[-28.32]	0.078	(0.019)	[-5.63]	(0.070)	[-14.11]	0.051
Female	(0.089)	[-27.83]	(0.219)	[-44.67]	0.130	(0.037)	[-10.80]	(0.137)	[-24.99]	0.100	0.002	[0.58]	(0.078)	[-13.23]	0.080

	Diff 14					Diff 24					Diff 34				
Race	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**	**Treatment**		**Comparison**		**diff (T-C)**
White	(0.134)	[-47.47]	(0.230)	[-58.29]	0.096	(0.078)	[-25.94]	(0.154)	[-35.79]	0.076	(0.046)	[-14.56]	(0.101)	[-22.24]	0.055
Black	(0.060)	[-12.00]	(0.200)	[-21.97]	0.140	(0.005)	[-0.94]	(0.098)	[-9.58]	0.093	0.036	[6.28]	(0.036)	[-3.31]	0.072
Hispanic	(0.054)	[-9.25]	(0.195)	[-22.84]	0.141	0.021	[3.42]	(0.070)	[-7.11]	0.091	0.070	[10.60]	0.022	[2.14]	0.048

NOTE: All table entries are in format “estimate [t-statistic]”

Table 16A: Comparison of Regression Models - Employment Outcomes

Employment Outcomes 1 Quarter After Services vs 1 Year Before Services - Diff11

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(0.223)	[-68.00]	(0.110)	[-11.22]	(0.182)	[-65.91]	(0.055)	[-5.75]
Treatment	0.150	[38.14]	0.145	[36.62]				
Male			0.005	[1.33]			(0.001)	[-0.23]
Female								
Gender INA			0.108	[0.31]			0.157	[0.45]
White								
Black			0.062	[12.35]			0.049	[9.79]
Other Race			0.040	[7.73]			0.034	[6.56]
Less Than High School								
High School			0.008	[1.55]			0.001	[0.12]
Some College			0.006	[1.02]			(0.003)	[-0.51]
College Degree			(0.033)	[-5.05]			(0.036)	[-5.60]
Age			(0.004)	[-17.12]			(0.004)	[-17.71]
Testing					(0.024)	[-1.15]	(0.015)	[-0.72]
Referrals to Support Svces.					(0.004)	[-0.75]	0.003	[0.58]
Workshops					(0.027)	[-4.52]	(0.022)	[-3.61]
Job Search Preparation					0.014	[3.01]	0.015	[3.19]
Job Referral					0.167	[32.28]	0.158	[30.31]
Guidance					(0.009)	[-1.07]	(0.005)	[-0.57]
Misc. Services					0.006	[1.16]	0.011	[2.28]
Self-Service					0.102	[20.69]	0.096	[19.36]
Labor Market Information					0.027	[6.37]	0.021	[4.87]

Table 16B: Comparison of Regression Models - Employment Outcomes

Employment Outcomes 2 Quarters After Services vs 1 Year Before Services - Diff12

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(0.201)	[-62.07]	(0.086)	[-8.85]	(0.169)	[-61.86]	(0.042)	[-4.44]
Treatment	0.122	[31.38]	0.117	[29.88]				
Male			(0.001)	[-0.22]			(0.005)	[-1.42]
Female								
Gender INA			0.104	[0.30]			0.144	[0.42]
White								
Black			0.046	[9.30]			0.035	[6.97]
Other Race			0.043	[8.39]			0.038	[7.42]
Less Than High School								
High School			0.006	[1.21]			0.000	[0.04]
Some College			(0.002)	[-0.28]			(0.010)	[-1.59]
College Degree			(0.050)	[-7.83]			(0.053)	[-8.20]
Age			(0.003)	[-16.22]			(0.003)	[-16.82]
Testing					(0.023)	[-1.12]	(0.017)	[-0.81]
Referrals to Support Svces.					(0.002)	[-0.34]	0.006	[1.07]
Workshops					(0.018)	[-3.05]	(0.013)	[-2.21]
Job Search Preparation					0.009	[1.98]	0.010	[2.17]
Job Referral					0.143	[27.91]	0.134	[26.01]
Guidance					0.003	[0.30]	0.007	[0.85]
Misc. Services					(0.000)	[-0.03]	0.005	[1.03]
Self-Service					0.089	[18.21]	0.084	[17.00]
Labor Market Information					0.023	[5.32]	0.017	[3.93]

NOTE: All table entries are in format “estimate [t-statistic]”

Table 16C: Comparison of Regression Models - Employment Outcomes

Employment Outcomes 3 Quarters After Services vs 1 Year Before Services - Diff13

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(0.210)	[-64.42]	(0.086)	[-8.85]	(0.180)	[-65.42]	(0.053)	[-5.57]
Treatment	0.118	[30.01]	0.117	[29.88]				
Male			(0.001)	[-0.22]			(0.016)	[-4.45]
Female								
Gender INA			0.104	[0.30]			0.148	[0.43]
White								
Black			0.046	[9.30]			0.027	[5.36]
Other Race			0.043	[8.39]			0.032	[6.22]
Less Than High School								
High School			0.006	[1.21]			(0.002)	[-0.33]
Some College			(0.002)	[-0.28]			(0.005)	[-0.84]
College Degree			(0.050)	[-7.83]			(0.055)	[-8.46]
Age			(0.003)	[-16.22]			(0.003)	[-15.47]
Testing					(0.021)	[-1.02]	(0.016)	[-0.76]
Referrals to Support Svces.					(0.005)	[-0.84]	0.003	[0.50]
Workshops					(0.013)	[-2.10]	(0.009)	[-1.49]
Job Search Preparation					0.015	[3.10]	0.015	[3.23]
Job Referral					0.127	[24.59]	0.119	[23.03]
Guidance					0.001	[0.15]	0.005	[0.65]
Misc. Services					0.002	[0.37]	0.006	[1.28]
Self-Service					0.085	[17.33]	0.080	[16.03]
Labor Market Information					0.021	[4.97]	0.016	[3.73]

Table 16D: Comparison of Regression Models - Employment Outcomes

Employment Outcomes 4 Quarters After Services vs 1 Year Before Services - Diff14

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(0.223)	[-67.72]	(0.109)	[-11.04]	(0.193)	[-69.62]	(0.067)	[-6.99]
Treatment	0.118	[29.78]	0.112	[28.14]				
Male			(0.020)	[-5.56]			(0.024)	[-6.48]
Female								
Gender INA			0.122	[0.35]			0.166	[0.48]
White								
Black			0.046	[9.15]			0.036	[7.02]
Other Race			0.041	[7.91]			0.036	[6.90]
Less Than High School								
High School			0.009	[1.77]			0.003	[0.58]
Some College			0.010	[1.62]			0.002	[0.27]
College Degree			(0.034)	[-5.22]			(0.038)	[-5.74]
Age			(0.003)	[-15.15]			(0.003)	[-15.76]
Testing					(0.021)	[-0.99]	(0.013)	[-0.62]
Referrals to Support Svces.					(0.009)	[-1.58]	(0.001)	[-0.16]
Workshops					(0.005)	[-0.82]	(0.002)	[-0.35]
Job Search Preparation					0.013	[2.61]	0.013	[2.68]
Job Referral					0.128	[24.61]	0.121	[23.15]
Guidance					0.017	[2.03]	0.021	[2.48]
Misc. Services					(0.005)	[-0.92]	0.000	[0.08]
Self-Service					0.082	[16.50]	0.076	[15.11]
Labor Market Information					0.028	[6.57]	0.022	[5.12]

NOTE: All table entries are in format “estimate [t-statistic]”

Table17A: Comparison of Regression Models - Employment Outcomes

Employment Outcomes 1 Quarter After Services vs 2 Years Before Services - Diff21

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(0.134)	[-37.24]	0.030	[2.70]	(0.102)	[-33.53]	0.074	[6.82]
Treatment	0.120	[27.69]	0.116	[26.67]				
Male			0.017	[4.25]			0.011	[2.71]
Female								
Gender INA			0.075	[0.20]			0.123	[0.33]
White								
Black			0.068	[12.32]			0.058	[10.39]
Other Race			0.067	[11.76]			0.059	[10.42]
Less Than High School								
High School			(0.005)	[-0.87]			(0.012)	[-2.11]
Some College			(0.002)	[-0.31]			(0.011)	[-1.56]
College Degree			(0.021)	[-2.89]			(0.026)	[-3.69]
Age			(0.005)	[-21.59]			(0.005)	[-21.81]
Testing					(0.172)	[-7.48]	(0.156)	[-6.81]
Referrals to Support Svces.					(0.005)	[-0.83]	0.006	[0.86]
Workshops					(0.037)	[-5.50]	(0.029)	[-4.35]
Job Search Preparation					0.028	[5.24]	0.028	[5.39]
Job Referral					0.136	[23.77]	0.125	[21.85]
Guidance					(0.041)	[-4.38]	(0.036)	[-3.88]
Misc. Services					0.004	[0.72]	0.012	[2.17]
Self-Service					0.062	[11.39]	0.057	[10.36]
Labor Market Information					0.033	[7.04]	0.025	[5.29]

Table17B: Comparison of Regression Models - Employment Outcomes

Employment Outcomes 2 Quarters After Services vs 2 Years Before Services - Diff22

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(0.113)	[-31.89]	0.051	[4.69]	(0.089)	[-29.84]	0.084	[7.88]
Treatment	0.092	[21.65]	0.088	[20.66]				
Male			0.013	[3.21]			0.008	[2.01]
Female								
Gender INA			0.072	[0.20]			0.110	[0.30]
White								
Black			0.052	[9.62]			0.043	[7.91]
Other Race			0.069	[12.45]			0.063	[11.28]
Less Than High School								
High School			(0.006)	[-0.98]			(0.011)	[-1.98]
Some College			(0.009)	[-1.32]			(0.016)	[-2.37]
College Degree			(0.037)	[-5.26]			(0.041)	[-5.91]
Age			(0.005)	[-20.91]			(0.005)	[-21.12]
Testing					(0.174)	[-7.73]	(0.161)	[-7.17]
Referrals to Support Svces.					(0.004)	[-0.66]	0.007	[1.08]
Workshops					(0.027)	[-4.05]	(0.019)	[-2.95]
Job Search Preparation					0.022	[4.31]	0.023	[4.49]
Job Referral					0.113	[19.99]	0.102	[18.10]
Guidance					(0.028)	[-3.05]	(0.023)	[-2.50]
Misc. Services					(0.001)	[-0.20]	0.006	[1.17]
Self-Service					0.049	[9.09]	0.044	[8.19]
Labor Market Information					0.028	[5.94]	0.020	[4.30]

NOTE: All table entries are in format “estimate [t-statistic]”

Table17C: Comparison of Regression Models - Employment Outcomes

Employment Outcomes 3 Quarters After Services vs 2 Years Before Services - Diff23

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(0.122)	[-34.51]	0.046	[4.23]	(0.100)	[-33.70]	0.076	[7.12]
Treatment	0.089	[20.83]	0.084	[19.79]				
Male			0.000	[0.11]			(0.003)	[-0.89]
Female								
Gender INA			0.076	[0.21]			0.114	[0.31]
White								
Black			0.042	[7.81]			0.035	[6.33]
Other Race			0.063	[11.33]			0.057	[10.25]
Less Than High School								
High School			(0.009)	[-1.54]			(0.014)	[-2.50]
Some College			(0.005)	[-0.74]			(0.012)	[-1.78]
College Degree			(0.039)	[-5.58]			(0.044)	[-6.28]
Age			(0.005)	[-20.14]			(0.005)	[-20.34]
Testing					(0.172)	[-7.64]	(0.159)	[-7.10]
Referrals to Support Svces.					(0.007)	[-1.13]	0.004	[0.60]
Workshops					(0.023)	[-3.48]	(0.017)	[-2.59]
Job Search Preparation					0.028	[5.35]	0.028	[5.48]
Job Referral					0.097	[17.20]	0.088	[15.61]
Guidance					(0.027)	[-2.95]	(0.022)	[-2.43]
Misc. Services					0.001	[0.23]	0.008	[1.48]
Self-Service					0.047	[8.76]	0.042	[7.78]
Labor Market Information					0.027	[5.88]	0.020	[4.38]

Table 17D: Comparison of Regression Models - Employment Outcomes

Employment Outcomes 4 Quarters After Services vs 2 Years Before Services - Diff24

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(0.135)	[-37.83]	0.031	[2.86]	(0.113)	[-37.64]	0.062	[5.81]
Treatment	0.088	[20.61]	0.084	[19.49]				
Male			(0.007)	[-1.65]			(0.010)	[-2.63]
Female								
Gender INA			0.090	[0.24]			0.132	[0.36]
White								
Black			0.052	[9.52]			0.044	[8.00]
Other Race			0.067	[11.99]			0.061	[10.80]
Less Than High School								
High School			(0.004)	[-0.62]			(0.010)	[-1.66]
Some College			0.002	[0.28]			(0.006)	[-0.82]
College Degree			(0.021)	[-3.03]			(0.027)	[-3.82]
Age			(0.005)	[-20.38]			(0.005)	[-20.60]
Testing					(0.170)	[-7.49]	(0.155)	[-6.86]
Referrals to Support Svces.					(0.012)	[-1.81]	(0.000)	[-0.01]
Workshops					(0.016)	[-2.40]	(0.011)	[-1.61]
Job Search Preparation					0.026	[4.92]	0.026	[4.99]
Job Referral					0.098	[17.27]	0.089	[15.75]
Guidance					(0.010)	[-1.08]	(0.006)	[-0.60]
Misc. Services					(0.004)	[-0.81]	0.003	[0.52]
Self-Service					0.042	[7.75]	0.036	[6.68]
Labor Market Information					0.033	[6.94]	0.025	[5.24]

NOTE: All table entries are in format “estimate [t-statistic]”

Table 18A: Comparison of Regression Models - Employment Outcomes

Employment Outcomes 1 Quarter After Services vs 3 Years Before Services - Diff31

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(0.073)	[-19.07]	0.105	[8.67]	(0.048)	[-14.86]	0.139	[11.78]
Treatment	0.095	[20.65]	0.090	[19.70]				
Male			0.015	[3.60]			0.009	[2.23]
Female								
Gender INA			0.296	[0.76]			0.331	[0.85]
White								
Black			0.079	[13.49]			0.069	[11.77]
Other Race			0.092	[15.22]			0.085	[14.06]
Less Than High School								
High School			(0.004)	[-0.64]			(0.010)	[-1.54]
Some College			(0.003)	[-0.42]			(0.010)	[-1.36]
College Degree			(0.004)	[-0.57]			(0.008)	[-1.10]
Age			(0.006)	[-21.74]			(0.006)	[-21.90]
Testing					(0.210)	[-8.76]	(0.191)	[-8.02]
Referrals to Support Svces.					(0.003)	[-0.50]	0.009	[1.35]
Workshops					(0.043)	[-6.04]	(0.035)	[-4.95]
Job Search Preparation					0.024	[4.39]	0.025	[4.47]
Job Referral					0.124	[20.49]	0.113	[18.62]
Guidance					(0.041)	[-4.16]	(0.037)	[-3.75]
Misc. Services					0.003	[0.48]	0.012	[2.10]
Self-Service					0.051	[8.78]	0.046	[7.92]
Labor Market Information					0.026	[5.20]	0.015	[3.08]

Table 18B: Comparison of Regression Models - Employment Outcomes

Employment Outcomes 2 Quarters After Services vs 3 Years Before Services - Diff32

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(0.052)	[-13.86]	0.127	[10.74]	(0.035)	[-11.23]	0.151	[12.98]
Treatment	0.068	[15.07]	0.064	[14.17]				
Male			0.011	[2.70]			0.007	[1.67]
Female								
Gender INA			0.293	[0.76]			0.319	[0.83]
White								
Black			0.062	[10.87]			0.054	[9.35]
Other Race			0.094	[15.87]			0.088	[14.86]
Less Than High School								
High School			(0.006)	[-0.92]			(0.010)	[-1.60]
Some College			(0.011)	[-1.54]			(0.017)	[-2.30]
College Degree			(0.021)	[-2.82]			(0.024)	[-3.22]
Age			(0.005)	[-21.31]			(0.005)	[-21.46]
Testing					(0.213)	[-9.07]	(0.197)	[-8.42]
Referrals to Support Svces.					(0.004)	[-0.56]	0.009	[1.35]
Workshops					(0.031)	[-4.47]	(0.024)	[-3.41]
Job Search Preparation					0.020	[3.61]	0.020	[3.73]
Job Referral					0.102	[17.05]	0.091	[15.22]
Guidance					(0.028)	[-2.88]	(0.023)	[-2.43]
Misc. Services					(0.002)	[-0.35]	0.007	[1.20]
Self-Service					0.038	[6.69]	0.034	[5.96]
Labor Market Information					0.020	[4.15]	0.011	[2.15]

NOTE: All table entries are in format “estimate [t-statistic]”

Table 18C: Comparison of Regression Models - Employment Outcomes
Employment Outcomes 3 Quarters After Services vs 3 Years Before Services - Diff33

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(0.061)	[-16.30]	0.125	[10.55]	(0.047)	[-14.81]	0.145	[12.54]
Treatment	0.065	[14.38]	0.061	[13.45]				
Male			(0.001)	[-0.23]			(0.004)	[-1.06]
Female								
Gender INA			0.297	[0.78]			0.323	[0.84]
White								
Black			0.052	[9.01]			0.045	[7.70]
Other Race			0.087	[14.68]			0.082	[13.76]
Less Than High School								
High School			(0.010)	[-1.57]			(0.013)	[-2.22]
Some College			(0.008)	[-1.15]			(0.014)	[-1.92]
College Degree			(0.024)	[-3.24]			(0.027)	[-3.70]
Age			(0.005)	[-20.80]			(0.005)	[-20.95]
Testing					(0.211)	[-9.00]	(0.195)	[-8.37]
Referrals to Support Svces.					(0.007)	[-0.99]	0.006	[0.92]
Workshops					(0.027)	[-3.88]	(0.021)	[-3.00]
Job Search Preparation					0.025	[4.64]	0.026	[4.71]
Job Referral					0.086	[14.43]	0.077	[12.89]
Guidance					(0.027)	[-2.81]	(0.023)	[-2.37]
Misc. Services					(0.000)	[-0.03]	0.008	[1.41]
Self-Service					0.036	[6.43]	0.032	[5.62]
Labor Market Information					0.020	[4.15]	0.011	[2.30]

Table 18D: Comparison of Regression Models - Employment Outcomes
Employment Outcomes 4 Quarters After Services vs 3 Years Before Services - Diff34

Variable	Model 1		Model 2		Model 3		Model 4	
regression intercept	(0.073)	[-19.48]	0.112	[9.44]	(0.059)	[-18.58]	0.134	[11.47]
Treatment	0.064	[14.15]	0.059	[13.14]				
Male			(0.008)	[-2.01]			(0.012)	[-2.84]
Female								
Gender INA			0.310	[0.81]			0.341	[0.89]
White								
Black			0.061	[10.63]			0.054	[9.25]
Other Race			0.091	[15.31]			0.085	[14.25]
Less Than High School								
High School			(0.005)	[-0.77]			(0.009)	[-1.49]
Some College			(0.002)	[-0.24]			(0.008)	[-1.05]
College Degree			(0.007)	[-0.88]			(0.011)	[-1.42]
Age			(0.005)	[-21.15]			(0.005)	[-21.30]
Testing					(0.209)	[-8.88]	(0.191)	[-8.15]
Referrals to Support Svces.					(0.011)	[-1.70]	0.002	[0.29]
Workshops					(0.021)	[-2.98]	(0.015)	[-2.21]
Job Search Preparation					0.023	[4.15]	0.023	[4.17]
Job Referral					0.087	[14.52]	0.078	[13.06]
Guidance					(0.008)	[-0.87]	(0.004)	[-0.47]
Misc. Services					(0.006)	[-1.12]	0.002	[0.41]
Self-Service					0.031	[5.51]	0.026	[4.61]
Labor Market Information					0.026	[5.29]	0.016	[3.26]

NOTE: All table entries are in format “estimate [t-statistic]”

Table 19: Quasi-Experimental Estimates
Earnings Outcomes
Study Group Treatments and External Controls

Variable	Model 1			Model 2	
Pre12	(340)	[-2.17]		(125)	[-0.82]
Pre11	(195)	[-1.69]		24	[0.21]
Pre10	(340)	[-3.40]		(87)	[-0.89]
Pre9	(521)	[-5.63]		(246)	[-2.74]
Pre8	(652)	[-7.14]		(330)	[-3.72]
Pre7	(582)	[-6.16]		(206)	[-2.24]
Pre6	(146)	[-0.99]		420	[2.95]
Pre5	(1,107)	[-7.03]		(438)	[-2.87]
Pre4	(1,048)	[-6.56]		(295)	[-1.90]
Pre3	(1,041)	[-6.40]		(207)	[-1.31]
Pre2	(1,134)	[-6.75]		(160)	[-0.98]
Pre1	(1,469)	[-7.52]		(265)	[-1.40]
Dur1	(1,661)	[-22.13]		(1,494)	[-20.51]
Dur2	(2,029)	[-8.07]		(3,190)	[-13.06]
Dur3	(1,506)	[-5.28]		(1,930)	[-6.98]
Dur4	(2,471)	[-5.45]		(2,719)	[-6.18]
Dur5	(3,135)	[-1.38]		(3,242)	[-1.47]
Post1	(976)	[-5.57]		(1,720)	[-10.11]
Post2	(558)	[-3.61]		(1,108)	[-7.39]
Post3	(385)	[-2.64]		(797)	[-5.62]
Post4	(258)	[-1.79]		(603)	[-4.32]
Post5	184	[1.30]		(93)	[-0.68]
Post6	(468)	[-3.76]		(660)	[-5.46]
White				1,244	[36.48]
Black				(382)	[-9.46]
HighSchool				1,217	[33.24]
SomeColl				2,380	[56.28]
CollDegree				6,753	[151.02]
Gender_M				2,090	[91.07]
Age				88	[90.77]

NOTE: All table entries are in format “estimate [t-statistic]”

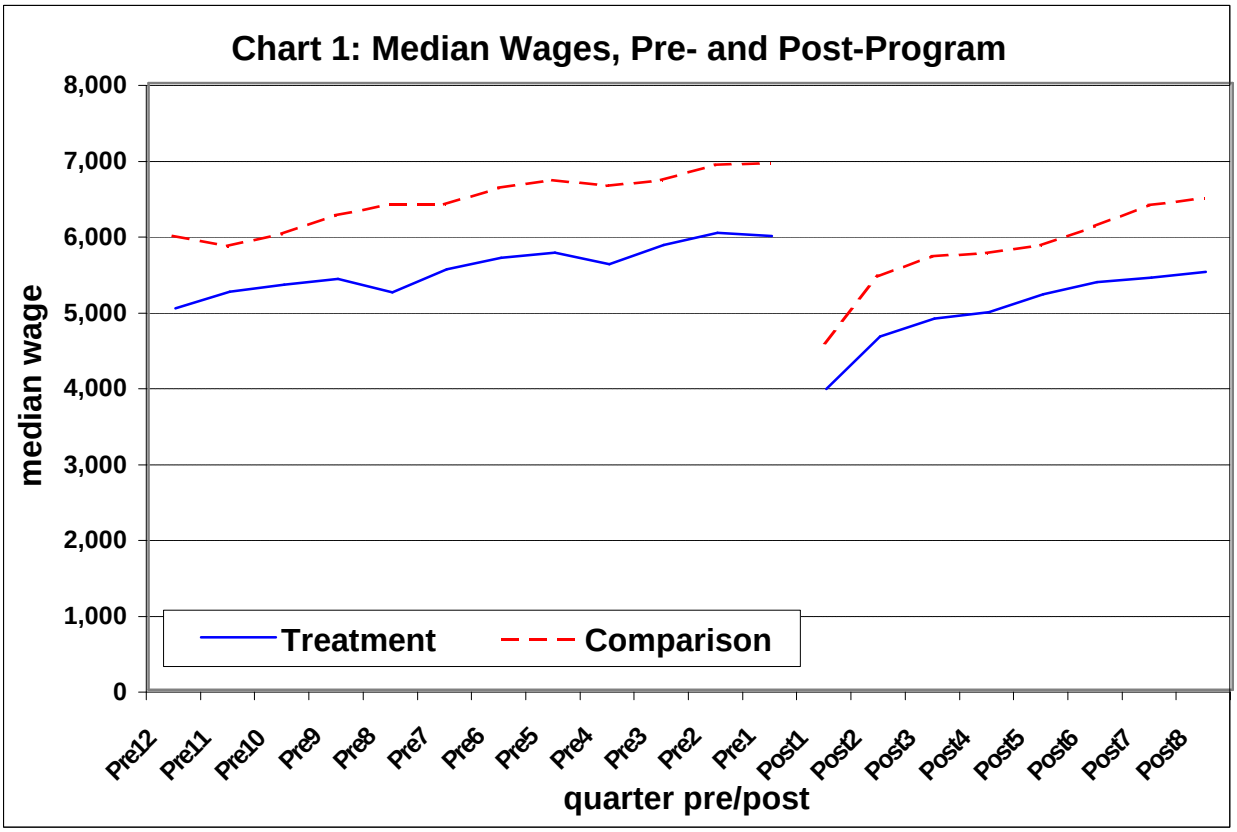
Chart 1: Median Wages, Pre- and Post-Program
median wage
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Treatment
Comparison
Pre12
Pre11
Pre10
Pre9
Pre8
Pre7
Pre6
Pre5
Pre4
Pre3
Pre2
Pre1
Post1
Post2
Post3
Post4
Post5
Post6
Post7
Post8
quarter pre/post

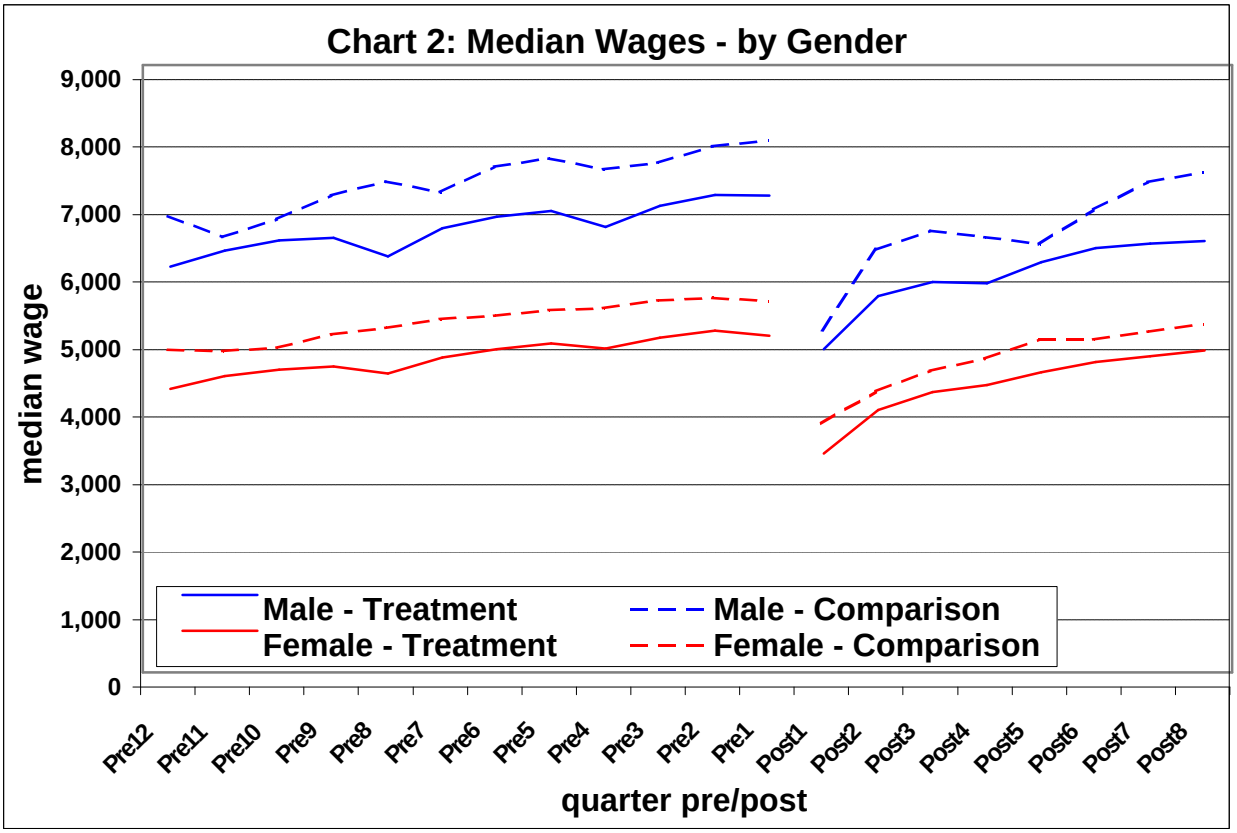
Chart 2: Median Wages - by Gender
median wage
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Male - Treatment
Female - Treatment
Male - Comparison
Female - Comparison
Pre12
Pre11
Pre10
Pre9
Pre8
Pre7
Pre6
Pre5
Pre4
Pre3
Pre2
Pre1
Post1
Post2
Post3
Post4
Post5
Post6
Post7
Post8
quarter pre/post

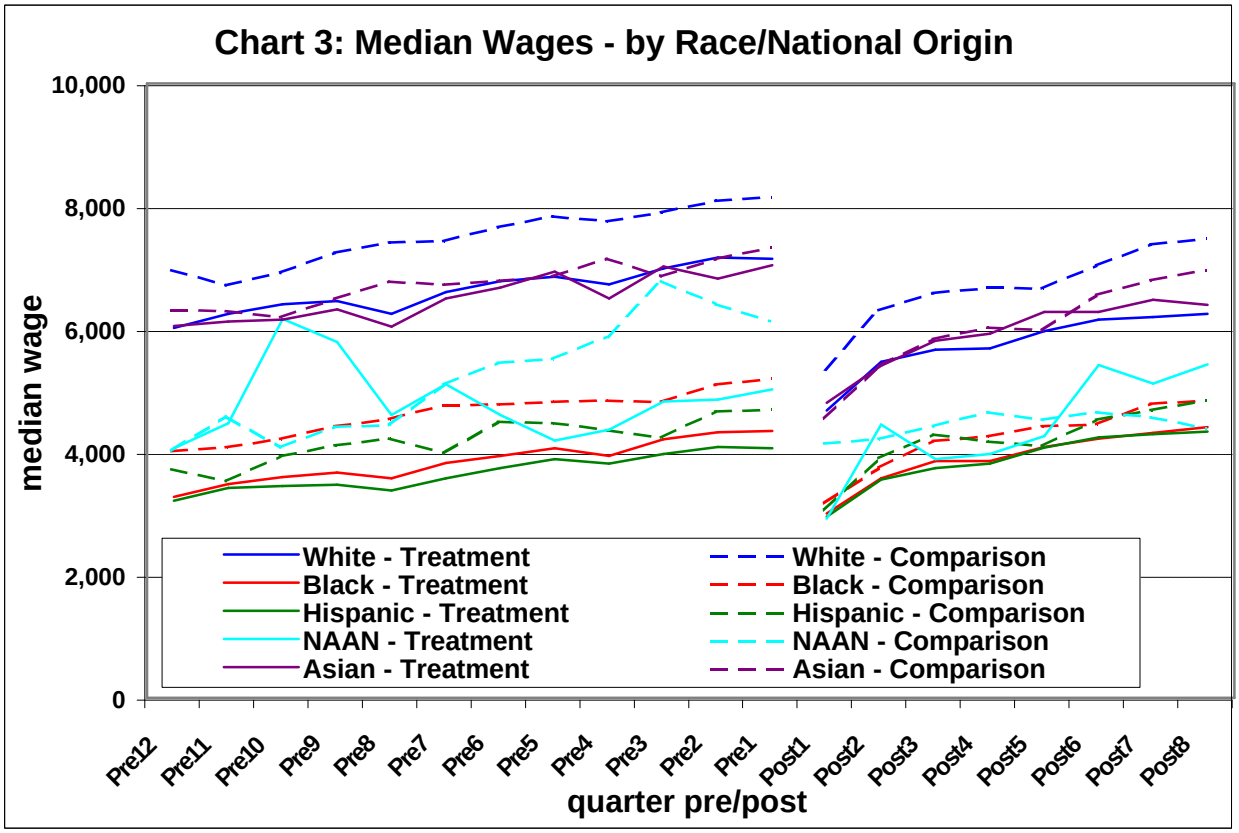
Chart 3: Median Wages - by Race/National Origin
median wage
10,000
8,000
6,000
4,000
2,000
0
White - Treatment
Black - Treatment
Hispanic - Treatment
NAAN - Treatment
Asian - Treatment
White - Comparison
Black - Comparison
Hispanic - Comparison
NAAN - Comparison
Asian - Comparison
Pre12
Pre11
Pre10
Pre9
Pre8
Pre7
Pre6
Pre5
Pre4
Pre3
Pre2
Pre1
Post1
Post2
Post3
Post4
Post5
Post6
Post7
Post8
quarter pre/post

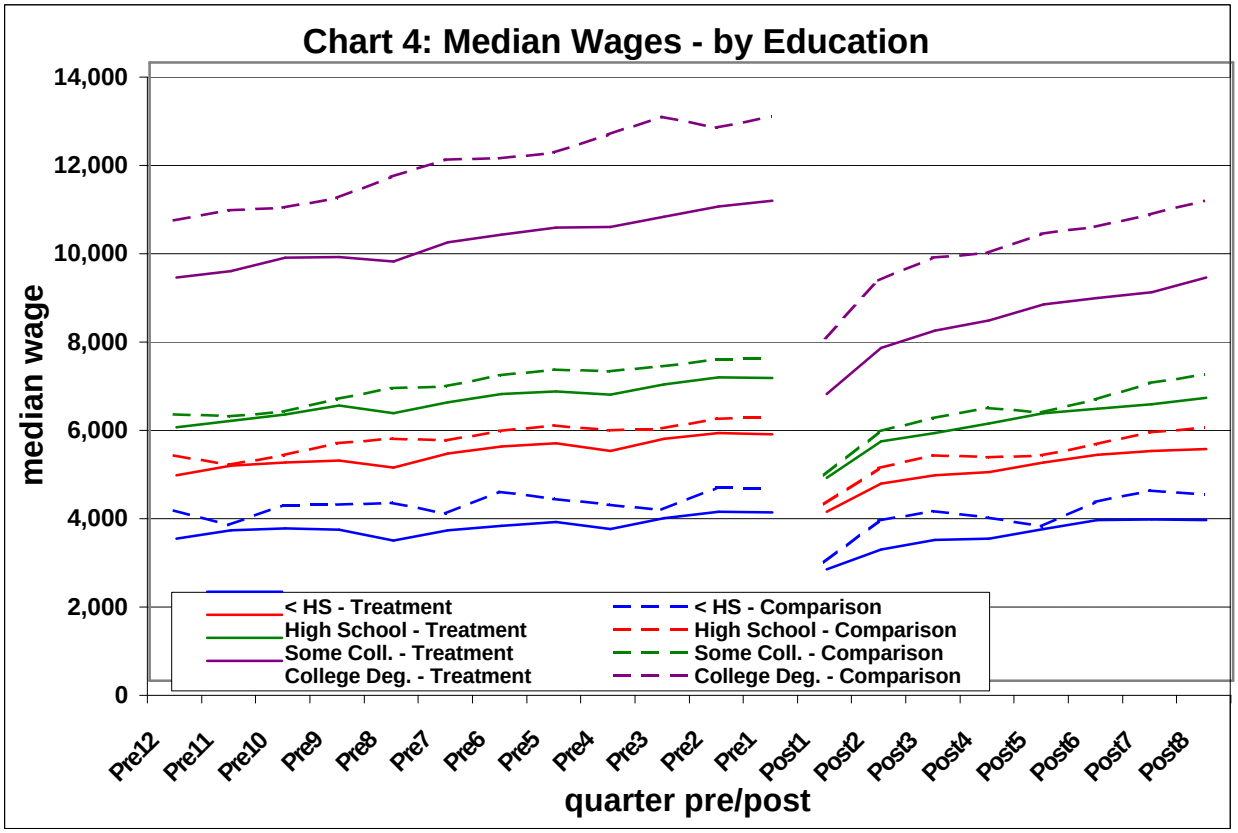
Chart 4: Median Wages - by Education
median wage
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
< HS - Treatment
High School - Treatment
Some Coll. - Treatment
College Deg. - Treatment
< HS - Comparison
High School - Comparison
Some Coll. - Comparison
College Deg. - Comparison
Pre12
Pre11
Pre10
Pre9
Pre8
Pre7
Pre6
Pre5
Pre4
Pre3
Pre2
Pre1
Post1
Post2
Post3
Post4
Post5
Post6
Post7
Post8
quarter pre/post

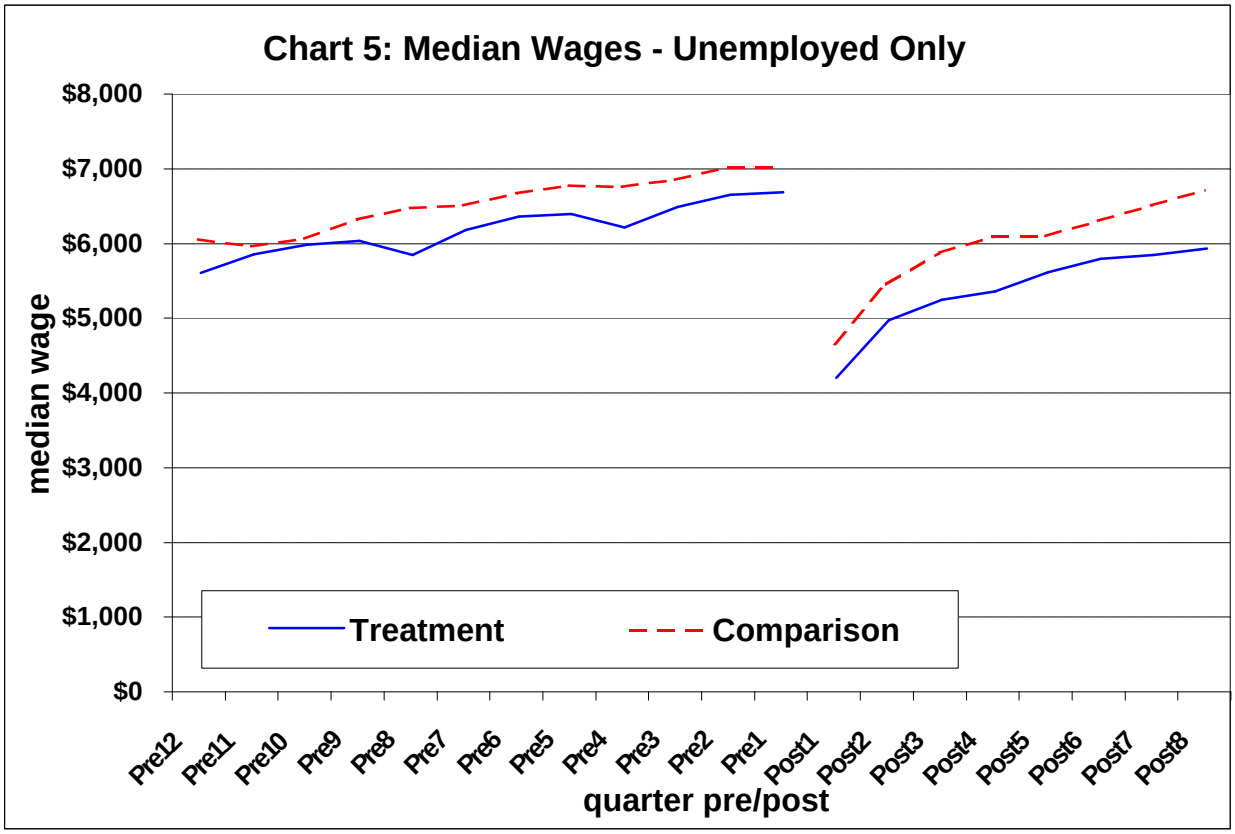
Chart 5: Median Wages - Unemployed Only
$8,000
$7,000
$6,000
$5,000
$4,000
$3,000
$2,000
$1,000
$0
median wage
Treatment
Comparison
Pre12
Pre11
Pre10
Pre9
Pre8
Pre7
Pre6
Pre5
Pre4
Pre3
Pre2
Pre1
Post1
Post2
Post3
Post4
Post5
Post6
Post7
Post8
quarter pre/post

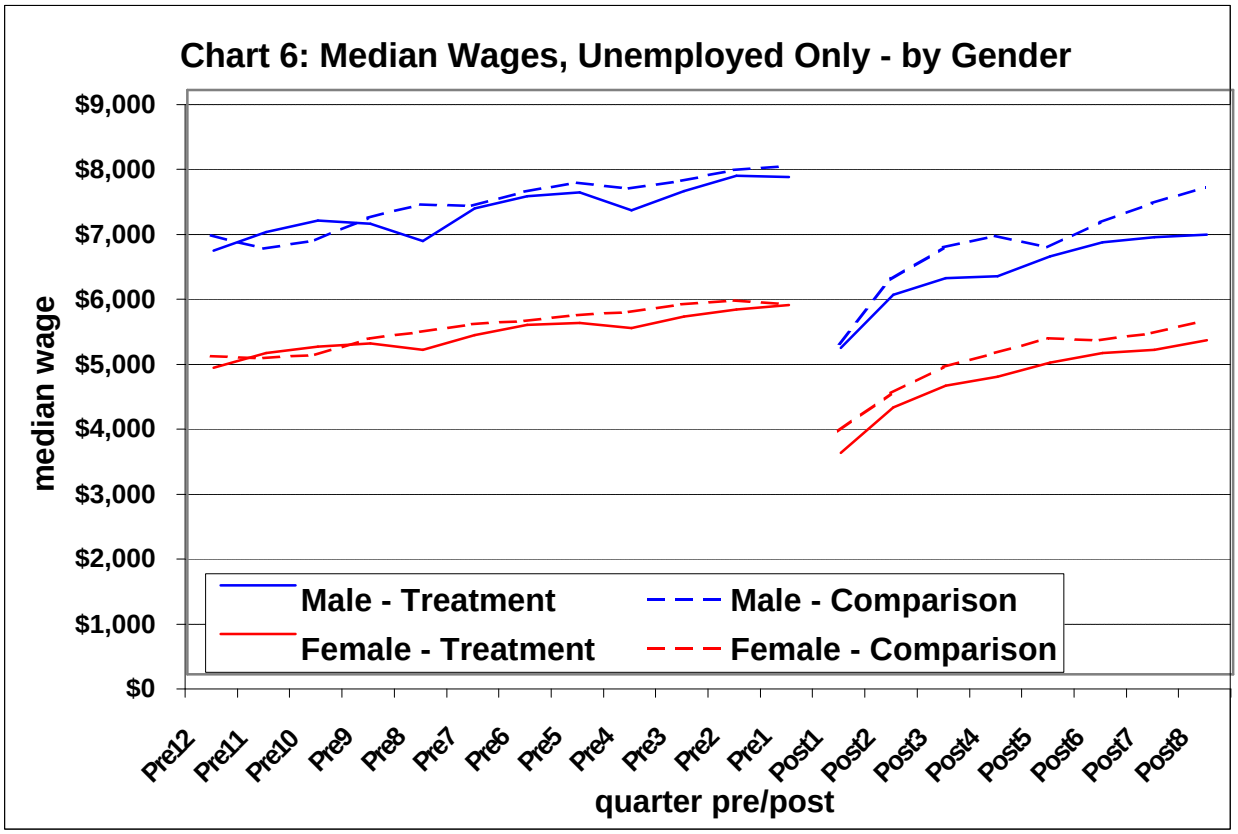
Chart 6: Median Wages, Unemployed Only - by Gender
$9,000
$8,000
$7,000
$6,000
$5,000
$4,000
$3,000
$2,000
$1,000
$0
median wage
Male - Treatment
Male - Comparison
Female - Treatment
Female - Comparison
Pre12
Pre11
Pre10
Pre9
Pre8
Pre7
Pre6
Pre5
Pre4
Pre3
Pre2
Pre1
Post1
Post2
Post3
Post4
Post5
Post6
Post7
Post8
quarter pre/post

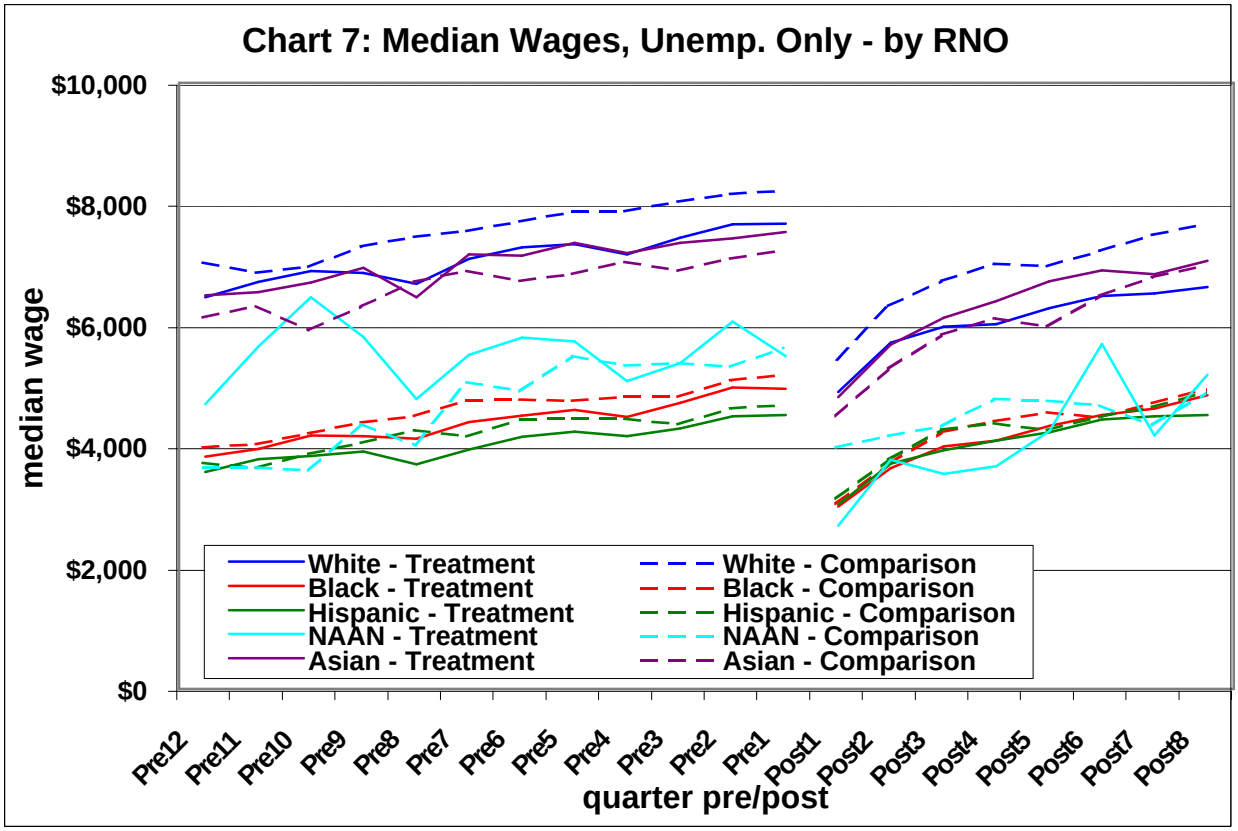
Chart 7: Median Wages, Unemp. Only - by RNO
$10,000
$8,000
$6,000
$4,000
$2,000
$0
median wage
White - Treatment
Black - Treatment
Hispanic - Treatment
NAAN - Treatment
Asian - Treatment
White - Comparison
Black - Comparison
Hispanic - Comparison
NAAN - Comparison
Asian - Comparison
Pre12
Pre11
Pre10
Pre9
Pre8
Pre7
Pre6
Pre5
Pre4
Pre3
Pre2
Pre1
Post1
Post2
Post3
Post4
Post5
Post6
Post7
Post8
quarter pre/post

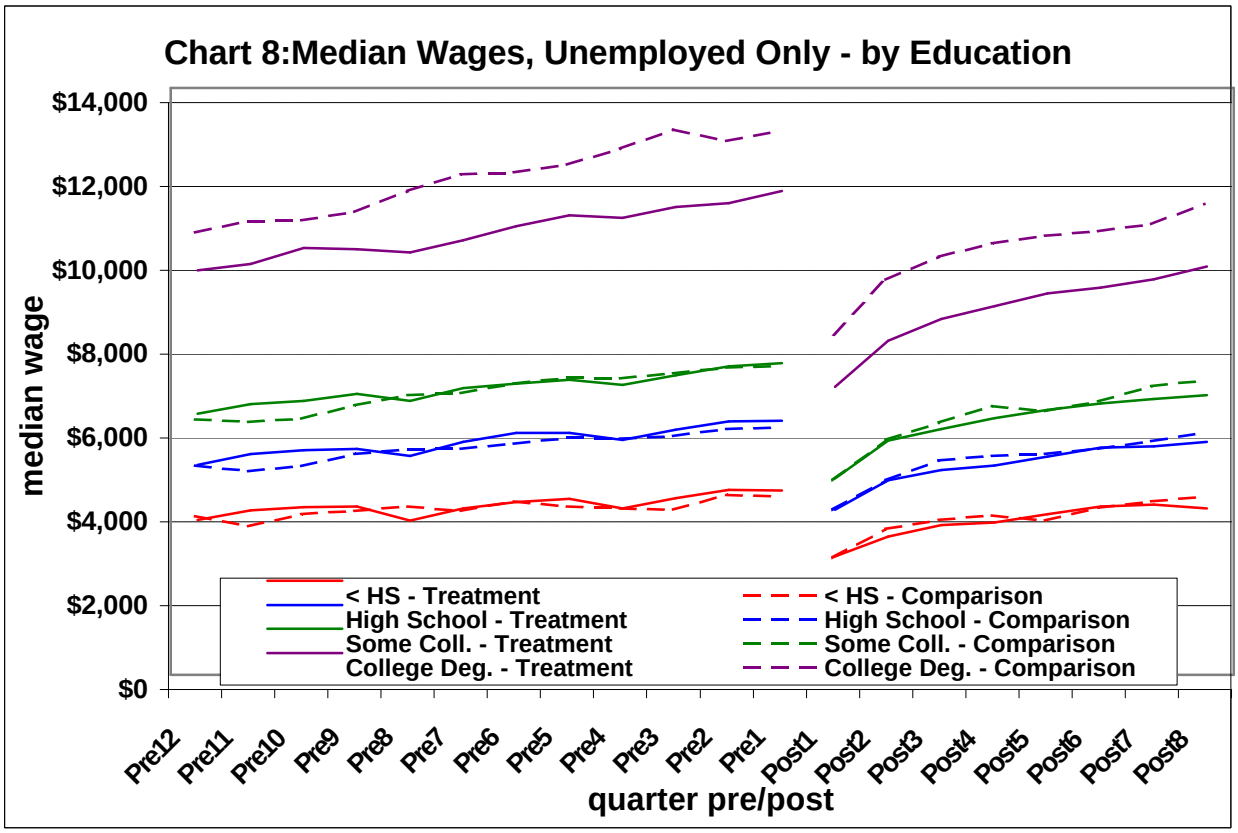
Chart 8:Median Wages, Unemployed Only - by Education
$14,000
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$0
median wage
< HS - Treatment
High School - Treatment
Some Coll. - Treatment
College Deg. - Treatment
< HS - Comparison
High School - Comparison
Some Coll. - Comparison
College Deg. - Comparison
Pre12
Pre11
Pre10
Pre9
Pre8
Pre7
Pre6
Pre5
Pre4
Pre3
Pre2
Pre1
Post1
Post2
Post3
Post4
Post5
Post6
Post7
Post8
quarter pre/post

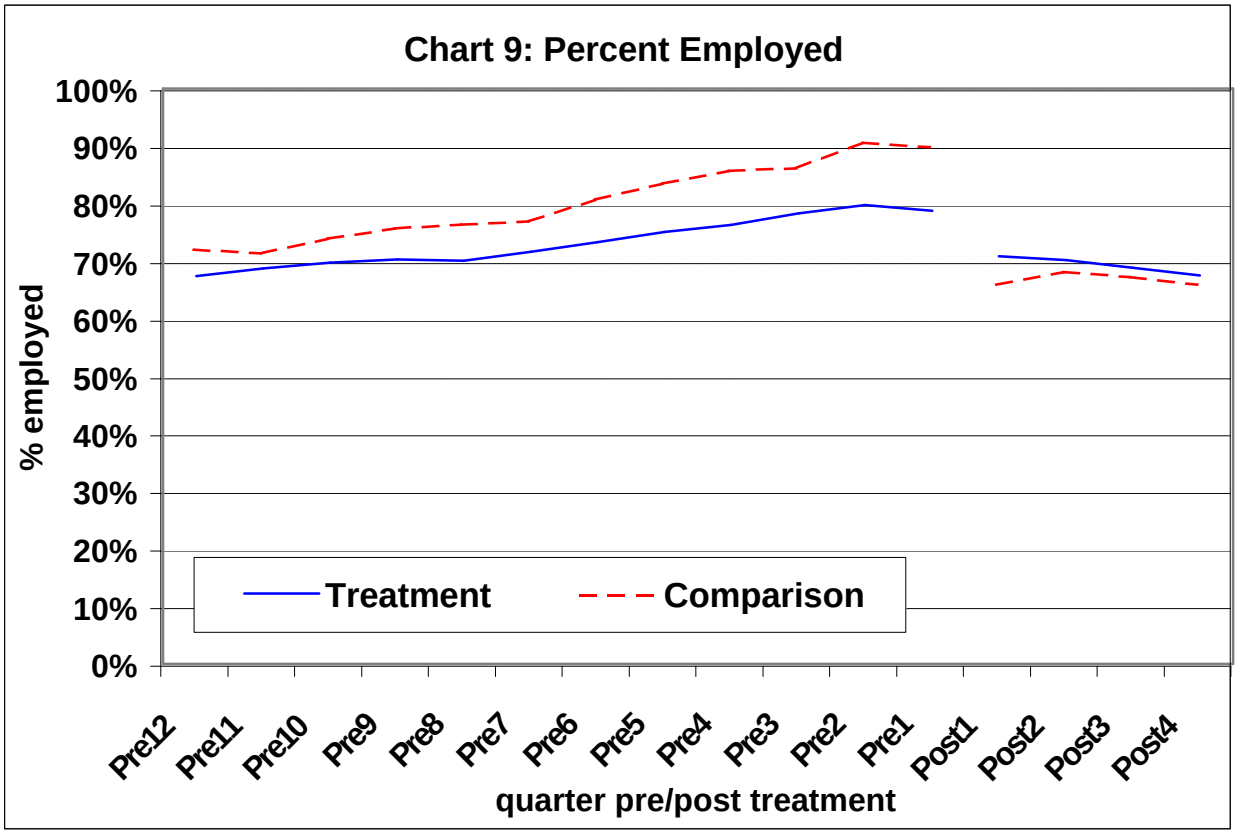
Chart 9: Percent Employed
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
% employed
Treatment
Comparison
Pre12
Pre11
Pre10
Pre9
Pre8
Pre7
Pre6
Pre5
Pre4
Pre3
Pre2
Pre1
Post1
Post2
Post3
Post4
quarter pre/post treatment

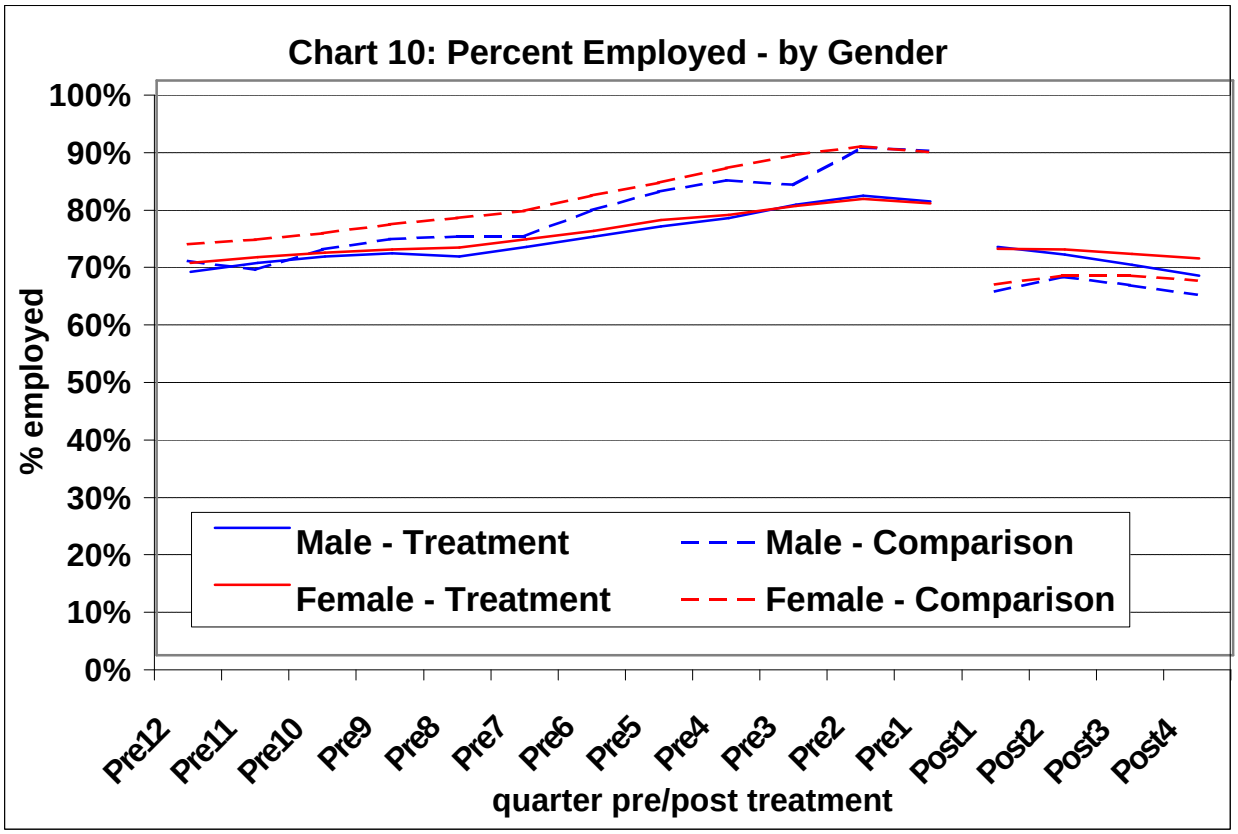
Chart 10: Percent Employed - by Gender
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
% employed
Male - Treatment
Male - Comparison
Female - Treatment
Female - Comparison
Pre12
Pre11
Pre10
Pre9
Pre8
Pre7
Pre6
Pre5
Pre4
Pre3
Pre2
Pre1
Post1
Post2
Post3
Post4
quarter pre/post treatment

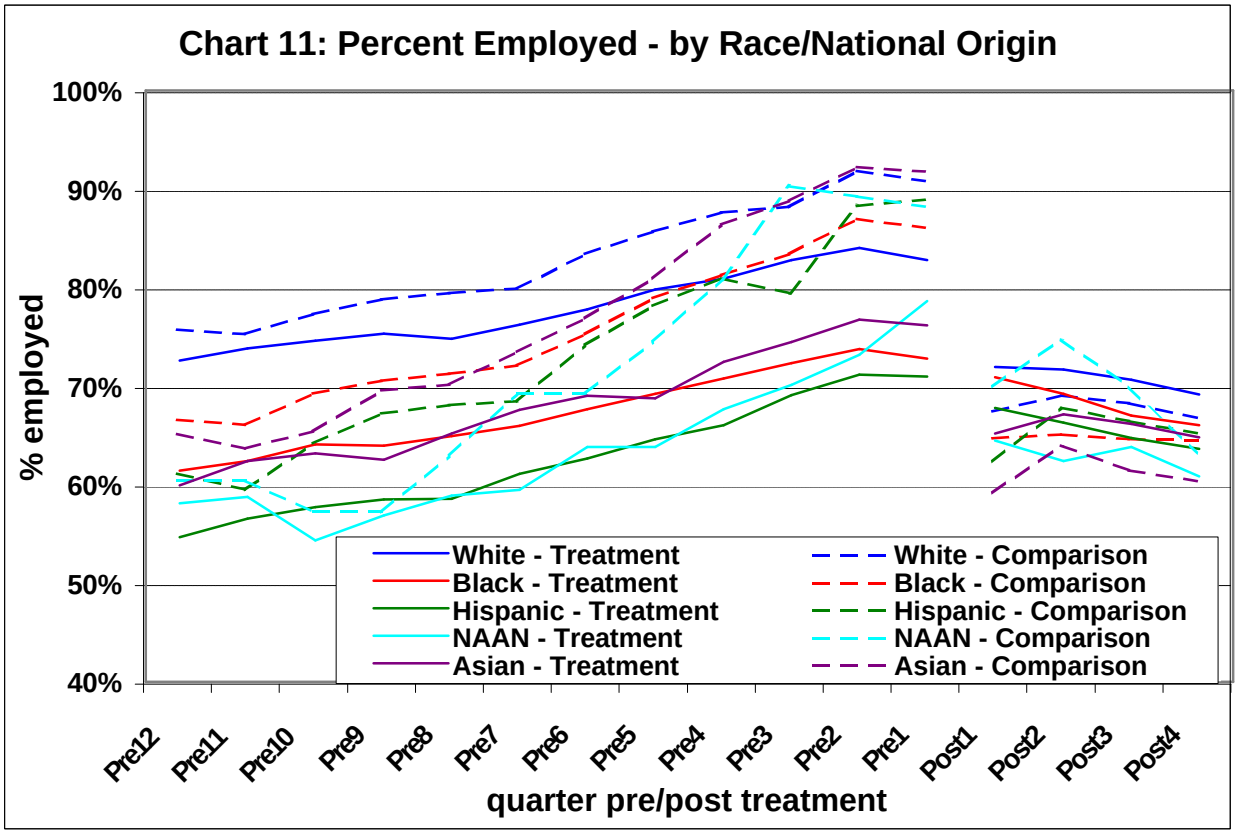
Chart 11: Percent Employed - by Race/National Origin
100%
90%
80%
70%
60%
50%
40%
% employed
White - Treatment
Black - Treatment
Hispanic - Treatment
NAAN - Treatment
Asian - Treatment
White - Comparison
Black - Comparison
Hispanic - Comparison
NAAN - Comparison
Asian - Comparison
Pre12
Pre11
Pre10
Pre9
Pre8
Pre7
Pre6
Pre5
Pre4
Pre3
Pre2
Pre1
Post1
Post2
Post3
Post4
quarter pre/post treatment

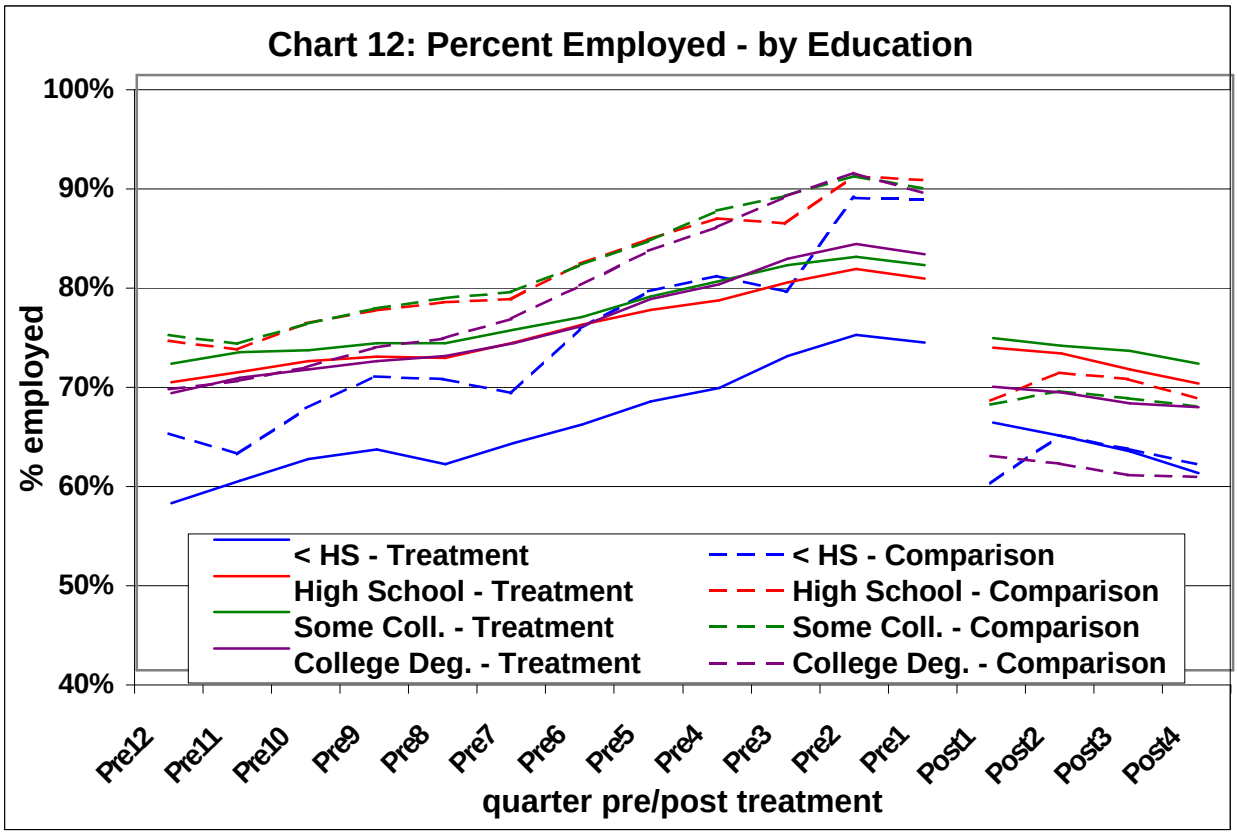
Chart 12: Percent Employed - by Education
100%
90%
80%
70%
60%
50%
40%
% employed
< HS - Treatment
High School - Treatment
Some Coll. - Treatment
College Deg. - Treatment
< HS - Comparison
High School - Comparison
Some Coll. - Comparison
College Deg. - Comparison
Pre12
Pre11
Pre10
Pre9
Pre8
Pre7
Pre6
Pre5
Pre4
Pre3
Pre2
Pre1
Post1
Post2
Post3
Post4
quarter pre/post treatment

APPENDICES

Appendix A: Service Groups

A: Testing Group — Total: 697

T-Code	T-Code Description	Count
210	GATB (General Aptitude Test Battery)	463
211	PROFICIENCY	8
212	SATB (specific Aptitude Test Battery)	13
213	NATB (Non-reading Aptitude Test Battery)	10
214	BOLT – LITERACY (Basic Occupational Literacy Test)	9
215	BEAG (Bateria de Examenes de Aptitude General – Spanish version of GATB)	1
216	USES (U. S. Employment Service) INTEREST INDEX	50
219	OTHER TESTING (e.g., keyboard skills)	143

B: Referrals to Supportive Services Group — Total: 15,170

(Supports include training or other services that enable individuals to obtain/retain employment or participate in training – e.g. medical, childcare, financial, residential, nutritional, legal services, etc.)

T-Code	T-Code Description	Count
271	REFERRED TO SUPPORTIVE SERVICES	12,764
272	REFERRED TO JTPA/WIA INSTITUTIONAL	1,191
273	REFERRED TO JOB CORPS	44
274	REFERRED TO OTHER FEDERAL	389
275	REFERRED TO OTHER STATE OR LOCAL	394
277	REFERRAL TO EDUCATIONAL SERVICES	388

C: Workshops Group — Total: 25,806

T-Code	T-Code Description	Count
900	CAREER SERVICES ORIENTATION (WS)	7,172
901	JOB SEARCH TECHNIQUES (WS)	1,557
902	SELF ASSESSMENT (WS)	1,824
903	NETWORKING (WS)	313
904	RESOURCES/RESEARCHING (WS)	750
905	RESUME WRITING (WS)	1,765
907	TELEPHONE TECHNIQUES (WS)	117
908	INTERVIEWING TECHNIQUES (WS)	1,692
910	COMMUNICATIONS SKILLS (WS)	734
911	JOB RETENTION (WS)	190
913	LABOR MARKET INFORMATION (WS)	2,306
914	JOB CLUBS (WS)	215
915	JOB SEARCH WORKSHOPS (WS)	906
916	TRANSITION CENTER SERVICES (WS)	5,894

D: Job Search Preparation Group — Total: 38,854

(Includes services geared to helping job seekers find job leads and also market their skills.)

T-Code	T-Code Description	Count
221	ES JOB SEARCH WORKSHOP	351
222	JOB FINDING CLUB	167
224	JOB SEARCH PLANNING	34,113
227	RESUME PREPARATION ASSISTANCE	3,852
912	APPLICATIONS (WS)	341
917	MARKET RESEARCH (WS)	30

E: Job Referral Group — Total: 28,335

(One-on-one assistance geared to providing job seekers with specific job leads)

T-Code	T-Code Description	Count
229	JS SPONSORED AUTOMATED LABOR (computerized job matching)	458
242	REFERRED TO JOB OVER 150 DAYS (“permanent” jobs)	20,081
252	REFERRED TO JOB OVER 4 - 150 DAYS (“temporary” jobs)	4,466
262	REFERRED TO JOB 3 DAYS OR LESS (“day work”)	19
280	JOB DEVELOPMENT CONTACTS (On behalf of a specific job candidate, contact an employer directly to create the opportunity for a job interview or resume review when no job order exists.)	3,311

F: Guidance Group — Total: 7,069

T-Code	T-Code Description	Count
200	COUNSELING/INDIVIDUAL	3,092
206	CAREER GUIDANCE	1,114
208	EMPLOYABILITY DEVELOPMENT PLAN	2,085
332	RECEIVED CASE MANAGEMENT SERVICES	778

G: Miscellaneous Group — Total: 124,439

T-Code	T-Code Description	Count
202	MANAGING CHANGE (PROFILE ONLY)	9
207	ORIENTATION	5,423
209	ASSESSMENT INTERVIEW	39,733
292	SOME REPORTABLE SERVICE (ES)	15,318
293	SOME REPORTABLE SERVICE (VET)	371
294	SOME REPORTABLE SERVICE (VET VR)	836
295	BONDING ASSISTANCE	24
296	PROVIDED NOTIFICATION OF EO RIGHTS	5
297	SOME REPORTABLE SERVICE (OTHER VR)	1,014
298	VOCATIONAL REHAB FROM VETS ADMIN	4
299	VOCATIONAL REHAB FROM OTHER	34
331	ASSIGNED CASE MANAGER	190
921	ELIGIBILITY REVIEW (ERP)	971

H: Self-service Group — Total: 59,407

T-Code	T-Code Description	Count
010	SELF-SERVICES TRACKED VIA BAR CODE SYSTEM	59,407

I: Labor Market Information Group — Total: 60,597

T-Code	T-Code Description	Count
228	PROVISION OF SPECIFIC LABOR MARKET INFORMATION	60,597

Appendix B: Individual Dimension and the Compilation of Time-Dependent Demographic Data for Individuals

The Individual Dimension is a compendium of data from a number of sources that describe the individual. This dimension is one of many to be compiled for Connecticut's' Workforce Data Warehouse and is currently sourced in:

- UI wage records
- W-P program participants
- UI benefit claimants
- WPRS (Worker Profiling and Re-employment Services) participants
- WIA program participants

The descriptive attributes of the individual are currently:

- Date of Birth
- Gender
- RNO (Race and National Origin)
- Years of Academic Education
- Highest Degree/Milestone of Academic Education
- Occupational Licensing/Certification
- Tradesman Licensing/Certification
- Primary Occupation
- Union Membership

The broadest source for the identification of individuals is the wage records provided by employers covered under Connecticut's UI statutes. Individuals participating in other programs that are administered by the Connecticut Department of Labor supplement this source. The Motor Vehicle Department would be another broad base for identifying individuals, however that agency in Connecticut has just begun identifying individuals by SSN. Other sources not currently available include taxpayers identified by the Department of Revenue Services, students in the State's education system, i.e., the State's colleges and universities, and adult and secondary education entities.

Available demographics captured for these programs were acquired over time and scrubbed and transformed as needed. While most of the time each source agreed on the value for a descriptive attribute, disagreements do occur. Selection of the "truest" value was based on the relative focus of the program. For example, if the date of birth differed between the UI program and the W-P program and the WIA program, the value presented from the WIA program was selected as that program is most likely to have the greatest need for accurate data for this attribute. Since Date of Birth, Gender and RNO are not expected to change over time, the latest value from the source deemed the most accurate was selected. Education and occupational/tradesman certifications can change over time and are tracked in the dimension. This dynamic aspect is captured in the Individual Dimension and can be used to add another perspective to the study results.

Currently there are 3.7 million individuals identified and 5.2 million records recorded for these individuals. The SSN and the effective date of the record distinguish the records in the dimension. Further refining is needed for this data source established for the study. We need to add new data sources and also we need to begin dealing with persistence over time of the sources deemed more credible, i.e., how long a period the value assigned by the most creditable source should persist when other less credible sources are suggesting some other value.

Appendix C: Structure of the Data Analysis File

Selected data, drawn from the agency's data stores, were compiled into a wide flat file to facilitate operations performed by our statistical analysis software. The SSN-specific rows in this file contain quarterly earnings data as far back as 1993 and arrayed as data correlated with the study's effective registration date for the pre-program review period. The earnings for the post-program period are correlated with each service set completion date and also the completion date over all service sets completed by members of the W-P treatment group. The last non-treatment service date is used to time-correlate earnings for the comparison group. Wages for the external comparison group are for each calendar quarter. The industry of the primary employer in each quarter is posted to the record along with treatment service set date(s)/last non-treatment service date and available demographics of the individual. The flat file also contains fields for demographic data such as gender, education, and race/national origin, where available.

Appendix D: Characteristics of Study Population - Unemployed Only

Table D-1: W-P Study Treatment Group - Unemployed Only
Unemployed W-P Service Recipients by Characteristic and Services Received

	Persons Served	Avg # Svc	All Services		Testing		Referrals to Support. Svces.		Workshops		Job Search Preparation		Job Referral		Guidance		Misc.		Self-Service		Labor Market Information	
					Grp A		Grp B		Grp C		Grp D		Grp E		Grp F		Grp G		Grp H		Grp I	
Total:	40,456	4.7	189,730	100%	281	0%	10,015	5%	16,645	9%	25,980	14%	13,857	7%	4,053	2%	44,013	23%	32,625	17%	42,261	22%
Gender:																						
Total	40,456	4.7	189,730	100%	281	0%	10,015	100%	16,645	100%	25,980	100%	13,857	100%	4,053	100%	44,013	100%	32,625	100%	42,261	100%
Male	21,938	4.8	105,803	56%	159	0%	6,388	64%	7,747	47%	13,992	54%	8,684	63%	2,195	54%	27,259	62%	15,701	48%	23,678	56%
Female	18,517	4.5	83,926	44%	122	0%	3,627	36%	8,898	53%	11,988	46%	5,173	37%	1,858	46%	16,753	38%	16,924	52%	18,583	44%
Gender INA	1	1.0	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	0%	0	0%	0	0%
Education:																						
Total	40,456	4.7	189,730	100%	281	1%	10,015	100%	16,645	100%	25,980	100%	13,857	100%	4,053	100%	44,013	100%	32,625	100%	42,261	100%
< HS	5,405	3.8	20,377	11%	26	0%	973	10%	1,303	8%	3,138	12%	1,889	14%	413	10%	4,813	11%	2,068	6%	5,754	14%
High School	19,753	4.6	90,611	48%	176	0%	4,981	50%	7,352	44%	12,465	48%	7,229	52%	1,924	47%	21,844	50%	13,898	43%	20,742	49%
> HS	7,460	5.5	41,007	22%	57	0%	2,245	22%	4,166	25%	5,438	21%	2,879	21%	915	23%	9,389	21%	7,956	24%	7,962	19%
College	6,859	5.1	35,006	18%	19	0%	1,729	17%	3,647	22%	4,745	18%	1,728	12%	761	19%	7,688	17%	7,271	22%	7,418	18%
Edu INA	979	2.8	2,729	1%	3	0%	87	1%	177	1%	194	1%	132	1%	40	1%	279	1%	1,432	4%	385	1%
Age:																						
Total	40,456	4.7	189,730	100%	281	1%	10,015	100%	16,645	100%	25,980	100%	13,857	100%	4,053	100%	44,013	100%	32,625	100%	42,261	100%
16 - 19	580	3.1	1,803	1%	2	0%	86	1%	101	1%	313	1%	143	1%	40	1%	433	1%	196	1%	489	1%
20 - 21	1,448	3.3	4,755	3%	1	0%	226	2%	287	2%	784	3%	372	3%	88	2%	1,106	3%	505	2%	1,386	3%
22 - 39	19,294	4.1	79,877	42%	127	0%	3,883	39%	6,729	40%	11,518	44%	5,964	43%	1,526	38%	18,054	41%	13,525	41%	18,551	44%
40 - 54	13,836	5.2	72,444	38%	121	0%	3,812	38%	6,950	42%	9,576	37%	5,251	38%	1,735	43%	16,429	37%	13,640	42%	14,930	35%
55 - 65	4,553	6.0	27,155	14%	27	0%	1,744	17%	2,372	14%	3,352	13%	1,879	14%	588	15%	6,892	16%	4,379	13%	5,922	14%
Over 65	654	5.0	3,302	2%	2	0%	254	3%	179	1%	390	2%	223	2%	65	2%	1,034	2%	237	1%	918	2%
Age INA	91	4.3	394	0%	1	0%	10	0%	27	0%	47	0%	25	0%	11	0%	65	0%	143	0%	65	0%
Race:																						
Total	40,456	4.7	189,730	100%	281	1%	10,015	100%	16,645	100%	25,980	100%	13,857	100%	4,053	100%	44,013	100%	32,625	100%	42,261	100%
White	26,825	4.9	130,357	69%	229	0%	7,206	72%	12,618	76%	17,999	69%	8,061	58%	2,870	71%	31,863	72%	22,261	68%	27,250	64%
Black	6,511	4.8	31,503	17%	30	0%	1,675	17%	2,015	12%	3,806	15%	3,245	23%	605	15%	6,202	14%	6,430	20%	7,495	18%
Hispanic	5,276	3.9	20,637	11%	15	0%	850	8%	1,418	9%	3,101	12%	2,025	15%	441	11%	4,353	10%	2,594	8%	5,840	14%
NAAN	104	5.3	547	0%	1	0%	23	0%	85	1%	53	0%	43	0%	5	0%	99	0%	142	0%	96	0%
Asian	685	4.0	2,715	1%	2	0%	119	1%	213	1%	383	1%	218	2%	61	2%	573	1%	427	1%	719	2%
Race INA	1,055	3.8	3,971	2%	4	0%	142	1%	296	2%	638	2%	265	2%	71	2%	923	2%	771	2%	861	2%

Table D-2: W-P Study Treatment Group - Unemployed Only

Unemployed W-P Service Recipients by Characteristic and Mode of Service

Description	Total - W/P		Staff-Asst only		Self-Serv only		Staff and Self	
All registrants:	40,456	100%	29,750	74%	1,746	4%	8,960	22%
Gender:								
Total	40,456	100%	29,750	100%	1,746	100%	8,960	100%
Male	21,938	54%	16,713	56%	835	48%	4,390	49%
Female	18,517	46%	13,036	44%	911	52%	4,570	51%
INA	1	0%	1	0%	0	0%	0	0%
Education:								
Total	40,456	100%	29,750	100%	1,746	100%	8,960	100%
Less than H.S.	5,405	13%	4,441	15%	163	9%	801	9%
H.S. or equiv.	19,753	49%	14,682	49%	621	36%	4,450	50%
Some College	7,460	18%	5,144	17%	226	13%	2,090	23%
College Degree	6,859	17%	5,119	17%	198	11%	1,542	17%
INA	979	2%	364	1%	538	31%	77	1%
Age:								
Total	40,456	100%	29,750	100%	1,746	100%	8,960	100%
16 - 19	580	1%	486	2%	33	2%	61	1%
20 - 21	1,448	4%	1,160	4%	55	3%	233	3%
22 - 39	19,294	48%	14,283	48%	942	54%	4,069	45%
40 - 54	13,836	34%	9,779	33%	564	32%	3,493	39%
55 - 65	4,553	11%	3,421	11%	118	7%	1,014	11%
Over 65	654	2%	565	2%	13	1%	76	1%
INA	91	0%	56	0%	21	1%	14	0%
Race:								
Total	40,456	100%	29,750	100%	1,746	100%	8,960	100%
White	26,825	66%	19,801	67%	855	49%	6,169	69%
Black	6,511	16%	4,388	15%	496	28%	1,627	18%
Hispanic	5,276	13%	4,206	14%	220	13%	850	9%
NAAN	104	0%	67	0%	7	0%	30	0%
Asian	685	2%	523	2%	44	3%	118	1%
INA	1,055	3%	765	3%	124	7%	166	2%

Appendix E: Disaggregated Services

Table E-1

Recoded Service Groupings

A: Testing Group **Total: 697**

T-Code	T-Code Description	Count
Retained as a group:		
210	GATB (General Aptitude Test Battery)	463
211	PROFICIENCY	8
212	SATB (specific Aptitude Test Battery)	13
213	NATB (Non-reading Aptitude Test Battery)	10
214	BOLT – LITERACY (Basic Occupational Literacy Test)	9
215	BEAG (Bateria de Examenes de Aptitude General – Spanish version of GATB)	1
216	USES (U. S. Employment Service) INTEREST INDEX	50
219	OTHER TESTING (e.g., keyboard skills)	143

B: Referrals to Supportive Services Group **Total: 15,170**

(Supports include training or other services that enable individuals to obtain/retain employment or participate in training – e.g. medical, childcare, financial, residential, nutritional, legal services, etc.)

T-Code	T-Code Description	Count
Shown Individually:		
271	REFERRED TO SUPPORTIVE SERVICES	12,764
272	REFERRED TO JTPA/WIA INSTITUTIONAL	1,191
Retained as a Group:		
273	REFERRED TO JOB CORPS	44
274	REFERRED TO OTHER FEDERAL	389
275	REFERRED TO OTHER STATE OR LOCAL	394
277	REFERRAL TO EDUCATIONAL SERVICES	388

C: Workshops Group **Total: 25,806**

T-Code	T-Code Description	Count
Shown Individually:		
900	CAREER SERVICES ORIENTATION (WS)	7,172
901	JOB SEARCH TECHNIQUES (WS)	1,557
902	SELF ASSESSMENT (WS)	1,824
905	RESUME WRITING (WS)	1,765
908	INTERVIEWING TECHNIQUES (WS)	1,692
913	LABOR MARKET INFORMATION (WS)	2,306
916	TRANSITION CENTER SERVICES (WS)	5,894
Retained as a Group:		
903	NETWORKING (WS)	313
904	RESOURCES/RESEARCHING (WS)	750
907	TELEPHONE TECHNIQUES (WS)	117
910	COMMUNICATIONS SKILLS (WS)	734
911	JOB RETENTION (WS)	190
914	JOB CLUBS (WS)	215
915	JOB SEARCH WORKSHOPS (WS)	906

D: Job Search Preparation Group — Total: 38,854

(Includes services geared to helping job seekers find job leads and also market their skills.)

T-Code	T-Code Description	Count
Shown Individually:		
224	JOB SEARCH PLANNING	34,113
227	RESUME PREPARATION ASSISTANCE	3,852
Retained as a Group:		
221	ES JOB SEARCH WORKSHOP	351
222	JOB FINDING CLUB	167
912	APPLICATIONS (WS)	341
917	MARKET RESEARCH (WS)	30

E: Job Referral Group — Total: 28,335

(One-on-one assistance geared to providing job seekers with specific job leads)

T-Code	T-Code Description	Count
Shown Individually:		
242	REFERRED TO JOB OVER 150 DAYS (“permanent” jobs)	20,081
252	REFERRED TO JOB OVER 4 - 150 DAYS (“temporary” jobs)	4,466
Retained as a Group:		
280	JOB DEVELOPMENT CONTACTS (On behalf of a specific job candidate, contact an employer directly to create the opportunity for a job interview or resume review when no job order exists.)	3,311
229	JS SPONSORED AUTOMATED LABOR (computerized job matching)	458
262	REFERRED TO JOB 3 DAYS OR LESS (“day work”)	19

F: Guidance Group — Total: 7,069

T-Code	T-Code Description	Count
Shown Individually:		
200	COUNSELING/INDIVIDUAL	3,092
206	CAREER GUIDANCE	1,114
208	EMPLOYABILITY DEVELOPMENT PLAN	2,085
332	RECEIVED CASE MANAGEMENT SERVICES	778

G: Miscellaneous Group — Total: 124,439

T-Code	T-Code Description	Count
Shown Individually:		
207	ORIENTATION	5,423
209	ASSESSMENT INTERVIEW	39,733
Retained as a Group:		
202	MANAGING CHANGE (PROFILE ONLY)	9
292	SOME REPORTABLE SERVICE (ES)	15,318
293	SOME REPORTABLE SERVICE (VET)	371
294	SOME REPORTABLE SERVICE (VET VR)	836
295	BONDING ASSISTANCE	24
296	PROVIDED NOTIFICATION OF EO RIGHTS	5
297	SOME REPORTABLE SERVICE (OTHER VR)	1,014
298	VOCATIONAL REHAB FROM VETS ADMIN	4
299	VOCATIONAL REHAB FROM OTHER	34
331	ASSIGNED CASE MANAGER	190
921	ELIGIBILITY REVIEW (ERP)	971

H: Self-service Group **Total: 59,407**

T-Code	T-Code Description	Count
010	SELF-SERVICES TRACKED VIA BAR CODE SYSTEM	59,407

I: Labor Market Information Group **Total: 60,597**

T-Code	T-Code Description	Count
228	PROVISION OF SPECIFIC LABOR MARKET INFORMATION	60,597

Table E-2: W-P Study Treatment Group
Detailed Services Received (page 1 of 4)

	Persons Served	Avg	All Services		Testing		Ref. To Supp. Svces		Ref. To JTPAS/ WIA		Other Referrals to Support. Svces.	
					Grp A		TCode 271		TCode 272		Grp B sub	
Total:	67,420	3.0	203,554	100%	636	0%	10,603	5%	1,160	1%	905	0%
Gender:												
Total	67,420	3.0	203,554	100%	636	100%	10,603	100%	1,160	100%	905	100%
Male	33,727	3.2	107,621	53%	364	57%	6,512	61%	514	44%	563	62%
Female	29,901	3.1	92,188	45%	272	43%	4,091	39%	646	56%	342	38%
Gender INA	3,792	1.0	3,745	2%	0	0%	0	0%	0	0%	0	0%
Education:												
Total	67,420	3.0	203,554	100%	636	100%	10,603	100%	1,160	100%	905	100%
< HS	9,692	2.9	27,817	14%	50	8%	1,211	11%	125	11%	148	16%
High School	31,025	3.2	98,192	48%	398	63%	5,440	51%	503	43%	464	51%
> HS	11,139	3.5	39,277	19%	141	22%	2,156	20%	269	23%	189	21%
College	9,294	3.3	30,794	15%	42	7%	1,719	16%	213	18%	92	10%
Edu INA	6,270	1.2	7,474	4%	5	1%	77	1%	50	4%	12	1%
Age:												
Total	67,420	3.0	203,554	100%	636	100%	10,603	100%	1,160	100%	905	100%
16 - 19	1,892	2.7	5,126	3%	6	1%	213	2%	23	2%	32	4%
20 - 21	3,029	2.8	8,335	4%	6	1%	358	3%	42	4%	44	5%
22 - 39	30,813	3.0	91,261	45%	271	43%	4,250	40%	551	48%	310	34%
40 - 54	20,314	3.4	68,072	33%	291	46%	3,750	35%	412	36%	358	40%
55 - 65	6,225	3.6	22,604	11%	57	9%	1,641	15%	112	10%	136	15%
Over 65	1,062	3.3	3,509	2%	2	0%	284	3%	11	1%	25	3%
Age INA	4,085	1.1	4,647	2%	3	0%	107	1%	9	1%	0	0%
Race:												
Total	67,420	3.0	203,554	100%	636	100%	10,603	100%	1,160	100%	905	100%
White	38,722	3.2	125,568	62%	489	77%	7,327	69%	751	65%	567	63%
Black	12,148	3.1	37,835	19%	81	13%	1,938	18%	215	19%	165	18%
Hispanic	9,701	2.9	28,178	14%	47	7%	1,029	10%	148	13%	149	16%
NAAN	191	3.0	579	0%	1	0%	34	0%	2	0%	3	0%
Asian	1,091	2.9	3,158	2%	5	1%	123	1%	22	2%	8	1%
Race INA	5,567	1.5	8,236	4%	13	2%	152	1%	22	2%	13	1%

Table E-2: W-P Study Treatment Group

Detailed Services Received (continued - page 2 of 4))

	Persons Served	Avg	Career Svces Orientation		Job Search Techniques		Self-Assessment		Resume Writing		Interviewing Techniques		Labor Market Information		Transition Center Services		All other Workshops	
			TCode 900		TCode 901		TCode 902		TCode 905		TCode 908		TCode 913		TCode 913		Grp C sub	
Total:	67,420	3.0	6,699	3%	1,462	1%	1,727	1%	1,723	1%	1,637	1%	2,041	1%	2,706	1%	2,261	1%
Gender:																		
Total	67,420	3.0	6,699	100%	1,462	100%	1,727	100%	1,723	100%	1,637	100%	2,041	100%	2,706	100%	2,261	100%
Male	33,727	3.2	3,292	49%	606	41%	738	43%	726	42%	620	38%	921	45%	1,207	45%	853	38%
Female	29,901	3.1	3,407	51%	856	59%	989	57%	997	58%	1,017	62%	1,120	55%	1,499	55%	1,408	62%
Gender INA	3,792	1.0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Education:																		
Total	67,420	3.0	6,699	100%	1,462	100%	1,727	100%	1,723	100%	1,637	100%	2,041	100%	2,706	100%	2,261	100%
< HS	9,692	2.9	957	14%	178	12%	151	9%	130	8%	150	9%	196	10%	255	9%	310	14%
High School	31,025	3.2	3,412	51%	615	42%	762	44%	820	48%	691	42%	928	45%	1,221	45%	1,022	45%
> HS	11,139	3.5	1,379	21%	326	22%	436	25%	418	24%	394	24%	452	22%	657	24%	504	22%
College	9,294	3.3	903	13%	326	22%	345	20%	332	19%	383	23%	422	21%	569	21%	376	17%
Edu INA	6,270	1.2	48	1%	17	1%	33	2%	23	1%	19	1%	43	2%	4	0%	49	2%
Age:																		
Total	67,420	3.0	6,699	100%	1,462	100%	1,727	100%	1,723	100%	1,637	100%	2,041	100%	2,706	100%	2,261	100%
16 - 19	1,892	2.7	199	3%	42	3%	21	1%	22	1%	24	1%	17	1%	49	2%	53	2%
20 - 21	3,029	2.8	316	5%	33	2%	29	2%	36	2%	25	2%	53	3%	107	4%	64	3%
22 - 39	30,813	3.0	3,210	48%	593	41%	770	45%	660	38%	645	39%	931	46%	1,233	46%	866	38%
40 - 54	20,314	3.4	2,237	33%	558	38%	670	39%	740	43%	681	42%	749	37%	1,006	37%	895	40%
55 - 65	6,225	3.6	639	10%	208	14%	205	12%	222	13%	237	14%	256	13%	279	10%	322	14%
Over 65	1,062	3.3	79	1%	23	2%	27	2%	38	2%	18	1%	29	1%	28	1%	49	2%
Age INA	4,085	1.1	19	0%	5	0%	5	0%	5	0%	7	0%	6	0%	4	0%	12	1%
Race:																		
Total	67,420	3.0	6,699	100%	1,462	100%	1,727	100%	1,723	100%	1,637	100%	2,041	100%	2,706	100%	2,261	100%
White	38,722	3.2	4,429	66%	954	65%	1,265	73%	1,246	72%	1,144	70%	1,493	73%	1,914	71%	1,494	66%
Black	12,148	3.1	1,094	16%	250	17%	229	13%	246	14%	232	14%	248	12%	438	16%	408	18%
Hispanic	9,701	2.9	940	14%	202	14%	156	9%	158	9%	191	12%	209	10%	240	9%	297	13%
NAAN	191	3.0	31	0%	5	0%	8	0%	5	0%	4	0%	9	0%	5	0%	4	0%
Asian	1,091	2.9	87	1%	21	1%	27	2%	22	1%	25	2%	22	1%	49	2%	27	1%
Race INA	5,567	1.5	118	2%	30	2%	42	2%	46	3%	41	3%	60	3%	60	2%	31	1%

Table E-2: W-P Study Treatment Group
Detailed Services Received (continued - page 3 of 4)

	Persons Served	Avg	Job Search Planning		Resume Prep. Assistance		All Other Job Search Preparation		Ref. to Job > 150 days		Ref. to job 4-150 days		Job Development Contacts		All other Job Referral	
			TCode 224		TCode 227		Grp D sub		TCode 242		TCode 252		TCode 280		Grp E sub	
Total:	67,420	3.0	26,972	13%	3,317	2%	828	0%	12,944	6%	3,577	2%	2,303	1%	440	0%
Gender:																
Total	67,420	3.0	26,972	100%	3,317	100%	828	100%	12,944	100%	3,577	100%	2,303	100%	440	100%
Male	33,727	3.2	14,304	53%	1,851	56%	354	43%	7,863	61%	1,986	56%	1,219	53%	224	51%
Female	29,901	3.1	12,668	47%	1,466	44%	474	57%	5,081	39%	1,591	44%	1,084	47%	216	49%
Gender INA	3,792	1.0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Education:																
Total	67,420	3.0	26,972	100%	3,317	100%	828	100%	12,944	100%	3,577	100%	2,303	100%	440	100%
< HS	9,692	2.9	4,014	15%	291	9%	151	18%	1,965	15%	594	17%	517	22%	107	24%
High School	31,025	3.2	13,259	49%	1,522	46%	384	46%	6,856	53%	1,942	54%	1,063	46%	217	49%
> HS	11,139	3.5	5,205	19%	776	23%	153	18%	2,500	19%	707	20%	397	17%	55	13%
College	9,294	3.3	4,259	16%	704	21%	131	16%	1,480	11%	291	8%	270	12%	51	12%
Edu INA	6,270	1.2	235	1%	24	1%	9	1%	143	1%	43	1%	56	2%	10	2%
Age:																
Total	67,420	3.0	26,972	100%	3,317	100%	828	100%	12,944	100%	3,577	100%	2,303	100%	440	100%
16 - 19	1,892	2.7	733	3%	67	2%	34	4%	485	4%	108	3%	99	4%	16	4%
20 - 21	3,029	2.8	1,206	4%	85	3%	33	4%	681	5%	189	5%	131	6%	25	6%
22 - 39	30,813	3.0	12,826	48%	1,268	38%	364	44%	6,108	47%	1,705	48%	1,093	47%	224	51%
40 - 54	20,314	3.4	8,880	33%	1,331	40%	283	34%	4,131	32%	1,193	33%	675	29%	139	32%
55 - 65	6,225	3.6	2,832	10%	497	15%	97	12%	1,233	10%	323	9%	250	11%	32	7%
Over 65	1,062	3.3	418	2%	62	2%	12	1%	186	1%	45	1%	49	2%	3	1%
Age INA	4,085	1.1	77	0%	7	0%	5	1%	120	1%	14	0%	6	0%	1	0%
Race:																
Total	67,420	3.0	26,972	100%	3,317	100%	828	100%	12,944	100%	3,577	100%	2,303	100%	440	100%
White	38,722	3.2	16,992	63%	2,495	75%	494	60%	7,067	55%	1,748	49%	927	40%	215	49%
Black	12,148	3.1	4,789	18%	380	11%	116	14%	3,116	24%	1,018	28%	716	31%	83	19%
Hispanic	9,701	2.9	3,991	15%	235	7%	200	24%	2,186	17%	665	19%	602	26%	128	29%
NAAN	191	3.0	75	0%	4	0%	0	0%	42	0%	12	0%	5	0%	0	0%
Asian	1,091	2.9	493	2%	35	1%	7	1%	219	2%	56	2%	31	1%	4	1%
Race INA	5,567	1.5	632	2%	168	5%	11	1%	314	2%	78	2%	22	1%	10	2%

Table E-2: W-P Study Treatment Group

Detailed Services Received (continued - page 4 of 4)

	Persons Served	Avg	Individual Counseling		Career Guidance		Employability Development Plan		Rec'd Case Mgmt. Services		Orientation		Assessment Interview		Misc.		Self-Service		Labor Market Information	
			TCode 200		TCode 206		TCode 208		TCode 332		TCode 207		TCode 209		Grp G		Grp H		Grp I	
Total:	67,420	3.0	2,369	1%	928	0%	2,014	1%	178	0%	5,384	3%	35,427	17%	9,248	5%	22,992	11%	41,073	20%
Gender:																				
Total	67,420	3.0	2,369	100%	928	100%	2,014	100%	178	100%	5,384	100%	35,427	100%	9,248	100%	22,992	100%	41,073	100%
Male	33,727	3.2	1,232	52%	498	54%	996	49%	161	90%	2,668	50%	19,264	54%	6,822	74%	8,943	39%	22,320	54%
Female	29,901	3.1	1,137	48%	430	46%	1,018	51%	17	10%	2,716	50%	16,163	46%	2,425	26%	10,305	45%	18,753	46%
Gender INA	3,792	1.0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	0%	3,744	16%	0	0%
Education:																				
Total	67,420	3.0	2,369	100%	928	100%	2,014	16%	178	100%	5,384	100%	35,427	100%	9,248	100%	22,992	100%	41,073	100%
< HS	9,692	2.9	258	11%	156	17%	257	13%	9	5%	364	7%	5,555	16%	823	9%	2,186	10%	6,709	16%
High School	31,025	3.2	1,117	47%	467	50%	944	1%	100	56%	2,505	47%	17,600	50%	4,793	52%	8,861	39%	20,286	49%
> HS	11,139	3.5	523	22%	173	19%	408	1%	48	27%	1,430	27%	6,516	18%	2,110	23%	3,719	16%	7,236	18%
College	9,294	3.3	445	19%	113	12%	380	1%	20	11%	1,031	19%	5,454	15%	1,455	16%	2,652	12%	6,336	15%
Edu INA	6,270	1.2	26	1%	19	2%	25	0%	1	1%	54	1%	302	1%	67	1%	5,574	24%	506	1%
Age:																				
Total	67,420	3.0	2,369	100%	928	100%	2,014	7%	178	100%	5,384	100%	35,427	100%	9,248	100%	22,992	100%	41,073	100%
16 - 19	1,892	2.7	53	2%	54	6%	40	2%	0	0%	26	0%	1,003	3%	126	1%	447	2%	1,134	3%
20 - 21	3,029	2.8	94	4%	39	4%	79	1%	3	2%	107	2%	1,592	4%	190	2%	830	4%	1,938	5%
22 - 39	30,813	3.0	912	38%	402	43%	911	1%	53	30%	2,399	45%	16,622	47%	3,272	35%	9,441	41%	19,371	47%
40 - 54	20,314	3.4	970	41%	286	31%	715	1%	89	50%	2,085	39%	11,520	33%	3,635	39%	6,610	29%	13,183	32%
55 - 65	6,225	3.6	307	13%	114	12%	229	1%	30	17%	691	13%	3,861	11%	1,658	18%	1,660	7%	4,476	11%
Over 65	1,062	3.3	24	1%	29	3%	34	1%	3	2%	69	1%	647	2%	343	4%	185	1%	787	2%
Age INA	4,085	1.1	9	0%	4	0%	6	0%	0	0%	7	0%	182	1%	24	0%	3,819	17%	184	0%
Race:																				
Total	67,420	3.0	2,369	100%	928	100%	2,014	68%	178	100%	5,384	100%	35,427	100%	9,248	100%	22,992	100%	41,073	100%
White	38,722	3.2	1,658	70%	504	54%	1,274	63%	125	70%	4,066	76%	22,305	63%	7,068	76%	11,409	50%	24,148	59%
Black	12,148	3.1	388	16%	227	24%	373	1%	39	22%	751	14%	6,346	18%	1,220	13%	4,486	20%	8,243	20%
Hispanic	9,701	2.9	238	10%	159	17%	297	1%	12	7%	366	7%	5,312	15%	645	7%	2,398	10%	6,978	17%
NAAN	191	3.0	6	0%	7	1%	4	1%	0	0%	17	0%	88	0%	30	0%	78	0%	100	0%
Asian	1,091	2.9	40	2%	14	2%	38	1%	0	0%	70	1%	578	2%	102	1%	304	1%	729	2%
Race INA	5,567	1.5	39	2%	17	2%	28	0%	2	1%	114	2%	798	2%	183	2%	4,317	19%	875	2%