Analyzing Washington state's welfare program design, workfirst

Axelsen, Dan and Snarr, Hal W.

North Carolina AT State University

2006

Analyzing Washington State's Welfare Program Design, WorkFirst

Dan Axelsen
ERS Group
850-562-1211
daxelsen@ersgroup.com

Hal W. Snarr
Department of Economics and
Transportation/Logistics
School of Business and Economics
North Carolina State A & T
336-334-7744
halsnarr@ncat.edu

JANUARY 2006

ABSTRACT Much debate in the early nineties centered on whether the federal entitlement program Aid for Families with Dependent Children (AFDC) reduced welfare dependency. Many contend that AFDC discouraged work, increased welfare dependency, and undermined the institution of family. Partly in response to these criticisms, welfare was reformed through the Personal Responsibility and Work Reconciliation Act (PRWORA) in 1996. PRWORA modified the primary objectives of welfare by placing more emphasis on work experience accumulation and less on human capital accumulation. Temporary Assistance for Needy Families (TANF) was designed to meet this primary objective. Washington State's TANF program, WorkFirst, utilizes a progressive system of programs (components) aimed at reducing welfare dependency through labor force participation. WorkFirst components have a variety of objectives including skills training, temporary subsidized employment, and mentoring. WorkFirst's objective is to accumulate work experience of welfare recipients, thus making them more employable. More work experience should place upward pressure on wage rates, which then in turn reduces welfare dependency. We analyze the working decision as it is related to Washington State's program design using a binary choice probit model. We find that welfare recipients who are enrolled in the later stage components of WorkFirst are more likely to find work and exit welfare than those that have only completed the initial components designed under WorkFirst. Cumulatively, WorkFirst seems to be an effective welfare program design.

INTRODUCTION[1]

On July 1, 1997 the Temporary Assistance for Needy Families (TANF) program replaced the federal entitlement program, Aid for Families with Dependent Children (AFDC) in Washington State. TANF provides temporary cash assistance and job training to low-income families with dependent children. Each State is allowed to tailor their welfare program design to the specific needs of their clients. In August 1997, the State of Washington created WorkFirst as its welfare program designed under TANF. The WorkFirst design discourages welfare dependency through the promotion of labor force participation and sanctions for non-compliance. Programs (components) under WorkFirst provide individuals with mentors, educational opportunities, and paid work experience. The underlying premise of WorkFirst is that work experience accumulation places upward pressure on wage rates. Components within WorkFirst promote work experience and skill building, and through the completion of cumulative stages within WorkFirst welfare recipients become less welfare dependent, and in many instances self-sufficient.

Washington State's WorkFirst program is not an entitlement; it provides temporary cash assistance, job training, and work experience to welfare recipients. Recipients are allowed a maximum of 60 months of lifetime cash assistance, with at most 24 consecutive months of assistance. Recipients must work or search for employment to receive cash assistance.[2] Unsuccessful individuals not finding employment but making an effort according to WorkFirst guidelines can qualify for

[1] We would like to thank the two anonymous reviewers for their helpful and insightful comments with regard to this manuscript. Their comments greatly improved our paper.

[2] All individuals enrolled on TANF must be enrolled in at least one component; most recipients are enrolled in more than one.

extensions. Because physically or mentally disabled individuals cannot participate in WorkFirst, they will continue to receive welfare assistance.[3]

WorkFirst is a comprehensive and progressive welfare-to-work program that utilizes many components consisting of over 30 different employment induced welfare programs. For the purposes of this paper, we will study the effects of only five of these WorkFirst components. They include Job Success Coach Initiative (JSCI), WorkFirst Post-employment Labor Exchange (WPLEX), Job Components (JC), Pre-Employment Training (PET), and Community Jobs (CJ). We chose these components because they are employment training, counseling and guidance programs. All five components are different in their nature and each attracts a different clientele. They are also progressive and attract the most political attention.[4]

Clients with very poor job skills often enter the WorkFirst program by enrolling in CJ, PET or JC. The CJ program is a community-based work and skill-building experience for heads of households receiving TANF benefits. The CJ program provides participants with valuable work experience and skills training. CJ benefits both the individual and local communities, often leading to a permanent job and job retention while meeting WorkFirst participation requirements "to work, look for work or prepare for work." Recipients that secure jobs under CJ are only temporarily employed, most typically for six months. PET is a program designed to assist individuals with additional education. The majority of PET individuals are enrolled in a Microsoft funded community college program focused on the acquisition of

[3]At this point the individual might qualify for SSI (Social Security Insurance) assistance. Disability falls more under SSI. If chemical dependency or otherwise, individual falls under this type of state funding.

computer skills. The JC program is a series of classes offered by the state. These classes teach participants how to act professional, look for work, and interview for jobs.

The JSCI and WPLEX programs tend to attract stronger clients whom are typically in the final stages of the WorkFirst program. The JSCI program assigns a job coach to each enrollee. The job coach guides individuals in their job search journey by offering advice and counseling. After clients have obtained employment they receive additional counseling from WPLEX call center associates. After enrollees enter the work force, the WPLEX program can assist them in finding better jobs as their job-skills improve and work experience increases.

WorkFirst is a progressive welfare-to-work design because clients typically start in JC, CJ or PET. After completion of any of these preliminary components, clients enroll in JSCI or WPLEX.

LITERATURE REVIEW

Much experimental design was conducted in the early 1990's as an application of welfare reform. Waiver programs allowed states to experiment with alternatives to the traditional AFDC design.[5] Many of these waiver programs resemble TANF, focusing on strong work requirements through job search, therefore the waiver period can be thought of as a foundation for understanding how to model TANF correctly. The waiver period and the research associated with this period directly evaluate

[4] A majority of the Washington State sponsored welfare studies focus their attention on the performance of JSCI, WPLEX, JC, PET, and CJ components, which determines how TANF funds are allocated.

[5] Waiver programs existed pre-1996. TANF turned discretion over to each individual state, and the waiver period was granted to enable states to test different welfare policies so that when TANF eventually took over as the dominant welfare policy, they would be prepared with the type of program they wanted to undertake. Extensive experimental analysis was administered during this period.

different program designs, unified by the imposition of strong work requirements. Friedlander and Hamilton (1996) examined an experimental welfare model that would eventually mimic TANF by testing whether imposing an obligation to work, and the implementation of these policies that lead to work, actually increase employment levels which in turn should reduce welfare dependency. The experimental data and design used by Friedlander and Hamilton (1996) is known as the Saturation Work Initiative Model (SWIM). From 1985 to 1987 the county of San Diego initiated the SWIM welfare design, which took a cohort of people currently enrolled in AFDC and placed them in work assignments and other types of employment-directed programs. Results show 75 percent of those who participated in SWIM were employed compared to 68 percent for the control group, a difference statistically significant at the 5 percent level. Friedlander and Hamilton (1996) successfully find that the SWIM model reduces welfare dependency more than the existing AFDC design. However, the authors' do not conclude that the waiver program is a successful overall welfare design, it is only marginally better than AFDC.

Bloom and Michalopoulos (2001), Fein et al. (2001) and O'Neill and Hill (2001) all look at the effect that similar waiver programs have had on employment, program participation, and wages. Each of these papers found waivers to have positive effects on employment and wages. In contrast, O'Neill and Hill, Bloom and Michalopoulos, and Fein et al. are all similar in that they find a negative effect on AFDC participation. They suggest that the effects on wages and employment are due to the enforcement of work requirements, not from marginal incentive changes. Similar

results are found by Bartik and Eberts (1999); Blank (2000); Figlio and Ziliak (1999); Wallace and Blank (1999); and Ziliak, Figlio, Davis, and Connelly (2000). Each of these authors' fails to determine whether each program design works as it is intended.

One issue with studying waiver programs is that only short-term effects of program reform are considered. Friedlander, Greenberg, and Robins (1997) evaluate the long-term aspects of government programs for the disadvantaged. Since welfare's initial inception in 1935, they find no support for positive long-term effects on employment, wages, poverty, income inequality, and welfare participation. Although most evaluations of the welfare population conclude that there are positive, significant effects of training programs in the short-run, they find that there is no evidence to support this claim over the longer-term. One explanation is the skills learned by participants are not valued by employers over the long-term. They should evaluate such a claim given the overall shape of the particular labor market for which their sample resides.

Supply controls typically include recipients' marital status, age, race, education, recent work experience, and welfare history. Surveys are the most common method for collecting labor supply data. The most commonly used surveys include the Survey of Income and Program Participation (SIPP), the Panel Study on Income Dynamics (PSID), the National Longitudinal Survey of Youth (NLSY) and Longitudinal Database of Cases (LDB).[6]

[6] Survey of Income and Program Participation is a sample conducted by the U.S. Census Bureau, the Panel Study on Income Dynamics is a longitudinal survey of US individuals conducted by the University of Michigan, the National Longitudinal Survey of Youth is conducted by Bureau of Labor Statistics, and the Longitudinal Database of Cases is a 1% sample from the California State Medicaid program.

Hoynes (2000) incorporated panel data from a subset of the LBD survey to estimate the probability of exits, returns and duration with respect to labor supply and demand variables using a discrete time hazard model. She found that labor market conditions significantly determined exits, returns and duration between 1987 and 1992. That is, welfare recipients are more likely to exit welfare and less likely to return when they are earning more. Additionally, she found that the market wage was a strong determinate of welfare dependency.

Harris (1993) uses a panel of data, from the PSID survey, to evaluate single mothers enrolled on AFDC from 1984 to 1986. She finds that the guarantee level is insignificant, and that a mother enrolled on AFDC exits approximately 67 percent of the time because of an employment opportunity.[7] Harris (1996) follows up her own work by looking at a longer panel from the same survey to estimate the probability of single mothers re-entering AFDC once they have exited. Once again, Harris finds the guarantee to be insignificant and, in general, claims that analyzing welfare is not always about the recipient weighing the costs and benefits of exiting and then returning. More important factors are those such as age, number of children, education and marriage. These factors significantly influence repeat dependency. The choice to exit and not return is mostly a function of the single mother's need for dependency and the existing social context she lives in. Women receiving welfare assistance are less likely to exit if they are single, have more dependents, older and less educated.

[7] The Guarantee level is the monthly transfer payment awarded to all recipients enrolled in WorkFirst. This amount is usually about $550 per month.

In a preliminary study using data from the Washington State Population Survey, Learch, Mayfield, and Burley (1999) found that Washington State females who participated in WorkFirst job search programs had 12 to 27 percent higher employment rates, earned approximately $213 more per month, and had between 14 and 20 percent less welfare enrollment than clients not participating. They used client characteristics as labor supply controls. Labor demand controls included local economic variables and local welfare office administrative practices. Their results were admittedly preliminary and required verification. We hope to verify these results using administrative records, and more importantly, we intend to analyze the WorkFirst design in the manner for which it is designed.

Supply side factors tend to be significant predictors of welfare dependency participation, and so they should be included in any empirical specification. However, generally speaking, demand side factors only generate statistically significant coefficients in studies using panels over long periods of time. Because our time horizon is so short, we do not include demand side factors in this analysis that are aggregated at the state or local level.

The goals of the above studies are only partially relevant to our work. However, our methodology is consistent with past methodologies. Typical methodologies analyze the work-decision with a binary dependent variable (probit and logit models). The use of a dichotomous variable captures whether or not recipients are working. Any model using this feature has the ability to predict labor force participation on a vector of independent variables. These types of models are also capable of evaluating welfare dependency, indicated by welfare exits and reentry.

Many current welfare designs have a progressive, cumulative nature to them. By modeling progression one can partially determine how well a program is designed in terms of effectiveness in reducing welfare dependency. To do this, one must be able to collect supply side data specific to individuals receiving welfare benefits and their component participation choices. To categorize the sample in this manor, one must have access to administrative records. Individuals entering WorkFirst progress through different components of the program until they are ready to exit and enter the work force. Participants that do not complete the series of components should be more dependent on welfare and less likely to enter the labor force. The literature has not yet captured this progressive analysis.

DATA SET

Most welfare studies use survey data. We use Washington State Administrative records for our analysis. We have merged wage data from Unemployment Insurance (UI) wage files with WorkFirst welfare data from the JOBS Automation System (JAS) of the Employment Security Department (ESD).[8] The merged data produces a panel data set, consisting of both cross-sectional and time-series elements specific to individuals enrolled in WorkFirst. Furthermore, this panel provides us the ability to capture both the working decision and welfare enrollment decision of each individual recipient over time.[9] We end up with a cross-section of welfare recipients between 2000 and 2001.

[8] Each employer in the state of Washington reports earnings for each of their employees on a quarterly basis to the Washington State Employment Security Department. All data are provided for by Labor Market and Economic Activity (LMEA). LMEA is a subsidiary of the Employment Security Department in Washington State (ESD). In Washington State the ESD has multiple objectives, some of which include the evaluation of Unemployment Insurance (UI) and WorkFirst in Washington State.
[9] All data are used confidentially herein. Granted Access implies that confidentiality will be maintained.

The WorkFirst design can only be analyzed by using administrative records. Surveys offer information about the aggregate welfare population and are often inaccurate due to survey approaches. By using individual welfare and wage data we can track individual decision making over time. Specifically, we can track which WorkFirst components individuals have enrolled in, which component they started in, when they finished each component, and how they are doing in the labor force after exiting each component. The merged data we have been able to collect allows us to evaluate what no other study has been able to, namely, measure the effectiveness of the WorkFirst design.

Table 1 provides various descriptive statistics of explanatory factors for the entire sample. Of the five WorkFirst components, WPLEX generated the highest median earnings and employment rates while having the lowest percentage of reentry into WorkFirst; $2,742 per quarter, 92.1 percent, and 12.9 percent respectively. JSCI has the highest exit percentage at 23 percent. JC, PET, and CJ appear to be the least successful of the WorkFirst components. For example, after completing CJ only 45.3 percent were employed, only 12 percent exited, and median earnings were a meager $1,624 per quarter. Demographically, the components appear very similar; marriage percentages, education levels, mean age of youngest child, and number of children residing in the welfare recipients household are similar across components. However, work experience is very different across components. Individuals enrolled in WPLEX and JSCI have more work experience than those in JC, PET, and CJ. Even though the performance of these later programs appears to be disappointing, they are not. Through self-selection, participants that enter JSCI and WPLEX are more

prepared for work. Individuals that are less prepared for the work force are encouraged to first enter JC, PET, and CJ.

We speculate that upon completion of these initial components, individuals are more likely to succeed in WorkFirst's terminal components, WPLEX and JSCI. It is evident from Table 1 that enrollees who successfully progress through WorkFirst components are better suited for the work force. That is, the likelihood an enrollee finds a job and exits welfare is higher than that of an individual who bypasses one or more of the initial components of WorkFirst. Those enrolled in the later stage components seem to be descriptively more successful than those enrolled in the initial stages of the WorkFirst design.

METHOD OF ANALYSIS

To model the Washington State welfare recipient welfare-to-work choice we utilize a discrete dependent variable similar to that of Nakosteen and Zimmer (1980). We will let U_i^w represent welfare recipient i's utility of remaining on welfare while U_i^e will denote i's utility of exiting welfare given they are employed. If $\mathbf{X}_i$ is a set of individual characteristics unique to recipient i, then the corresponding linear random utility model has the form

$$U_i^w = \boldsymbol{\beta}_w' \mathbf{X}_i + \varepsilon_w \quad \text{and} \quad U_i^e = \boldsymbol{\beta}_e' \mathbf{X}_i + \varepsilon_e \tag{1}$$

Utility for each choice is unobservable. However, the choice made by recipient i reveals which choice provides greater utility. If we define W_i to be the observable choice that i makes, then we can let W_i equal one when U_i^e exceeds U_i^w; otherwise,

W_i will be assigned the value zero. If we let F represent the cumulative normal distribution function, $\boldsymbol{\beta} = \boldsymbol{\beta}_e - \boldsymbol{\beta}_w$, and $\varepsilon = \varepsilon_e - \varepsilon_w$, then the probability that W_i equals one is[10]

$$P\left(W_i = 1 \middle| \mathbf{X}_i\right) = F\left(\boldsymbol{\beta}'\mathbf{X}_i + \varepsilon_i > 0\right)$$

provided that the disturbances of system (1) are normally distributed.

The probit model will allow us to determine how effective WPLEX, JSCI, PET, CJ, and JC are at assisting WorkFirst participants in exiting welfare given the employment choice, as measured by our dependent variable which represents an individual who has exited welfare and is employed, *W = 1*. To do this, we compare an unrestricted model with six restricted models. Each regression model will include the following set of individual characteristics: work experience (past 6 years), work experience (past year), education level, number of children, age of client, age of youngest child, and wages.

We use component identifiers to flag those enrolled in each of the included components: WPLEX, JSCI, PET, CJ, and JC. If a client is enrolled in the j^{th} component, then the corresponding component identifier, D_j, will be assigned a one,

[10] The probability of $W = 1$ is

$$\begin{aligned} P\left(W = 1 \middle| \mathbf{X}\right) &= P\left(U^e > U^w\right) \\ &= P\left(\boldsymbol{\beta}_e'\mathbf{X} + \varepsilon_e > \boldsymbol{\beta}_w'\mathbf{X} + \varepsilon_w \middle| \mathbf{X}\right) \\ &= P\left(\boldsymbol{\beta}_e'\mathbf{X} - \boldsymbol{\beta}_w'\mathbf{X} + \varepsilon_e - \varepsilon_w > 0 \middle| \mathbf{X}\right) \\ &= P\left(\boldsymbol{\beta}'\mathbf{X} + \varepsilon > 0 \middle| \mathbf{X}\right) \\ &= F\left(\boldsymbol{\beta}'\mathbf{X} + \varepsilon > 0\right) \end{aligned}$$

where F is denotes the cumulative normal distribution function, $\boldsymbol{\beta} = \boldsymbol{\beta}_e - \boldsymbol{\beta}_w$, and $\varepsilon = \varepsilon_e - \varepsilon_w$.

zero otherwise. The unrestricted model's independent variables will include the entire set of WorkFirst participation identifiers,

$$\mathbf{D}_U = [D_{WPLEX}, D_{JSCI}, D_{PET}, D_{CJ}, D_{JC}].$$

For testing the direct effect of each component we specify five restricted models that remove a corresponding component identifier. For instance, when measuring CJ's effect on being employed and exiting welfare the component identifier matrix becomes

$$\mathbf{D}_{CJ} = [D_{WPLEX}, D_{JSCI}, D_{PET}, D_{JC}].$$

The sixth restricted model includes no component identifiers. The empirical model specification is

$$W = \int_{-\infty}^{\boldsymbol{\beta}'\mathbf{X} + \boldsymbol{\delta}'\mathbf{D}_m + \varepsilon} f(t; \mu, \sigma)\, dt\,, \qquad (2)$$

where the subscript *m* on **D** identifies the specification of the model as either the unrestricted (*U*) or one of the restricted models: WPLEX, JSCI, PET, CJ, or JC.

A likelihood ratio test (*LR*) will be used to compare the unrestricted model with the six restricted models.[11] The likelihood ratio test determines whether each δ_j coefficient corresponding to each component identifier is significantly different from the unrestricted model. A significant chi-square value implies that the component in question is a significant predictor of employment and welfare exits, relative to all

[11] The likelihood ratio statistic is $LR = -2(\ln \hat{L}_R - \ln \hat{L}_U)$, where $\hat{L}_R$ and $\ln \hat{L}_U$ are the log-likelihood functions evaluated at the restricted and unrestricted estimates, respectively (Greene, 2000 pp. 826). For the unrestricted model, SAS reported $-2 \ln \hat{L}_U$ = 7668.53. The unrestricted model included all of the explanatory and indicator variables. The values of $-2 \ln \hat{L}_R$ for the restricted models ranged from 7668.54 to 7729.59. Table 3 summarizes the values of these statistics and their respective Log-Likelihood ratios.

other components. If the restricted model that excludes all dummy variables is significant, the five components are more likely to create employment and reduce welfare dependency than all other WorkFirst components not included in our study. This test will determine the total effect of WorkFirst on employment and welfare exits. The results of the other five restricted models determine if an individual WorkFirst component is a significant predictor by itself, a direct test of the individual effect of each WorkFirst component.

We would also like to predict how welfare recipient quarterly earnings, *Y*, are impacted by their participation in WPLEX, JSCI, PET, CJ, and JC. To do this, we will estimate the parameters of

$$Y_i = \gamma + \boldsymbol{\theta}\mathbf{X}_i + \boldsymbol{\varphi}\mathbf{D}_i + \xi_i \qquad (3)$$

using ordinary least squares (OLS). Equation (3) will determine which predictors have a significant relationship with earnings, and whether or not the relationship is positive or negative. Each component identifier will determine how expected earnings are affected by the participation in each of the five WorkFirst components. The intercept coefficient includes all other individuals in the caseload but not enrolled in one of the five components. We simultaneously control for demographics and prior work experience with the inclusion of $\mathbf{X}_i$.

RESULTS

The results of the nonlinear estimation of equation (2) are reported in Table 2 below. Odds ratios and their corresponding standard errors for each of the predictors in the unrestricted binary choice probit model are included in this table. Results show that coefficients for identifiers corresponding to WPLEX, JSCI, and JC have the

highest odds ratios (each is greater than zero). The WPLEX odds ratio is 1.364 suggesting individuals enrolled in WPLEX are 1.364 times more likely to be employed and have exited welfare than those recipients not enrolled in WPLEX. The JSCI odds ratio is even greater at 2.355. Those who have successfully exited JSCI are 2.355 times more likely to be employed and off of welfare than those not completing JSCI during the same period. The JC component also has significant positive effects on employment and welfare exits.

Pre-employment training and community jobs enrollment and completion is actually less likely to yield employment and a welfare exit (0.988 and 0.974). Education and work experience enhance the enrollee's likelihood of finding work and exiting welfare; while the number of children, age of youngest child, and age of client appear to have very little effect. The older the client or the more children the client has, decrease the chances of employment and exiting welfare. Clients that have younger children are less likely to be employed and more likely to exit welfare. This is a general conclusion not necessarily related to a particular component.

The likelihood ratio test statistics comparing the unrestricted probit model with our six restricted models are reported in Table 3 below. The first row of Table 3 corresponds to the restricted regression that excludes all component identifiers, while the other five rows correspond to the remaining five restricted regressions. Notice that the test statistic associated with row 1 is 122.18. This implies that the programs we chose to include in this study (WPLEX, JSCI, PET, CJ, and JC) significantly improve a WorkFirst client's likelihood of being employed and exiting welfare. Each restricted model tests whether or not any of the individual programs have significant

effects on employment and welfare exits relative to competing programs. Our results suggest JSCI, WPLEX, and JC all significantly increase the likelihood of finding work and exiting welfare, while pre-employment training and community jobs do not. Thus, individuals enrolled in WorkFirst's initial components are not as prepared to exit welfare as their counterparts in the terminal components, and so should remain in the program until the terminal components are completed.

The results of the empirical estimation of equation (3) are reported in Table 4 below. Equation (3) predicts a welfare recipient's expected quarterly earnings, Y, given the individual's characteristics and participation in WPLEX, JSCI, PET, CJ, or JC. Work experience, JSCI, and WPLEX significantly increase earnings, on average. For instance, if a participant in WorkFirst is enrolled in WPLEX, her earnings will increase, on average, by $1,018.18 per quarter after completion. Likewise, if an individual is enrolled in JSCI, her earnings will increase by an average of $491.69 per quarter. The Community Jobs, Pre-Employment Training, and J-Components programs appear to have negative effects on quarterly earnings; these programs reduce earnings by $92.82, $105.14, and $48.97 respectively. The intercept term represents all other programs in the WorkFirst caseload. Therefore, all other components within the WorkFirst program increase earnings, on average, by $114.62. Age, work experience, and number of children are positively correlated with earnings, each is significant. Age of youngest child has a negative correlation with earnings. Education is not a significant predictor of earnings, and therefore has no relationship with earnings. The welfare population as a whole is uneducated; most do not have

college degrees, and a college degree is the only degree that could really differentiate earnings between these individuals.

Those who have completed later stage components have a higher probability of working and exiting welfare at higher wages (JSCI and WPLEX). Those who complete initial stage components are less likely to find work, exit welfare, and earn lower wages than those completing later stage components (CJ, PET, and JC). WorkFirst, by design, encourages individuals to initially enroll in initial stage components such as CJ, PET, or JC. After completing these initial components, the welfare recipient is then ready to look for work and enrolls in JSCI or WPLEX. Those welfare recipients who progress through the WorkFirst design face better odds of exiting the welfare rolls through employment and earn higher wages than those who do not.

CONCLUSIONS AND POLICY RECOMMENDATIONS

Our results show that WPLEX and JSCI are stronger predictors of employment, while completion reduces welfare dependency; both programs increase wages significantly. On the other hand, the pre-employment training and community jobs components are not strong predictors of employment and do not significantly reduce welfare dependency. CJ and PET actually decrease earnings on average. This can be explained in several ways. First, people that are enrolled in WPLEX and JSCI tend to have more work experience, are younger, and have fewer children on average; demographics of this group are more favorable. Secondly, these enrollees may have already been through at least one of the other WorkFirst programs, for instance, pre-employment training or community jobs. That is, individuals often learn job skills

and job training before being enrolled in WPLEX or JSCI. The WorkFirst design is intended to build work experience and skills through completion of several components, or stages.

This analysis has showed several things, and has also left several questions unanswered. WPLEX and JSCI are more effective, on average, than all other WorkFirst programs at increasing the likelihood of employment and exiting welfare. However, those enrolled in WPLEX or JSCI could be better prepared for the job market than those enrolled in CJ, PET, and JC. Whether this is due to the design of WorkFirst or attributed to the demographics and personal characteristics of each individual is ambiguous. However, overall, if the welfare recipient does progress through the various stages, components, they are more likely to be employed and exit welfare.

REFERENCES

Bartik, T. and R. Eberts (1999) "Examining the Effect of Industry Trends and Structure on Welfare Caseloads," *Economic Conditions and Welfare Reform*, Edited by S. Danziger, Upjohn Institute for Employment Research, Kalamazoo, MI, pp. 119-57.

Blank, R. M. (2000) "What Causes Public Assistance Caseloads to Grow?" *Journal of Human Resources* 36: 85-118.

Bloom, D. and C. Michalopoulos (2001) "How Welfare and Work Policies Affect Employment and Income: A Synthesis of Research," New York: Manpower Demonstration Research Corporation.

Fein, D., D. Long, J. Behrens, and W. Lee (2001) "The ABC Evaluation: Turning the Corner: Delaware's A Better Chance Welfare Reform Program at Four Years," Cambridge: Abt Associates.

Figlio, D. and J. Ziliak (1999) "Welfare Reform, the Business cycle, and the Deline in AFDC Caseloads," *Economic Conditions and Welfare Reform*, Edited by S. Danziger, Upjohn Institute for Employment Research, Kalamazoo, MI, pp. 17-48.

Friedlander, D. and G. Hamilton (1996) "The Impact of a Continuous Participation Obligation in a Welfare Employment Program." *The Journal of Human Resources* 31(4): 734-756.

Friedlander, D., D. H. Greenberg, and P. K. Robins (1997) "Evaluating Government Training Programs for the Economically Disadvantaged." *Journal of Economic Literature* 35(4): 1809-1855.

Greene, W. (2000) *Econometric Analysis*, Fourth Edition. Upper Saddle, NJ: Prentice-Hall, Inc.

Harris, K. (1993) "Work and Welfare Among Single Mothers in Poverty," *American Journal of Sociology* 99, pp. 317-352.

Harris, K. (1996) "Life After Welfare: Women, Work, and Repeat Dependency," *American Sociological Review* 61, pp. 407-426.

Hoynes, H. (2000) "Local Labor Markets and Welfare Spells: Do Demand Conditions Matter?" *Review of Economics and Statistics* 82, pp. 351-368.

Learch, S., J. Mayfield, and M. Burley (1999) "WorkFirst Job Search Services: Preliminary Analysis," Washington State Institute for Public Policy, Publication #9-06-3301.

Nakosteen and Zimmer (1980) "Migration and Income: The Question of Self-Selection," *Southern Economic Journal* 46, pp. 840-51.

O'Neill, J. and M.A. Hill (2001) "Gaining Ground? Measuring the Impact of Welfare Reform on Welfare and Work," NY: Manhattan Institute.

Wallace, G. and R. Blank (1999) "What Goes Up Must Come Down," *Economic Conditions and Welfare Reform*, Edited by S. Danziger, Upjohn Institute for Employment Research, Kalamazoo, MI, pp. 49-89.

Ziliak, J., D. Figlio, E. Davis, and L. Connelly (2000) "Accounting for the Decline in AFDC Caseloads: Welfare Reform or Economic Growth?" *Journal of Human Resources* 35 (Summer): 570-586.

TABLE 1 Descriptive Statistics

Component	JSCI	WPLEX	JC	PET	CJ
N	691	1122	8637	1588	1838
N with UI-reported wages	571	1033	4635	739	832
% employed in the CY2001, Q1	83.00%	92.10%	53.70%	46.50%	45.30%
Median quarterly earnings in CY2001, Q1	$1,657	$2,724	$1,496	$1,954	$1,624
% who exit TANF in January 2001	23.00%	17.90%	18.00%	14.70%	12.00%
% returning in Feb., March, or April 2001	15.10%	12.90%	17.10%	19.30%	18.20%
Mean age of client	31*	33	33	32*	33*
Mean age of youngest child	6*	7*	8*	7*	8*
Mean number of children	2	2	2	2	2
% that never made it through eighth grade	10.48%	11.42%	12.34%	10.45%	12.01%
% with some high school	41.22%	24.28%	29.98%	34.54%	35.20%
% with high school diploma/GED	42.16%	49.31%	45.68%	44.37%	43.23%
% with some college	5.50%	13.17%	10.36%	9.64%	8.70%
% with at least a BS/BA	0.62%	1.81%	1.64%	0.99%	0.85%
Percent married	23%	32%*	28%*	24%*	22%*
% of past 24 quarters employed	43.79%	44.13%	34.90%	33.05%	35.83%
% of past 4 quarters employed	57.58%	62.10%	43.02%	37.48%	30.16%
Median earnings over past 4 quarters	1,018	1,680	878	895	681
Percent with zero earnings in 6 years	2.28%	4.18%	12.79%	11.83%	10.64%

Data Source: JAS, UI wage file, monthly JSCI report, an * says that the cell in question is significantly different than the caseload.

Table 2 Odds Ratios of the Unrestricted Probit Model

Odds Ratio Estimates Effects	Point Estimate	Standard Errors
Education	1.000	0.000087
Age Client	0.989	0.00265
Age of Youngest Child	0.992	0.00355
Work Experience (last 6 years)	1.025	0.00437
Work Experience (previous year)	1.035	0.0183
Number Children	0.966	0.0196
Community Jobs (CJ)	0.974	0.0824
JSCI	2.355	0.0818
Pre-Employment Training (PET)	0.988	0.0814
WPLEX	1.364	0.0774
J-Components (JC)	1.431	0.0788

Table 3 Likelihood Ratio Test Statistics
(Unrestricted $-2 \times \text{log-likelihood} = 7668.53$)

Restricted Model	$-2 \times \text{log-likelihood}$	Likelihood Ratio*
No Identifiers	7729.59	122.118
JSCI	7717.41	97.75
J-Components	7678.24	19.42
WPLEX	7676.23	15.402
Community Jobs	7668.58	0.099
Pre-Employment Training	7668.54	0.022

* The chi-square statistic is calculated by subtracting the unrestricted $-2 \times \text{log-likelihood}$ from that of the restricted (Greene 2000, pp. 826).

Table 4 OLS Estimates of Equation 2

Effect	Estimated Coefficient	Standard Errors
Intercept	114.62	47.32
Education	-0.206	0.369
Age of Client	7.588	1.467
Age of Youngest Child	-5.93	1.553
Work Experience (last 6 years)	57.14	2.230
Work Experience (previous year)	36.71	9.248
Number of Children	63.09	9.124
Community Jobs (CJ)	-92.82	36.68
JSCI	491.69	54.13
Pre-Employment Training (PET)	-105.14	37.54
WPLEX	1018.18	45.46
J-Components (JC)	-48.97	38.82