J Fam Econ Iss (2012) 33:130–142
DOI 10.1007/s10834-011-9272-1

ORIGINAL PAPER

The Effects of Welfare-to-Work Programs on Welfare Recipients' Employment Outcomes

Jeounghee Kim

Published online: 6 September 2011

Abstract This study examined the effects of U.S. Welfare-to-Work programs on the employment outcomes of Temporary Assistance to Needy Family (TANF) recipients. Using the Survey of Program Dynamics and the Welfare Rules Database, the present study followed unemployed TANF recipients who participated in Human Capital Development (HCD) and Labor Force Attachment (LFA) programs from 1997 through 2001. The analyses examined how program participation affected recipients' employment while holding the effects of the state economy and various TANF rules constant. The results showed that, unlike the assumption of the work-first strategy in the welfare reform, participation in HCD programs was associated with a higher probability of obtaining and maintaining employment than participation in LFA programs.

Keywords Employment · Human capital development · Labor force attachment · Welfare reform · Welfare-to-work

The U.S. government has tried to reduce welfare caseloads by moving welfare mothers into the labor market for more than four decades. This Welfare-to-Work (WTW) movement reached its peak in 1996 when the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) created strict work requirements and a 5-year time limit on cash benefits. Most recently, the work requirements were made even stricter when the government reauthorized PRWORA while adopting the Deficit Reduction Act (DRA) (P.L. 109–171) in February of 2006. While the entire focus of the WTW movement has changed into recipients' rapid employment, provisions on education or training opportunities for long-term human capital development have become clearly limited.

In fact, there have been debates for decades over which WTW strategy, rapid employment or advancement of education and skills, is more effective in bringing about better employment outcomes among poor single mothers. The former *Labor Force Attachment* (LFA) strategy assumes that the (nonworking) poor can best build work habits and skills and advance their positions in the labor market by starting to work at any initial job, including low-paying and unstable jobs. Typical LFA activities include participating in job-search and work-experience programs that are short-term, low cost, and outcome driven. On the other hand, the latter *Human Capital Development* (HCD) strategy assumes that the poor cannot hold well-paying and stable jobs without improving their human capital first. Under the HCD strategy, typical activities include participation in basic education, post secondary education, and occupational-specific vocational training designed to enable participants to obtain long-lasting and well-paying employment (Hamilton et al. 2001).

Obviously, the government's recent welfare-reform efforts have been diverted from the HCD strategy to the LFA strategy. This emphasis on LFA was largely based on the research findings in the 1980s and 1990s, showing that programs emphasizing quick job placement can be more effective in reducing welfare payments and increasing employment than programs offering time-consuming and expensive education and training (Strawn 1999). Indeed, since the government declared the LFA strategy as the primary means of reforming welfare in 1996, the welfare caseload has been reduced by almost 50% in a seeming confirmation of the effectiveness of the LFA strategy.

J. Kim (✉)
School of Social Work, Rutgers, the State University of New Jersey, 536 George Street, New Brunswick, NJ 08901, USA
e-mail: jeoung@ssw-mail.rutgers.edu

Before one uses this existing evidence as a base for discarding the HCD strategy, however, a close examination of literature is warranted. In fact, the literature provides little evidence that the results of past experimental studies on WTW programs are flawless or even reproducible for recipients of Temporary Assistance to Needy Families (TANF). Many experimental studies not only suffer from methodological flaws but also were conducted with rather homogeneous populations in small localities, whereas TANF programs are being implemented on a national scale and deal with more diverse populations and policy environments (Greenberg et al. 2005; Heckman et al. 1999). In addition, the literature indicates that the results of the recent welfare reform were much more mixed than they were often publicized, as many TANF leavers suffer from unemployment, material hardship, and subsequent welfare recidivism (Parrott and Sherman 2007; Livermore et al. 2010). Furthermore, most econometric studies on TANF have failed to consider the effects of WTW programs as well as specific TANF rules such as time limits and sanctions in their examinations of the effects of TANF on the recipients' employment outcomes.

In this light, the main contribution of this study is to examine the effects of the two WTW strategies on TANF recipients' employment outcomes while controlling for other major specific TANF rules, the state economy, and individual characteristics, using nationally representative longitudinal data, the Survey of Program Dynamics and the Welfare Rules Database. More specifically, this study explores whether or not the probabilities of entering and exiting employment (after having obtained it) are significantly different by the type of WTW programs in which TANF recipients participated.

Literature Review

Effects of WTW Programs on Employment

U.S. welfare history provides ample evidence on the impacts of the two WTW strategies on welfare recipients' outcomes from the evaluations of national and state welfare experiments (Friendlander et al. 1997). Of the many evaluations, the National JOBS Study, known as the National Evaluation of Welfare-to-Work Strategies (NEWWS), offers the most useful evidence because of its explicit goal of directly comparing the impacts of the two WTW strategies in its eleven experimental programs. In the experiment, three sites (Atlanta, Grand Rapids, and Riverside) simultaneously implemented both HCD and LFA programs to directly compare the impacts of each strategy. Meanwhile, another four sites (Columbus Integrated, Columbus Traditional, Detroit, and Oklahoma City) ran only HCD programs, and Portland experimented with an LFA program that also offered HCD opportunities (Hamilton et al. 2001).

According to the Manpower Demonstration Research Corporation (MDRC) that conducted the evaluation research, only three (Riverside, Columbus, and Detroit) of seven HCD programs had small impacts on participants' employment *rates*. The difference in the employment rates between the control and the treatment groups ranged from 2.2 to 9.5%. The small size of the impacts was largely because the majority of the control groups also participated in employment-related activities available in their communities on their own. The impacts of these HCD programs were found to be more significant on participants' employment *duration*, measured as the mean number of quarters employed over 5 years. The impacts ranged from 16.6% (5.5 quarters for the experimental group vs. 4.7 quarters for the control group) in Riverside to 3.1% in Columbus (Hamilton et al. 2001).

Contrary to these HCD programs, all LFA programs significantly affected participants' employment. The impact was the largest and the most consistent in the Portland program with an impact of 21% in the means of employment durations over the 5 years of the evaluation. Portland's success was known to have resulted from its unique combination of both WTW strategies. Side-by-side comparisons of the LFA and HCD strategies in the NEWWS experiments suggested that the LFA programs, by and large, had quicker, larger and more consistent effects on participants' employment than the HCD programs did (Hamilton et al. 2001).

Although these findings from the demonstration programs seemed conclusive enough, a more recent study of California's Greater Avenues for Independence (GAIN) program found a conflicting result that the relative advantages of the LFA approach were largely attributed to better local labor market conditions in Riverside County (Hotz et al. 2006). The study found that in the longer run the HCD programs of GAIN yielded higher employment rates compared to the LFA programs and that the use of an HCD strategy could be more effective for successful WTW transitions and long-term self sufficiency.

Besides this conflicting new evidence, the literature also warned that the results of the past experimental programs may not be the same for a permanent, national program (Pepper 1999). While the short-term, small scale, and homogeneous (geographically, socially, and economically) environments of demonstration programs were conducive to producing fairly straightforward outcomes, permanent programs including TANF usually deal with more heterogeneous settings where populations are more diverse and the environments are more complex. Therefore, drawing inferences from the experimental evidence may not

necessarily lead to an accurate depiction of the anticipated effects of WTW programs for TANF recipients (Greenberg et al. 2005). More empirical studies are needed to examine which WTW programs are indeed more effective for TANF recipients.

Effects of TANF on Employment

A few econometric studies of 1996 welfare reform also offer what seems to be circumstantial evidence about the effects of WTW strategies. None of them, unfortunately, provides direct evidence on the effectiveness of WTW programs because they considered welfare reform as a package of policies with the use of dummy variables in their analyses. They also generally focused on aggregate outcomes (i.e., caseload reduction) and failed to measure changes in individual behaviors associated with the variations in state WTW programs (Moffitt 2003).

Findings of these studies, moreover, are mixed at best. While O'Neill and Hill (2001) and Grogger (2003), for example, argued that recent welfare reforms (including pre-PRWORA waivers) were responsible for the increase in employment of single mothers, Schoeni and Blank (2000) attributed it to the growing strength of the economy during the early welfare reform years. Again, besides these broad analyses of the 1996 welfare reform, there are few empirical studies that have examined if and how the type of WTW programs have made significant differences in the employment outcomes of TANF recipients.

Effects of Other Specific TANF Rules and the Local Economy on Employment

A recent study by De Jong and his colleagues (2006) found that, since the welfare reform of 1996, States have become more stringent on TANF rules designed to guide the recipients' behaviors. Several studies have hinted that such rules including time limits, diversion, family caps, and sanctions may also affect their employment outcomes. Although the number of these studies is too limited to lead a conclusion about how these specific TANF rules affect their employment outcomes, the following statements can be made about their effects based on the existing evidence.

First, severe forms of sanctions for noncompliance with work requirements might increase the probability of work (Hofferth et al. 2005). Second, diversion might be associated with lower rates of employment due to economic deprivation (London 2003). Third, time limits might encourage the recipients to find jobs and leave welfare more quickly (Grogger 2003). Fourth, earnings disregards could offer work incentives (Connolly and Marston 2005). Fifth, little is known about how the family cap provision affected employment outcomes (Grogger et al. 2002). Finally, TANF benefit levels were likely to affect the probability of program exit and employment (Sandefur and Cook 1997).

Existing studies unanimously state that a strong economy had substantially positive effects on TANF recipients' employment (e.g., Council of Economic Advisors 1999). For example, according to Grogger (2003) and O'Neill and Hill (2001), anywhere from 17% to 35% of the increase in the employment of welfare-prone populations between 1992 and 1999 could be attributed to the economy.

Effects of TANF Recipients' Characteristics on Employment

The literature documents that individual characteristics including disability, education, and number of children are also significant determinants of TANF recipients' employment outcomes. Whereas mental and physical disabilities and a greater number of children exert the largest negative effects on employment status, education, especially some college education or a college degree, substantially increases the probability of employment among TANF recipients (Jayakody and Stauffer, 2000). In addition, it has been documented that the region of residence made a difference in WTW transitions. Welfare recipients living in rural or inner-city areas had much greater challenges in making a WTW transition partially due to long commutes to work and a lack of social services, childcare, and employment opportunities (Fisher and Weber 2002).

Methods

Data and Sample

Three longitudinal data files were merged for this study. Individual data came from the Survey of Program Dynamics (SPD), whereas state TANF policies and unemployment statistics came from the Welfare Rules Database (WRD) and the Bureau of Labor Statistics. The SPD was a 10-year longitudinal survey by the U.S. Census Bureau on civilian, non-institutional individuals from nationally representative households. It was mandated by Congress as a part of PRWORA to collect information on a wide variety of demographic and welfare-related topics and monitor the long-term effects of welfare reform. The SPD used three different survey instruments, and this study used only the data collected with the SPD instrument from 1998 through 2002 (for calendar year 1997 through 2001) because the focus of this research was on post-TANF era, and questions about WTW program participation were not included in other survey instruments prior to 1998 survey (U.S. Census Bureau 2002).

Compared to other longitudinal data files, the SPD was particularly useful for this research because it offered weekly employment data and annual WTW program participation data. One of the major limitations of the SPD, however, was lack of information on program quality, duration, and motivation (voluntary vs. mandatory), sequence, and timing of program participation (U.S. Census Bureau 2002). Implications of these limitations were discussed in more detail later.

The Welfare Rules Database (WRD) was also a longitudinal data source funded by the US Department of Health and Human Service and collected by the Urban Institute. It recorded annual data on the 29 most significant categories of state AFDC/TANF rules in all 50 states and the District of Columbia from 1996 through 2005. The WRD did not record how state TANF rules were implemented in practice because it took time for any policies to take effect or be saturated in the field. For the policies determined at the county level, the WRD captured ones for the largest county in the state. It also recorded the majority rules that affected the majority of the caseload for the majority of the year when there were great variations within a state in a year (Rowe et al. 2006). Interpretation of the result of this study should take these facts into consideration.

Monthly unemployment statistics came from the following website of the Bureau of Labor Statistics (BLS): Local Area Unemployment Statistics, http://data.bls.gov/cgi-bin/dsrv. Note that because the employment data from SPD were weekly while both the state welfare rules and unemployment statistics were collected monthly, the employment data were converted into monthly data in the merge process by keeping only the data of the first weeks (choosing other weeks or averaging a couple of weeks to represent entire months did not qualitatively change the results of descriptive or multivariate analyses).

Two hundred and twenty-eight mothers with children younger than 18 years old ($N = 228$) who met the following criteria were selected into the sample—(a) participated in any WTW programs at least once in 1997 but not between 1998 and 2001, (b) received TANF benefits at least once between 1997 and 2001, (c) were unemployed in October 1997 when all states were required to implement TANF under PRWORA, and (d) never received SSI or any other incomes on the account of their own or a family member's disability between 1997 and 2001. The time of origin for this study was chosen as October 1997 (month of the "official" TANF enactment) rather than the end month of a WTW program because WTW program participation was recorded annually, and the exact timing of participation was not available in the SPD. Basically, the sample mothers who received WTW programs in 1997 were followed from October 1997 through December 2001. Mothers whose unemployment spell already started before that time (i.e., left-censored cases) were excluded from the sample (Allison 1995). The sample mothers were then divided into the following three groups—(1) HCD ($n = 66$), (2) LFA ($n = 94$), and (3) both HCD and LFA ($n = 68$)—based on the type of WTW programs they participated in.

Variables and Measures

The dependent variables that came from the SPD included the spells of unemployment and employment. An unemployment spell of a mother began in October 1997 and ended when she became employed or was right censored (note that only the first spell of unemployment was observed). An employment spell started when the mother became employed and ended when she exited from employment or was right censored (again, only the first spell of employment was observed). The definitions of unemployment and employment followed those given by the Bureau of Labor Statistics (U.S. Department of Labor 2008, Chapter 1, p. 2). Both the unemployment and employment spells were measured monthly and allowed to vary monthly.

The independent variables were participation in a WTW program, and the variables came from the SPD. An LFA program was defined as a program that provided job search assistance, employment counseling, work experience (unpaid job, internship, or community service, workfare), short-term job readiness training, job club or placement services, on-the-job training, and/or classroom training in job skills. An HCD program was defined as a high school (or GED), college, vocational school, or any other educational program. Note that a mother's participation in any of the above programs could have been either voluntary (i.e., personally initiated) or mandatory (i.e., required by local welfare offices).

The control variables entailed the following four groups of variables: (a) demographic characteristics from the SPD that included race, age, education, marital status, number of children, status of TANF receipt, and region of residence; (b) state TANF policy rules from the WRD that included the presence of a family cap, hours of work needed to be exempt from work requirements, presence of diversion, level of worst sanction, type of time limit, level of earnings disregard, time to required work activities, allowable work activities, and maximum benefit amounts (Detailed measurements of these variables were provided in the Appendix Table.); (c) monthly state unemployment rates from BLS, and (d) year dummy variables from the SPD that measured time-specific unobservable factors (Grogger et al. 2002; Grogger 2003). Note that in the exception of race and year dummy variables, all of the dependent and control variables including state TANF rules were allowed to vary monthly in the following multivariate analyses.

Data Analyses

First, descriptive statistics of the independent and control variables were obtained using the final longitudinal weight variable provided in the SPD in order to produce non-biased estimates. Second, survival functions of the dependent variables were calculated using the Kaplan–Meier method to describe unemployment and employment durations. Finally, discrete-time logit models were used to examine if the probabilities of entering and exiting employment were significantly different by the type of WTW program, while the effects of individual characteristics, state TANF rules, and unemployment rates were held constant.

The choice of a discrete-time logit model was based on the following three reasons and the advantages of the model. The first reason was the fact that monthly determination of employment and unemployment makes the process of entering into and exiting from employment inherently discrete. Second, because time in this study was measured as crudely as month, it was possible that many mothers experienced entries into and exits from employment at the same months and created many tied cases. A discrete-time logit model successfully handles this problem by assuming that the events occur at a discrete time. Third and last, unlike other survival methods, a discrete-time logit model was particularly useful for this study because the model could handle many time-varying covariates. In a discrete-time logit model, each individual's survival history was broken down into a set of discrete time units that were treated as distinct observations. After pooling these observations, a binary regression model was estimated to predict whether an event did or did not occur in each time, while covariates were allowed to vary over time (Allison 1995).

Because this study merged three data files, one of which had individuals as the unit of observation and the other two had states as the unit of observation, it was possible that individuals in the same state were more similar on a wide variety of observed as well as unobserved measures. Because of the potentially correlated nature of the data, the regression models used Huber-White robust standard errors that were known to adjust for possible correlations of error terms across observations and obtain valid results of significance tests (Rogers 1993).

Findings

Characteristics of the Sample

As Table 1 suggests, in the first month of observation, the mean age of all mothers was 30 years. More than 40% of mothers were White and almost 29% and 25% were African American and Hispanic, respectively. Nearly 56% had never been married, but around 66.5% had at least two children. Approximately 70.5% had less than or equal to a high school education, and the remaining had attended some college (no mothers had graduated from college or had a graduate education). Seventy-four percent were living in poverty with total family incomes below 100% of the Federal Poverty Threshold incomes of the given family sizes, and about 82% were receiving TANF in the first month of observation. The median total family income (income from all sources) was around $725 per month.

When mothers were compared by the type of WTW programs in which they participated, those who participated in the HCD programs were younger, better educated, had a fewer number of children, were more likely to be White, and had higher monthly family incomes than those who participated in the LFA or both the LFA and HCD programs. Whether these observable demographic differences between the HCD and LFA participants were due to self-selection into one type of WTW program and/or cream-skimming of mandatory programs was unknown (Heckman et al. 1999). An important thing to note was that participation in one of the WTW programs might be endogenous if the decision to participate in one rather than the other WTW program was correlated with *unobservable factors* that would also affect employment outcomes. If only those with high employment potential were selected into the HCD programs (either voluntarily or involuntarily) and therefore were more likely to obtain employment with all other observable factors being equal, then failure to control for this correlation might yield an estimated effect of the HCD program that was biased upward. Although a traditional instrumental variable approach could be used to guard against such a bias (Friendlander et al. 1997), identifying an instrumental variable that was correlated with WTW program participation but uncorrelated with employment outcomes was challenging and beyond the scope of this study. Implications of this limitation were discussed later.

Table 1 indicated that around 46% of mothers lived in a state where there was a family cap provision. The majority of mothers (60%) had to work at least 20 h a week in unsubsidized jobs to be exempted from their states' work requirement. Less than 10% of mothers resided in a state that had adopted a diversion strategy. More than 68% of mothers lived in a state that had adopted a partial loss of benefits as its worst sanction policy. Nearly 45% and 17% lived in a state in which they were subject to a lifetime and/or period time limit. Most mothers (74%) were residing in a state that offered an earnings disregard of $90. Around 69% of mothers were required to participate in work activities as early as in the process of applying for TANF or receiving their first benefits. Around 40% mothers were living in a state where they were allowed to participate in a

Table 1 Descriptive statistics, by type of welfare-to-work program

	All ($N = 228$)	HCD ($N = 66$)	LFA ($N = 94$)	LFA & HCD ($N = 68$)
Demographic characteristics				
Age (mean)	30.54	28.10	30.75	31.76
Race				
White	42.26	42.47	37.27	46.46
Black	29.35	23.29	31.82	30.71
Hispanic	25.16	31.51	27.27	19.69
Marital status				
Currently married	14.84	17.81	18.18	10.24
Previously married	29.35	20.55	26.36	37.01
Never married	55.81	61.64	55.45	52.76
Education				
Less than high school	31.56	29.22	36.67	28.48
High school	38.90	23.06	38.86	48.03
Number of children				
One	34.52	45.21	32.73	29.92
Two	31.94	30.14	32.73	32.28
Three	20.32	20.55	16.36	23.62
Four or more	13.23	4.11	18.18	14.17
Region of residence				
Northeast	26.45	26.03	30.91	22.83
Midwest	20.32	16.44	27.27	16.54
South	19.68	24.66	13.64	22.05
West	33.55	32.88	28.18	38.58
Poor (below 100% FPLs)[1]	73.87	64.38	76.36	77.17
Receiving TANF	82.45	82.08	76.06	88.19
Median monthly family income ($)	725.00	896.00	684.00	712.00
State TANF rules				
Presence of family cap	46.45	37.73	48.03	64.38
Hours of work in unsubsidized job to be exempt from work requirement				
No exemption	37.74	39.09	35.43	39.73
30 hours	2.58	2.73	2.36	2.74
20 hours	59.68	58.18	62.20	57.53
Presence of diversion	6.77	6.36	7.09	6.85
Type of sanction				
Entire Loss of benefit for life or specific time or until compliance	31.94	27.27	26.77	47.95
Partial loss of benefit for specific time or until compliance	68.06	72.73	73.23	52.05
Type of time limit				
Life time limit or benefit waiting period	44.84	55.45	35.43	45.21
Period limit or benefit reduction period	16.77	14.55	18.11	17.81
No time limit	38.39	30.00	46.46	36.99
Type of earnings disregards				
$90 flat amount	74.19	72.73	78.74	68.49
Flat amount of more than $90	13.87	13.64	12.60	16.44
20% of earning	6.77	8.18	5.51	6.85
100% earning	5.16	5.45	3.15	8.22
Time when required activities are imposed				
Upon applying for TANF	35.16	23.64	43.31	38.36
Upon receiving TANF	33.87	39.09	27.56	36.99
Within 2 years of TANF receipt	7.42	13.64	3.94	4.11
No time specified	23.55	23.64	25.20	20.55
Type of allowable activities for non exempt recipients				
Only work or only school activities	40.97	35.45	44.88	42.47
More possibilities including community service or child care	18.91	18.18	15.75	24.66
Wide range of activities including PSE	40.32	46.36	39.37	32.88
Maximum benefit for a family of four ($)	525.10	526.85	523.44	525.33

Note: A mother was defined poor if her total monthly family income was below the monthly Federal Poverty Lines, available at http://www.census.gov/hhes/www/poverty/threshld.html)

wide range of work activities including post secondary education.

Survival Functions: Obtaining Employment

Of the 228 sample mothers, 120 mothers eventually found employment sometime in the observation period. The Kaplan–Meier analyses in Table 2 showed that the cumulative proportion of person spells remaining unemployed up to three-month time intervals. The results suggested that

the estimated probability that an unemployment spell would last for 12 months was 0.583; that was, approximately 42% of all unemployment spells ended within a year of the fist observation due to obtaining employment. Within 24 months of observation, 49% of the sample mothers ended their unemployment spells and found employment.

Table 2 also showed that the survival functions of unemployment spells by the type of WTW program. By 12 months into observation, while 50% of the LFA participants remained unemployed, around 66 and 62% of the HCD participants and those who participated in both WTW programs were still unemployed. Interestingly, however, by the end of the observation period, it was the mothers in both WTW programs who showed the lowest unemployment rate. Although these results might suggest that short-term outcomes of WTW programs could be different from long-term outcomes, a log-rank test revealed that such differences in the unemployment durations were not statistically significant.

Multivariate Analysis: WTW Programs and Employment

The sample of 228 mothers created 3,720 person-month observations for the analysis of a discrete-time loigt model. The result showed that it was actually the combination of the LFA and the HCD programs that was associated with a higher probability of obtaining employment when other relevant factors were controlled for. As Table 3 revealed, mothers who participated in both WTW programs were almost 55% more likely to find employment than those who received the LFA services.

Among other characteristics, having some college education (compared to having less than a high school degree) and living in Northeastern (compared to Southern) states had positive effects on obtaining employment. With respect to state TANF rules, how soon required activities were imposed was a significant factor related to the probability of finding employment. Compared to mothers who had to participate in work activities upon applying for TANF, those who were allowed more time in complying with the requirements were less likely to obtain employment. The results also suggested that local labor market conditions were a significant factor; mothers who were living in a state where the unemployment rate was higher were less likely to find employment.

Survival Functions: Employment Duration

As Table 4 indicated that, among the 120 mothers who found employment, 70 mothers (number of failed persons) became unemployed again during the subsequent observation period. (Note that the time of start for the analysis of employment duration was the months when those mothers obtained employment). The results showed that the estimated probability that an employment spell would last for

Table 2 Survival function of unemployment, by type of welfare-to-work program

Month	All	HCD	LFA	HCD & LFA
0–3	1.000	1.000	1.000	1.000
3–6	0.925	0.955	0.917	0.909
6–9	0.796	0.866	0.750	0.792
9–12	0.658	0.716	0.573	0.714
12–15	0.583	0.657	0.500	0.623
15–18	0.551	0.639	0.478	0.569
18–21	0.531	0.597	0.478	0.539
21–24	0.526	0.575	0.478	0.539
24–27	0.511	0.575	0.478	0.496
27–30	0.493	0.575	0.478	0.445
30–33	0.485	0.575	0.478	0.425
33–36	0.478	0.534	0.478	0.425
36–39	0.470	0.534	0.478	0.405
39–42	0.462	0.534	0.478	0.383
42–45	0.452	0.534	0.478	0.383
45–48	0.452	0.534	0.478	0.359
Number of total persons	228	66	94	68
Number of failed persons	120	28	50	40
Number of censored persons	108	38	44	28
Percent censored	47.37	57.58	46.81	41.18

Log-rank test of equality of survival function: Chi-square(df) = 2.465 (2)

Table 3 Discrete time logit model of entry into employment

	Logit	Huber-White Robust SE	Odds ratio
Age	0.000	0.015	1.000
Race			
White	0.166	0.393	1.180
(Black)			
Hispanic	−0.231	0.376	0.794
Others	−0.181	0.388	0.835
Marital status			
Currently married	−0.532	0.339	0.587
Previously married	0.568*	0.286	1.764
(Never married)			
Education			
(Less than high school)			
High school	0.082	0.404	1.085
Some college	0.337*	0.157	1.401
Number of children			
One	−0.163	0.609	0.849
Two	−0.349	0.530	0.705
Three	−0.915	0.590	0.401
(Four or more)			
Region of residence			
Northeast	1.427**	0.354	4.164
Midwest	0.226	0.500	1.254
(South)			
West	1.293*	0.550	3.642
Presence of family cap	−0.243	0.406	0.784
Hours of work in unsubsidized job to be exempt from work requirement			
(No exemption)			
30 hours	−0.934	0.870	0.382
20 hours	0.153	0.442	1.165
Presence of diversion	0.085	0.428	1.088
Type of sanction			
(Entire Loss of benefit for life or specific time or until compliance)			
Partial loss of benefit for specific time or until compliance	−0.207	0.365	0.813
Type of time limit			
(Life time limit and benefit waiting period)			
Benefit waiting or period limit or benefit reduction period	−0.354	0.371	0.702
No time limit	0.092	0.560	1.097
Type of earnings disregard			
($90 flat amount)			
Flat amount of more than $90	−0.033	0.314	0.968
20% of earning	−0.140	0.476	0.869
100% earning	−1.316*	0.518	0.268
Time when required activities are imposed			
(Upon applying for TANF)			
Upon receiving TANF	−1.031**	0.328	0.357
Within 2 years of TANF receipt	−1.181	0.617	0.307
No time specified	−0.770*	0.372	0.463
Type of allowable activities for non exempt recipients			
(Only work or only school activities)			
More possibilities including community service or child care	0.504	0.613	1.655
Wide range of activities including post secondary education	0.572	0.395	1.772
Maximum TANF benefit	0.001	0.001	0.999
Monthly state unemployment rate	−0.601***	0.148	0.548
Number of month unemployed	−0.106**	0.031	0.899
Year			
1997	−0.425	0.393	0.653
1998	−0.699	0.396	0.497
1999	−0.233	0.728	0.793
2000	−0.627	0.314	0.534
(2001)			
Receiving TANF	−0.912***	0.272	0.402
Type of program participated			
HCD	0.109	0.404	1.115
LFA & HCD	0.437*	0.209	1.548
(LFA)			
Log Likelihood (Pseudo Chi-square)	−1,480.07		
Total Person-Month Observation	3,720		

* $p < .05$, ** $p < .01$, *** $p < .001$ (Reference groups are in parentheses)

12 months was 0.471, indicating that around 53% of employment spells ended within a year.

The remaining columns of Table 4 suggested that participation in the HCD programs might be associated with a longer duration of employment compared to participation in the LFA programs. After 12 months of employment, nearly 68% of the HCD participants still maintained the employment whereas only 42% of the LFA participants did so. This difference in the survival functions, however, was not statistically significant according to a log-rank test.

Table 4 Survival functions of employment spell, by type of program

Month	All	HCD	LFA	HCD & LFA
0–3	1.000	1.000	1.000	1.000
3–6	0.764	0.786	0.780	0.733
6–9	0.577	0.714	0.540	0.533
9–12	0.504	0.679	0.420	0.489
12–15	0.471	0.679	0.420	0.422
15–18	0.460	0.679	0.398	0.422
18–21	0.460	0.679	0.398	0.399
21–24	0.460	0.679	0.398	0.399
24–27	0.447	0.679	0.398	0.399
27–30	0.447	0.679	0.371	0.399
30–33	0.418	0.679	0.371	0.399
33–36	0.403	0.679	0.371	0.337
36–39	0.403	0.679	0.371	0.307
Number of total persons	120	27	49	44
Number of failed persons	70	9	31	30
Number of censored persons	50	18	18	14
Percent censored	41.67	66.67	36.73	31.82

Log-rank test of equality of survival function: Chi-square (df) = 5.585(2)

Multivariate Analysis: WTW Programs and Employment Duration

The sample of 120 employed mothers created 1,230 person-month observations for the following analysis of a discrete time logit model. The analysis showed that when all other relevant factors were accounted for, participating in the HCD programs was associated with a lower probability of exiting employment than participating in the LFA programs. Specifically, the odds that the HCD recipients would exit from employment were 76% smaller than the odds for the LFA recipients (see third column of Table 5 for variable 'HCD'). This indicated that the HCD recipients were more likely than the LFA recipients to retain employment when all other relevant factors were held constant.

It was also found that many state TANF rules made significant differences in the probability of maintaining employment. For some of the rules designed to directly influence TANF recipients' behaviors (De Jong, et al. 2006), it appeared that more lenient rules were related to a higher likelihood of exiting employment. More specifically, mothers who lived in a state in which they could be exempt from work requirements by working 20 h per week at unsubsidized jobs were more than 100 times more likely to exit employment than those who lived in a state that did not offer any exemption. Second, mothers who lived in a state where TANF recipients were subject to partial sanctions were 3 times more likely to exit employment than those who could face full sanctions in the case of noncompliance. Third, compared to mothers who lived in a state where they were required to participate in work activities as soon as they applied for TANF, those living in a state that did not specify the time to engage in required work activities were 2.5 times more likely to exit employment.

On the contrary, for some other TANF rules, it appeared that lenient rules were related to lower likelihoods of exiting employment. Mothers living in a state that did not have a family cap or time-limit provisions were significantly less likely to exit employment. In addition, mothers who were allowed to keep greater amounts of their earnings without any reduction in their TANF benefits were less likely to exit employment.

Discussions and Implications

This study found that the combination of the LFA and HCD programs was significantly associated with a higher probability of obtaining employment. It also found that participation in the HCD programs, compared to the LFA programs, was related to longer employment durations. Overall, it was difficult to find empirical evidence supportive of PRWORA's assumption that targeting rapid employment can actually lead to better employment outcomes for TANF recipients. While the results are consistent with those of NEWWS that suggested that a mixed WTW program in Portland yielded the best outcomes, they are most congruent with the aforementioned evidence from California's GAIN, where participants in the HCD programs than the LFA programs produced better employment outcomes in the long run (Hotz et al. 2006).

This finding bears some important implications for the reauthorization of PRWORA scheduled in 2011. Under the

Table 5 Discrete time logit model of exit from employment

	Logit	Huber-White Robust SE	Odds ratio
Age	0.027	0.021	1.027
Race			
White	0.814**	0.310	2.257
(Black)			
Hispanic	1.335	0.767	3.802
Others	1.073	0.716	2.924
Marital status			
Currently married	−0.323	0.484	0.724
Previously married	−1.753***	0.404	0.173
(Never married)			
Education			
(Less than high school)			
High school	0.360	0.437	1.433
Some college	0.501	0.363	1.651
Number of children			
One	−0.219	0.373	0.803
Two	0.308	0.370	1.361
Three	0.856*	0.359	2.353
(Four or more)			
Region of residence			
Northeast	−1.553***	0.439	0.212
Midwest	−0.694	0.626	0.500
(South)			
West	−1.263	0.896	0.283
Presence of family cap	1.262**	0.431	3.531
Hours of work in unsubsidized job to be exempt from work requirement			
(No exemption)			
30 hours	0.592	0.446	1.808
20 hours	4.611***	0.940	100.631
Presence of diversion	0.302	0.634	1.352
Type of sanction			
(Entire Loss of benefit for life or specific time or until compliance)			
Partial loss of benefit for specific time or until compliance	1.109*	0.469	3.033
Type of time limit			
(Life time limit and benefit waiting period)			
Benefit waiting or period limit or benefit reduction period	−0.325	0.658	0.723
No time limit	−1.638**	0.599	0.194
Type of earnings disregard			
($90 flat amount)			
Flat amount of more than $90	−0.834**	0.269	0.434
20% of earning	0.725	0.503	2.066
100% earning	0.662	0.692	1.939
Time when required activities are imposed			
(Upon applying for TANF)			
Upon receiving TANF	0.609	0.576	1.839
Within 2 years of TANF receipt	−0.320	0.716	0.726
No time specified	0.923***	0.574	2.518
Type of allowable activities for non exempt recipients			
(Only work or only school activities)			
More possibilities including community service or child care	0.910	0.650	2.484
Wide range of activities including post secondary education	0.487	0.559	1.628
Maximum TANF benefit	−0.000	0.002	0.100
Monthly state unemployment rate	0.186	0.162	1.204
Number of month employed	−0.085*	0.035	0.918
Year			
1997	−1.203*	0.520	0.300
1998	−0.104	0.438	0.902
1999	−0.438	0.568	0.645
2000	0.280	0.311	1.323
(2001)			
Receiving TANF	0.667*	0.309	1.948
Type of program participated			
HCD	−1.425**	0.309	0.240
LFA & HCD	0.534	0.305	1.706
(LFA)			
Log Likelihood	−642.13		
Total Person Month Observation	1,230		

* $p < .05$, ** $p < .01$, *** $p < .001$. (Reference groups are in parentheses)

current law, single parents on TANF are required to participate in specified work activities for 35 h per week, and those activities are heavily focused on rapid employment. The three allowable education-related work activities—job skills training, education directly related to employment, and secondary school or equivalency classes—should be combined with participation in subsidized or unsubsidized employment or community service for at least 20 h per week. The only educational activity that does not need to be combined with employment is vocational educational training, which is limited to only 12 months in a lifetime. Moreover, the law limits that no more than 30% of all TANF participants (including teenagers finishing high school degrees) may participate in educational activities.

These provisions have been widely criticized since PRWORA was enacted in 1996 because nearly half of welfare recipients lack basic education and minimum qualifications necessary to gain well-paying, sustainable jobs (London 2005). Contrary to the work-first premise of PRWORA, evidence suggests that education and training play a significant role for successful and sustainable welfare-to-work transitions. As most provisions of PRWORA are scheduled to be reauthorized by Congress in 2011, it is expected that provisions on work requirements and access to education are to be most intensively debated in the process (Haskins 2009). Based on the evidence from this and other studies, it is recommendable that Congress revisits the assumption of PRWORA and modifies work requirements to expand educational opportunities for TANF recipients.

Other findings of this study also call for continuous research on how regional differences and variations in state TANF rules can make significant differences in welfare population's employment outcomes. As indicated in the findings of this study, region of residence and local economy were significant determinants of the sample mothers' employment outcomes. Mothers living in the Northeast were more likely than mothers living in the South to find as well as to maintain employment. Mothers living in states with higher unemployment rates were less likely to find employment. Most interesting findings were, however, that many state TANF rules such as work exemptions, sanctions, time limits, earnings disregards, family caps, and time to work requirements were found to be significantly related to the probabilities of obtaining and maintaining employment. These findings need to be examined much further in order for us to understand how each TANF rule as well as combinations (interactions) of multiple rules hinder and/or promote positive employment outcomes of TANF recipients. Such understanding is critical especially for state governments to design more effective sets of TANF rules that aim better economic outcomes of TANF recipients and families.

Overall, this study made a unique contribution to the existing body of literature by utilizing new longitudinal data and separating out different types of WTW programs along with much important state TANF rules that have typically been overlooked in the previous analyses of TANF. Nonetheless, it is important to note that the findings of this study should be interpreted while considering the following three limitations, all of which shed some light on the direction of future research.

The first limitation is that this study was based on a small size sample. Although it utilized data collected by a large national survey, the number of WTW program participants who met all the selection criteria was quite modest. It would be best if this study can be replicated in the future using a much larger sample from another nationally representative data source.

The second limitation is that this study could not control for important details of WTW programs such as program quality, sequence, and duration because such information was not available in the SPD data used in this study. It is surprising to find that the SPD did not collect data such as detailed timing of participation in WTW programs despite the fact that it was specifically designed to measure the effect of welfare reform over time. Future public data collection efforts can definitely address this limitation and thus improve the qualities of future studies.

The last and most important limitation of this study is about the potential selection bias briefly stated above in the finding section. One cannot rule out a slight possibility that selection bias might have played a role in producing the result of this study. Based on the literature, however, it does not seem that selection bias has an easy solution (Friendlander et al. 1997; Heckman et al. 1999). Nevertheless, future research should look into how much the WTW program participants' employment outcomes were related to their unobservable characteristics (as opposed to participation in the programs), hopefully with more advanced research methodologies. At the same time, more research is warranted to reveal the relationship of self-selection and/or cream-skimming with the efficiency and equity of WTW programs. Although it is obvious that selection or cream-skimming is harmful for program equity and redistributive effects, it may not be true from a program efficiency perspective because the largest social returns (per dollar spent) can result from educating and training the most job-ready applicants (Friendlander et al. 1997; Heckman et al. 1999).

Acknowledgments The author would like to gratefully acknowledge editorial contributions made by Richard Kevin Caputo, Associate Editor of *Journal of Family and Economic Issues*.

Appendix

See Table 6.

Table 6 Measure of state variations in TANF rules

TANF rules	State variations in the WRD	Measures
Family cap	No increase in benefit for additional child	1. Yes
	Partial increase in benefits for an additional child	2. No
	Total benefit increase for additional child	
Work exemption	No exemption	1. No exemption
(Hours of work to be exempt from work requirement)	30 h of work at paid jobs	2. 30 h of work
	20 h of work at paid jobs	3. 20 h of work
Diversion	Presence or absence of diversion	1. Yes
		2. No
Worst sanction	Termination of entire benefits for life or specific time or until compliance	1. Full sanction
	Terminated partial benefits for specific time or until compliance	2. Partial sanction
Time limit	Lifetime limit	1. Life time limits or benefit waiting periods
	Benefit waiting period	
	Period limits	2. Periodic or benefit reduction time limits
	Benefit reduction period	
	No time limit	3. No time limits
Earnings disregard	$90 flat amount	1. $90 flat amount
	Flat amount ranging from $100 to $250	2. Flat amount of more than $90
	20% of earning	3. 20% of earning
	100% of earning	4. 100% of earning
Time to work requirement	Before receipt of benefit (upon applying or being assessed)	1. Upon applying for TANF
		2. Upon receiving benefits
	Immediately (or upon benefit receipt)	3. Within 2 yrs of benefit receipt
	Within 2yrs of benefit receipt	4. No time specified
	No work requirement	
Allowable work activities*	Only work or only school activities	1. Only work or only school activities
	More possibilities than only work or only school related activities	2. More possibilities including community service or childcare
	More possibility including community service or child care.	3. Wide range of activities including post secondary education
	More possibilities including PSE	
Maximum benefit amount	Maximum benefit for a family of four	Continuously measured

Source: Urban Institute (2007), Welfare Rules Database, retrieved May 7, 2008 from http://anfdata.urban.org/WRD/Query/WRDQuery.html

References

Allison, P. (1995). *Survival analysis using the SAS system: A practical guide*. Cary, NC: SAS Institute.

Connolly, L., & Marston, C. (2005). Welfare reform, earning, and incomes: New evidence from the Survey of Program Dynamics. *Contemporary Economic Policy, 23*(4), 493–512.

Council of Economic Advisors. (1999). The effect of welfare policy and the economic expansion on welfare caseloads: An update. Retrieved May 11, 2007 from http://clinton4.nara.gov/WH/EOP/CEA/html/welfare/

De Jong, G., Graefe, D., Irving, S., & Pierre, T. (2006). Measuring state TANF policy variations and change after reform. *Social Science Quarterly, 87*(4), 755–781.

Fisher, M., & Weber, B. (2002). *The importance of place in welfare reform: Common challenges for central cities and remote rural areas. Research brief*. Washington, DC: Brookings Institute.

Friendlander, D., Greenberg, D., & Robins, P. (1997). Evaluating government training programs for the economically disadvantaged. *Journal of Economic Literature, XXXV*, 1809–1885.

Greenberg, D., Cebulla, A., & Bouchet, S. (2005). Report on meta analysis of welfare-to-work programs. Discussion Paper no. 1312-05, Madison, WI: Institute for Research on Poverty.

Grogger, J. (2003). The effects of time limits, the EITC, and other policy changes on welfare use, work, and income among female-headed families. *Review of Economics and Statistics, 85*(2), 394–408.

Grogger, J., Karoly, L., & Klerman, J. (2002). Consequences of welfare reform: A research synthesis. Working Paper. Santa Monica, CA: Rand Corporation.

Hamilton, G., Freedman, S., Gennetian, L., Michalopoulos, C., Walter, J., Adams-Ciardullo, D., et al. (2001). *How effective are different welfare-to-work approaches? Five-year adult and child impacts for eleven programs*. New York: Manpower Demonstration Research Corporation.

Haskins, R. (2009). *The 2010 reauthorization of welfare reform could result in important changes*. Washington, DC: Brookings Institute.

Heckman, J., Lalonde, R., & Smith, J. (1999). The economics and econometrics of active labor market programs. In O. Ashenfelter & D. Card (Eds.), *Handbook of labor economics* (Vol. 3, pp. 1865–2097). Amsterdam: Elsevier Science.

Hofferth, S., Stanhope, S., & Harris, K. (2005). Remaining off welfare in the 1990 s: The influence of public policy and economic conditions. *Social Science Research, 34*(2), 426–453.

Hotz, J., Imbens, G., & Klerman, J. (2006). Evaluating the differential effects of alternative welfare-to-work training components: A reanalysis of the California GAIN program. *Journal of Labor Economics, 24*, 521–566.

Jayakody, R., & Stauffer, D. (2000). Mental health problems among single mothers: Implications for work and welfare reform. *Journal of Social Issues, 56*(4), 617–634.

Livermore, M., Powers, R., Davis, B., & Lim, Y. (2010). Failing to make ends meet: Dubious financial success among employed former welfare to work program participants. *Journal of Family and Economic Issues, 32*(1), 73–83.

London, R. (2003). Which TANF applicants are diverted and what are their outcomes? *Social Service Review, 77*, 373–398.

London, R. (2005). Welfare recipients' college attendance and consequences for time-limited aid. *Social Science Quarterly, 86*(Suppl), 1104–1122.

Moffitt, R. (2003). The temporary assistant to needy families. In R. Moffit (Ed.), *Means-tested transfer programs in the U.S.*. Chicago, IL: University of Chicago Press.

O'Neill, J., & Hill, A. (2001). *Gaining ground: Measuring the impact of welfare reform on welfare and work*, Civic Report 17. New York, NY: Manhattan Institute.

Parrott, S., & Sherman, A. (2007). TANF's results are more mixed than is often understood. *Journal of Policy Analysis and Management, 26*(2), 374–381.

Pepper, J. (1999). What do welfare-to-work demonstration reveal to welfare reformers? Virginia Economics Online Papers 317. Department of Economics, University of Virginia.

Rogers, W. (1993). Regression standard errors in clustered samples. Stata Technical Bulletin: 19–23. Reprinted in *Stata Technical Bulletin Reprints*, *3*, 88–94.

Rowe, G., Murphy, M., & Williamson, M. (2006). *Welfare rules databook: State TANF policies as of July 2005*. Washington, DC: The Urban Institute.

Sandefur, G., & Cook, S. (1997). Duration of public assistance receipt: Is welfare a trap? Discussion Paper No. 1129-97, Madison, WI: Institute for Research on Poverty.

Schoeni, R., & Blank, R. (2000). What has welfare reform accomplished: Impacts on welfare participation, employment, income, poverty, and family structure? Working Paper No. 7627. Cambridge, MA: National Bureau of Economic Research.

Strawn, J. (1999). *Beyond job search or basic education: Rethinking the role of skills in welfare reform*. Washington, DC: Center for Law and Social Policy.

U.S. Census Bureau. (2002). *Survey of Program Dynamics (SPD) Users' Guide*. Retrieved May 5, 2007 from http://www.census.gov/spd/pubs/spdug_01.pdf

U.S. Department of Labor. (2008). *B.L.S. handbook of methods*. Washington, DC: U.S. Bureau of Labor Statistics.

Author Biography

Jeounghee Kim is an Assistant Professor of Social Work at Rutgers, the State University of New Jersey. Her interests include analyzing the impacts of social welfare policies and financial situations on the lives of low-income families and workers. She is currently studying the effects of the recent great recession on socioeconomic inequality in academic attainment. She earned her Ph.D. from George Warren Brown School of Social Work, Washington University in St. Louis.