

Senior Project
Department of Economics



“Deficit Reduction Act’s Effect on the
Working Poor”

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ABSTRACT:

The working poor is considered the working population of society whose total income falls below a certain poverty level. This indigent population who choose to receive welfare benefits are allotted a monthly benefit guarantee if they comply with welfare program standards (i.e. work requirements). These welfare recipients face labor supply decisions that affect their eligibility for the program. The Deficit Reduction Act of 2005 (DRA), was an attempt to get welfare recipients to increase their labor supply. The theory of labor supply for welfare recipient's states an increase in earned income exemption level in a welfare program, will result in increases in labor supply for its recipients. This paper uses an Ordinary Least Square and difference-in-difference estimator to study the effect that the Deficit Reduction Act had on the labor supply of Temporary Assistance for Needy Families program. We will see the policy change positively altering the work behavior of TANF recipients.

INTRODUCTION

An important dimension of welfare programs is the disincentives towards work recipients face due to the reduction in benefits that comes with an increase in earnings. These disincentives can be represented as average (implicit) tax rates that depend directly on policy variables including the maximum benefit and the disregard policy. Previous research has shown welfare programs create work disincentives (Borjas 2008), these disincentives could be reduced with proper welfare reform. During the last 20 years, welfare policy has increasingly shifted toward making work pay by increasing the amount individuals may earn without losing eligibility, or reducing benefit levels at a slower rate as earnings rise. Aid to Families with Dependent Children (AFDC) from 1935 to 1996 and Temporary Assistance for Needy Families (TANF) from 1996 to the present have both exhibited variation over time. TANF was reauthorized under the Deficit Reduction Act of 2005 (DRA), which included several changes to the original program.

In this study we will observe how the Deficit Reduction Act of 2005 affected the Temporary Assistance for Needy Families program. Our goal is to see how a change in policy affects the labor supply of TANF recipients. If TANF recipients show an increase in labor supply after the enactment of DRA, this will show the positive effect that the policy had on the TANF program. DRA was intended to raise TANF work participation rates, increase the share of welfare recipients subject to work requirements, limit the activities that could be counted as work, prescribe hours that could be spent doing certain work activities, and require states to verify activities for each adult beneficiary. With the reauthorization of DRA, states change the benefit rules in their basic TANF program so that working recipients remain eligible for assistance until their earnings reach higher levels. This benefit change will be our primary focus on analyzing the effect that DRA had on labor supply.

Deficit Reduction Act

Deficit Reduction Act included a number of changes to the TANF program, most of which took effect on October 1, 2006. These changes were expected to put greater pressure on states to place more individuals who were receiving TANF-funded assistance in jobs. The main provisions from the original TANF program was changing the base year of the caseload reduction credit (states that reduce their caseloads see a reduction in the percentage of families who must be engaged in work activities) and requiring states to include more individuals in their TANF work participation rate than previously required. These two provisions had a significant impact on states changing their TANF programs. The DRA also put more pressure on states to verify information on work participation. It established penalties when states failed to meet federal requirements. It more clearly defines for states the allowable work activities, giving states less flexibility than they enjoyed when these activities were outlined in the original 1996 TANF law.

State TANF programs agreed to raise the exemption level, so recipients wouldn't be penalized for additional work hours. This raising of the exemption level provided an incentive for those recipients to continue work past the original exemption level. DRA aims to get low income workers additional income through work activities. Redefining work activities as actual labor, this showed a shift in policy, wanting recipients to increase labor hours and not just constantly "searching" for labor. By states being able to increase the labor supply of TANF recipients, they remained eligible for Federal TANF funding and would not be penalized the following year.

LITERATURE REVIEW

A large amount of literature has been produced on the Aid to Families with Dependent Children (AFDC), which was the federal assistance program from 1935 to 1996, later replaced by Temporary Assistance for Needy Families. Researchers have studied and estimated the effects that the AFDC welfare program has had on labor supply. Hoynes (1993) and Moffitt (1992) utilized structural and quasi-structural models, using cross-state variation in AFDC benefits along with other variables. The research conducted showed that AFDC programs reduced the United States' labor supply by 10 to 50 percent compared to a non-AFDC policy.

Moffitt (1992) also addressed the effect of a reduction in marginal tax rates and the unclear response it had on labor supply. These effects were reached through simulation, using structural estimates of substitution and income elasticities to observe the positive and negative labor response due to a reduction in marginal tax rates over income and hours distribution. It was found that in single mothers, average labor supply was highly inelastic regarding marginal tax rates while holding benefit guarantees fixed. However, the distributional impacts of the tax rate reduction must be considered. The policy reform does achieve its goal of encouraging the lowest-labor supply individuals to work more, but at the cost of some labor supply reduction among higher-labor-supply individuals. Income is increased among the higher-labor supply individuals, representing a shift in the income distributional impact of the welfare program away from the lowest-income individuals and toward somewhat higher-income individuals.

Hoynes (1996) studied the Aid to Families of Dependent Children – Unemployed Parent program. The main difference between this program and traditional AFDC was the restriction of hours worked by the principal earner. These earners could not work more than 100 hours in any given month. Using data from Survey of Income and Program Participation from 1983-1986,

they studied low-asset married couples. Their estimation showed a decrease in the labor supply of the principal earner and an increase in labor supply in spouses of the principal earner. The estimated work disincentive effects of the AFDC-UP program on couples: about 47 hours per month for husbands and 32 hours per month for wives. With the work restriction removed, this resulted in an increase in labor supply amongst welfare recipients. This increase is associated with people who work full time but still live in poverty who can now join the program.

Blank, Card, and Robbins (2000) also noticed the dynamic of non-welfare recipients joining the welfare program once work restrictions were reduced. They stumbled on these findings when investigating the work incentives that financial incentive programs (i.e. TANF) had on welfare programs. These researchers analyzed five different programs in the early 1990's and was able to determine that income disregard and marginal tax rate was key in labor supply decisions of welfare recipients. They noticed recipients labor supply increased in programs who increased the income disregard threshold and had a lower marginal tax rate. They noted that the failure of Aid to Families of Dependent Children (AFDC) was primarily due to high marginal tax rate of 100 percent on earnings above the disregard. Blank, Card, Robbins (2000) stated the limitations to this study was the isolation of programs and not considering an individual's labor supply decisions could be due to outside program involvement.

Keane and Moffitt (1998) explained the difficulty of estimating the labor supply effects. One of the main obstacles is differentiating the effects of participation in multiple welfare programs simultaneously. For example, one individual could be receiving benefits from the Food Stamp Program, Social Security, and TANF, so one's labor decisions may revolve around three programs. They attempted to solve this problem by applying methods of simulation estimation to a model of labor supply and multiple program participation. They found that many types of

wage subsidies and wage rate increases have positive labor supply effects and negative program participation effects. These subsidies and wage increases are meant to incentivize companies to offer higher wages. Keane et al. (1998) were also able to conclude that these programs marginal tax rates had no effect on labor supply.

Before the national legislation of Personal Responsibility and Work Opportunity Act (PROWORA) in 1996, states implemented test programs called “waivers.” The waivers were similar to the standards of PRWORA, in terms of time limits, sanctions, and work requirements. The evaluation of the waiver programs was possible because different states tested different types of programs and did so at different calendar times. This provided a variation in policies, which was used to estimate impacts on labor supply. Studying the effect of the 1996 legislation is difficult because it was implemented nationally and all states had to comply with its main provisions all at once. This meant there was no overall cross-state variation in the timing of the program.

Ellwood (2000) and Schoeni and Blank (2000), use difference-in-difference methods to evaluate the effects of Temporary Assistance to Needy Families (TANF). Both of these studies control for the state of the economy by controlling for the current and lagged unemployment rate, so the estimated effects of welfare reform are all intended to be net of the strong economy. These two studies differed in that Ellwood (2000) source of program variation was a high-wage control group, while Schoeni and Blank (2000) method was a high-educated control group to measure the effects of welfare reform. Ellwood (2000) results found increases in labor supply for low income single parent recipients, but showed that one cannot separate the effect of EITC and welfare reform. Schoeni and Blank (2000) estimates showed little effect of the 1996 welfare

reform on labor supply. The estimates were less than before the reform, showing that waivers had a better effect on increasing labor supply of welfare recipients.

THEORETICAL FRAMEWORK

I apply the tools of utility maximization to the analysis of labor supply decision. The trade-off between consumption and leisure is shown with a utility function that is, $U(C, L)$, where C represents the consumption of goods (income) and L represents the consumption of leisure (hours). With these choices one could construct a budget constraint representing a person's labor supply decisions. The slope of the budget constraint is equal to a person(s) hourly wage rate, it shows the "price" of one hour of leisure time. An individual could choose to spend a maximum of L hours in leisure, a maximum of C on consumption of goods, or some combination of the two.

In the case of welfare recipients, we see a kinked shaped budget constraint. As depicted in figure 1, from point A to B represents a benefit guarantee provided by the welfare program. Line segment BC , represents an exemption of earned income for an individual to earn Y_0 dollars, at L_0 hours, and continue to receive the same benefit guarantee. The work disincentive occurs when a welfare recipient is penalized for participating in labor. This penalty is a reduction in benefit guarantee or a marginal tax on additional income. This makes it irrational for recipients to participate in additional labor, unless the labor could generate income greater than the benefit guarantee, line segment EF , in figure 1. In this case the utility maximized point for a recipient will be u_0 is tangent with point C . DRA changes the benefit rule, so working welfare recipients will be able to reach higher incomes before being penalized. This incentive of higher income is a strategy to get recipients increase labor supply.

Economic theory predicts the effects of an increase in the exemption level for earned income on welfare recipients. It states, that not all welfare recipients will respond to a higher earned exemption level by supplying more labor, but those recipients who do respond will reach a higher utility and will supply more labor. The welfare recipients who respond to this reform continue to collect their full welfare benefit and work a few more hours each week. In figure 1, point *c* was the original utility maximized point and any additional hours of labor past this point would reduce the welfare benefit guarantee at the same rate as earned income, implying a 100 percent marginal tax rate (i.e. wage rate equal to marginal tax rate). An attempt to increase labor supply, welfare programs could raise the earned income exemption level for recipients. In figure 1, we will now see point *b* extend to point *e*, and the individuals new utility maximized point will be where indifference curve U_1 is tangent with point *e*. This research looks at the change in labor supply caused by the increase in earned income exemption level.

EMPIRICAL MODEL

Similar to Schoeni and Blank (2000), I use two methods to study the effect of DRA on the labor supply of TANF recipients. The approach I use is an Ordinary Least Square method, which Schoeni and Blank (2000) found underestimated the policy effect on labor supply of TANF recipients. The second method I use is a difference-in-difference method, which Schoeni and Blank (2000) says improved their analysis, by controlling for some variables they had not included in the OLS. This model, shows the change in labor supply for a treatment group that experiences a change and a control group that does not.

$$Labor\ supply_{it} = \beta_1 + \beta_2 TANF_i + \beta_3 Post_t + \beta_4 (TANF * Post)_{it} + \varepsilon_{it}$$

Since TANF eligibility is determined on a month-to-month basis, I use monthly hours of labor to denote labor supply. $TANF$, a dummy variable set to 1 if individual is a TANF recipient, otherwise set to zero. $Post$, a dummy variable set to 1 after DRA, otherwise set to zero. The treatment group in this study will be represented by low skilled single white women with one dependent child who are in the TANF program. The control group will be this same demographic of women who are not in the TANF program. The pre-DRA control group will be estimated as, $E(Y_{it=0}|TANF = 0) = \beta_1$, β_1 representing labor supply effects of this demographic of people when $t = 0$ (year 2005). The pre-DRA treatment group will be estimated as, $(Y_{it=0}|TANF = 1) = \beta_1 + \beta_2$, β_2 representing the labor supply effect of being a TANF recipient when $t = 0$. In post-DRA, the control group is examined as, $(Y_{it=1}|TANF = 0) = \beta_1 + \beta_3$, with β_3 representing the labor supply effect of the specified demographic people when $t = 1$ (year 2007). The post-DRA treatment group is estimated as, $(Y_{it=1}|TANF = 1) = \beta_1 + \beta_2 + \beta_3 + \beta_4$, β_4 being the interaction term, represents the labor supply effect of a TANF recipient when $t = 1$. To find the treatment effect, I compare the two groups, before and after the enactment of DRA, to find the difference of monthly hours supplied in labor by recipients.

$$[(\beta_1 + \beta_2 + \beta_3 + \beta_4) - (\beta_1 + \beta_2)][(\beta_1 + \beta_3) - \beta_1] = \beta_4.$$

Since I used identical demographic profiles for each group, I assume both will have similar labor supply effects. The difference between the two groups will be the result of the policy change that was aimed to help the TANF recipients (β_4).

DATA DESCRIPTION

The data from this study is obtained from the Survey of Income and Program Participation (SIPP). SIPP is a longitudinal survey conducted in the United States, where each

sampled household and each descendent household is re-interviewed at 4-month intervals for each interview or "wave". The waves we use in this study are wave 4 (February 2005-May 2005) and wave 10 (February 2007- May 2007). I choose to examine these two years because we want to measure the effect before and after the enactment of DRA. The files contain basic demographic and social characteristics data for each member of the household. Core questions, which are repeated at each interview, cover labor force activity, types and amounts of income, and participation in various cash and noncash benefit programs for each month of the four-month reference period. Data for employed persons include number of hours and weeks worked, earnings, and weeks without a job.

I chose to examine the labor supply effects of single white women between 21-65 years old, who have lower skills (less than 12 years of education), one dependent child, and reside in the state of Alabama. This population represents the type of person(s) eligible for AFDC assistance when the program was first introduced in 1935. Also, controlling for these factors, I am able to have a population with similar marital status, race, and gender, which are important indicators for labor market decisions. The restriction of age, is to observe the labor supply effect of women with comparable work experience. As Schoeni and Blank (2000) noted, lower skilled women are most effected by a welfare policy change, I use a control to study this population. The amount a recipient receives in benefit guarantee is relies on how many dependent children a person has, I control for this factor by using women with only one dependent child. I chose to observe the state of Alabama because they had the most observations for this specified population and to control for state effects. When mentioning recipients, I will be referring to this for mentioned demographic of people.

I obtain observations of 195 TANF recipients and 202 non TANF recipients in wave 4. The number of observations in wave 10 results in 58 for TANF recipients and 146 for non TANF recipients. I believe the discrepancy in wave 10 observations compared to wave 4 is lack of funding for SIPP in wave 10. SIPP noted, that their goal is to reach all survey participants, but funding sometime restricts these efforts.

EMPIRICAL ESTIMATION

The first method used is an Ordinary Least Square (OLS) approach to see the labor supply effects of TANF recipients. In Table 1, the interaction term *TANF_Post* is significant, indicating a TANF recipient's monthly labor hour's increase by 8.8 hours in the year 2007. This coefficient is relatively large suggesting TANF recipients were better off due to the enactment of DRA. The OLS results show the explanatory variables only account for 9.5 percent of the model, but our F Value being large enough to signify that the overall model is statically significant. Thus suggesting we may need additional variables in the model.

Previous research attempted to use an OLS method in estimating the labor supply effect of recipients involved in welfare programs. The issue of OLS in regards to program participation derives from recipients being able to choose their involvement in the program. This causes a sample selection bias, in which OLS tends to overestimate the effects of a change due to unobserved characteristics not used in the model. This statement was reinforced by Schoeni and Blank (2000), by citing their large estimates may be capturing other factors not in the model. This violation is the reason I chose to use the difference in difference, when measuring labor supply effects of TANF recipients.

Difference-in-difference

By estimating the change in labor supply of TANF and non TANF individuals in years 2005 and 2007, we see positive results from the enactment of DRA. Results from the difference-in-difference show that on average TANF recipients increased monthly hours of work by 6.2 hours due to the change in TANF policy. Table 2, non TANF recipients show a minute decline in labor supply, while TANF recipients show an increase in labor supply from 2005 to 2007. I assume, in the absence of the policy change aimed to help TANF recipients, these recipients would have experienced a similar labor supply effects as non TANF recipients. By using a treatment and control group, I control for the economic changes and see the actual effect of the Deficit Reduction Act. I believe recipients responded to the ability to earn more income, by working more hours, whereas non recipients not given incentives to work more remained somewhat constant.

CONCLUSION

The reauthorization of the Temporary Assistance for Needy Families program raised the earned income exemption level and changed work behavior for recipients. This study examined how the Deficit Reduction Act of 2005 affected labor market decisions of Temporary Assistance for Needy Families recipients, in particular labor supply. The OLS method seemed to overestimate the labor supply effect of TANF recipients after the policy change. The alternative method, difference-in-difference, looked to correct for the overestimation by using a control group in comparing labor supply effects. Both methods indicate that TANF policy changes had a positive impact on the labor supply of TANF recipients immediately after the enactment.

The increase in labor was relatively small, and theory says the effect of the quantity of labor supplied by a rise of the earned income exemption level is ambiguous. Some 'original' welfare recipients will increase their labor supply up to the new higher exemption level

(probably by a relatively small amount), while some 'new' welfare recipients will decrease their labor supply (probably by a relatively large amount) as they move from full-time work to part-time work on welfare. Thus confirming the theoretical assumption of labor supply incentives for individuals in welfare programs. In reviewing the literature my conclusions align with previous research, in particular Schoeni and Blank (2000), showing increases in labor supply for lower skilled women after policy changes. I conclude, welfare policy changes that provide recipients with work incentives tend to have positive effects on the labor supply of recipients.

Policies that motivate welfare recipients to work are ideal, but further analysis would have to be done in recommending policy implementation. Limitations to this research include the restriction of the population, which causes a lower amount of observations and results can only be explained for this group of people. Also, by using a difference in difference method we can only measure short run effects of program. While this study provides evidence about labor supply effects from the reauthorization of TANF, future research could look at other labor market outcomes caused by the change in TANF policy.

References

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APPENDIX A:

Variable Definitions and summary Statistics for TANF and Non TANF Recipients from Survey of Income and Program Participation(2004 Panel data-Wave 4/Wave 10)			
Variable	Definition [mean; standard deviation]	TANF Recipient [Mean; Standard deviation]	NonTanf Recipient [Mean; Standard deviation]
EHRALL	<i>Usual hours worked at all jobs during reference month.</i>	[32.30;14.50]/ [38.33;4.82]	[32.32;14.42]/ [32.09;10.39]
Single	<i>Dummy variable for marital status</i>	[4.98;1.13]/ [5.17;0.92]	[5.29/1.11]/ [4.94;1.36]
Post	<i>Dummy variable for after treatment</i>		
TANF_Post	<i>Interaction term for TANF recipient after treatment</i>		
Skill	<i>Dummy variable for highest degree received or grade completed</i>	[37.08;1.72]/ [37.24;1.87]	[37.44;2.11]/ [37.20;1.95]
TANF	<i>Dummy variable for Whether ... received TANF.</i>		
Female	<i>Dummy variable for sex of person(s)</i>	[1.95;0.22]/ [1.83;0.38]	[1.83;0.38]/ [1.81;0.39]
Caucasian	<i>Dummy variable for race(s) of respondent</i>	[1.52;0.50]/ [1.5;0.51]	[1.28;0.4524]/ [1.44;0.50]

Notes: The data include SIPP 2004 Panel Wave 4 covering interview months of February 2005 - May 2005 and Wave 10 covering interview months of February 2007 - May 2007.

Figure 1:

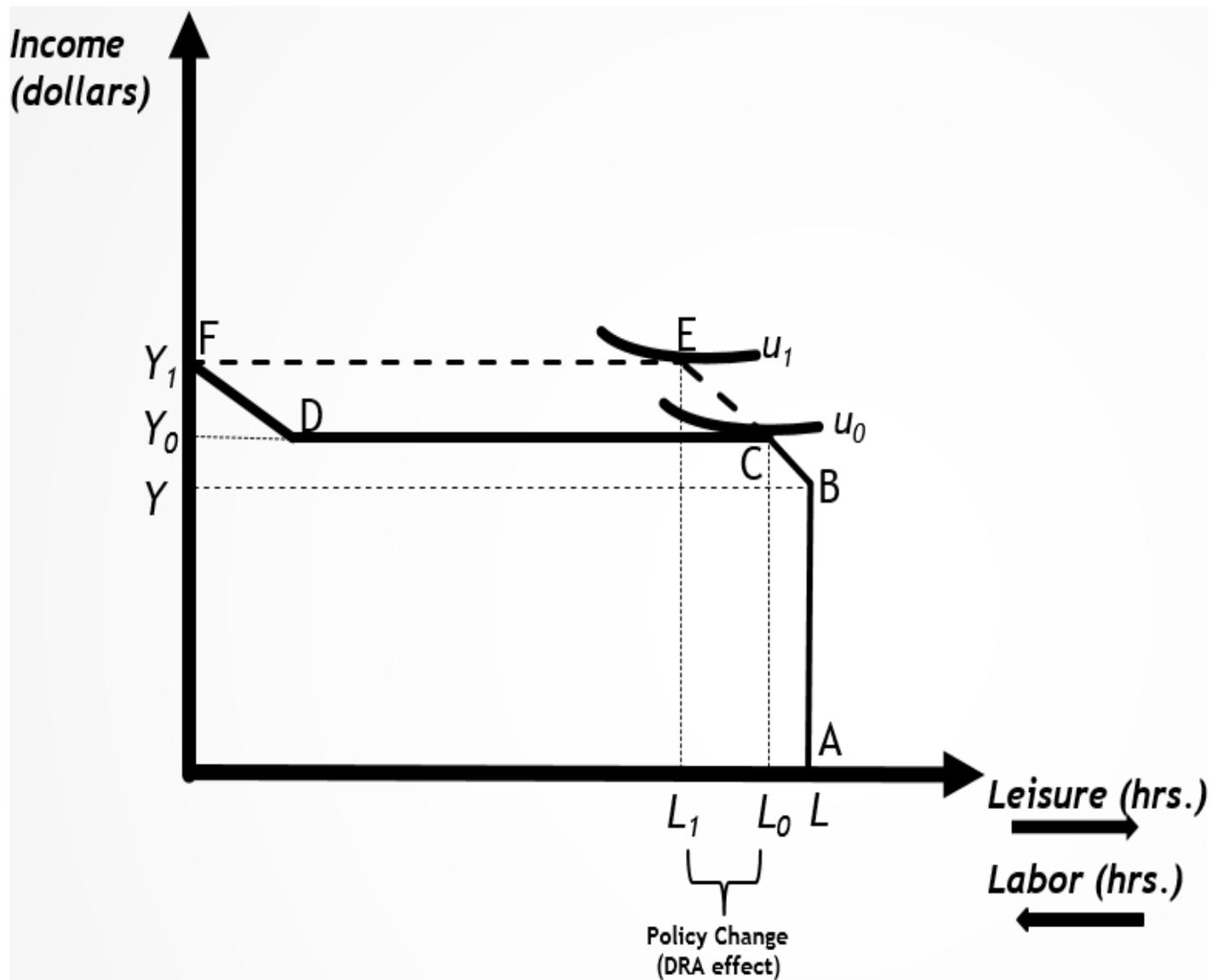


Table 1:

Variable	Estimates
Intercept	21.89031 <i>(9.05)***</i>
TANF	1.23362 <i>(0.79)</i>
Post	15.50284 <i>(2.55)**</i>
TANF_Post	8.80092 <i>(2.52)**</i>
Caucasian	1.83662 <i>(1.32)</i>
Female	9.78810 <i>(4.79)***</i>
Single	-10.08138 <i>(-3.26)***</i>
Skill	2.84949 <i>(2.06)**</i>
N	397
R-sq	0.0951
RMSE	13.07495

*T-Values are in Parentheses. *** means 99 percent confidence interval, ** means 95 percent confidence interval, * means 90 percent confidence Interval*

Table 2: Policy Effects Calculated as the Residual Change From 2005 to 2007 by Classification.

	Pre-DRA	Post-DRA	Treatment effect
	(1)	(2)	(3)
TANF Recipient	32.30	38.33	
	[14.50]	[4.82]	
NON Recipient	32.32	32.09	
	[14.42]	[10.39]	
<i>Difference-in-difference</i>	2.43	1.21	6.22

Column (1): Based on models that include controls for age (21-65), education (>12), race (white), marital status (single), gender (female), and household (one dependent child). Monthly labor supply for 2005. [Standard deviation]

Column (2): Based on models that include controls for age (21-65), education (>12), race (white), marital status (single), gender (female), and household (one dependent child). Monthly labor supply for 2007. [Standard deviation]

Column (3): The labor supply change from year 2005 to 2007.

Difference-in-difference estimator is the difference between recipient and non-recipient in the change between 2005 and 2007.

SAS Coding

```

PROC FORMAT;
VALUE FM0X
-1 = 'Not in Universe'
1 = 'Yes'
2 = 'No'
;
VALUE FM1X
1 = 'Married, spouse present'
2 = 'Married, spouse absent'
3 = 'Widowed'
4 = 'Divorced'
5 = 'Separated'
6 = 'Never Married'
;
VALUE FM2X
0 = 'Less than 1 full year old'
;
VALUE FM3X
1 = 'Male'
2 = 'Female'
;
VALUE FM4X
-1 = 'Not in Universe'
0 = 'Not Determined (See User Note)'
;
VALUE FM5X
-1 = 'Not in Universe'
31 = 'Less Than 1st Grade'
32 = '1st, 2nd, 3rd or 4th grade'
33 = '5th Or 6th Grade'
34 = '7th Or 8th Grade'
35 = '9th Grade'
36 = '10th Grade'
37 = '11th Grade'
38 = '12th grade, no diploma'
39 = 'High School Graduate - (diploma or GED or equivalent)'
40 = 'Some college, but no degree'
41 = 'Diploma or certificate from a vocational, technical, trade or business
school beyond high'
43 = 'Associate (2-yr) college degree (include academic/occupational degree)'
44 = 'Bachelor's degree (for example: BA, AB, BS)'
45 = 'Master's degree (For example: MA, MS, MEng, MEd, MSW, MBA)'
46 = 'Professional School degree (for example: MD, (doctor), DDS
(dentist), JD(lawyer)'
47 = 'Doctorate degree (for example: Ph.D., Ed.D)'
;
VALUE FM6X
1 = 'White alone'
2 = 'Black alone'
3 = 'Asian alone'
4 = 'Residual'
;
run;

```

```

options invaliddata="." notes fullstimer;
data sasuser.cey5hed9;
infile 'desktop/cey5huvwqced91.asc' lrecl=80;
INPUT
  @1 EPATANF1 10.
  @12 EMS 10.
  @23 TAGE 10.
  @34 ESEX 10.
  @45 EHRSALL 10.
  @56 EEDUCATE 10.
  @67 ERACE 10.
;
Label
EPATANF1 = 'GI: Whether ... received TANF'
EMS = 'PE: Marital status'
TAGE = 'PE: Age as of last birthday'
ESEX = 'PE: Sex of this person'
EHRSALL = 'LF: Usual hours worked at all jobs during the reference period'
EEDUCATE = 'ED: Highest Degree received or grade completed'
ERACE = 'PE: The race(s) the respondent is'
;
FORMAT
EPATANF1 FM0X.
EMS FM1X.
TAGE FM2X.
ESEX FM3X.
EHRSALL FM4X.
EEDUCATE FM5X.
ERACE FM6X.
;
post=1;
tanf_Post = EPATANF1*post;
run;
PROC FORMAT;
VALUE FM0X
-1 = 'Not in Universe'
31 = 'Less Than 1st Grade'
32 = '1st, 2nd, 3rd or 4th grade'
33 = '5th Or 6th Grade'
34 = '7th Or 8th Grade'
35 = '9th Grade'
36 = '10th Grade'
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40 = 'Some college, but no degree'
41 = 'Diploma or certificate from a vocational, technical, trade or business
school beyond high'
43 = 'Associate (2-yr) college degree (include academic/occupational degree)'
44 = 'Bachelor''s degree (for example: BA, AB, BS)'
45 = 'Master''s degree (For example: MA, MS, MEng, MEd, MSW, MBA)'
46 = 'Professional School degree (for example: MD, (doctor), DDS
(dentist), JD(lawyer))'
47 = 'Doctorate degree (for example: Ph.D., Ed.D)'
;

```

```

VALUE FM1X
0 = 'Less than 1 full year old'
;
VALUE FM2X
1 = 'Male'
2 = 'Female'
;
VALUE FM3X
-1 = 'Not in Universe'
1 = 'Yes'
2 = 'No'
;
VALUE FM4X
-1 = 'Not in Universe'
0 = 'Not Determined (See User Note)'
;
VALUE FM5X
1 = 'White alone'
2 = 'Black alone'
3 = 'Asian alone'
4 = 'Residual'
;
VALUE FM6X
1 = 'Married, spouse present'
2 = 'Married, spouse absent'
3 = 'Widowed'
4 = 'Divorced'
5 = 'Separated'
6 = 'Never Married'
;
run;

options invaliddata="." notes fullstimer;
data sasuser.cey5h3op;
infile 'desktop/cey5huwq33op1.asc' lrecl=80;
INPUT
  @1 EEDUCATE 10.
  @12 TAGE 10.
  @23 ESEX 10.
  @34 EPATANF1 10.
  @45 EHRALL 10.
  @56 ERACE 10.
  @67 EMS 10.
;
Label
EEDUCATE = 'ED: Highest Degree received or grade completed'
TAGE = 'PE: Age as of last birthday'
ESEX = 'PE: Sex of this person'
EPATANF1 = 'GI: Whether ... received TANF'
EHRALL = 'LF: Usual hours worked at all jobs during the reference period'
ERACE = 'PE: The race(s) the respondent is'
EMS = 'PE: Marital status'
;
FORMAT
EEDUCATE FM0X.

```

```

TAGE FM1X.
ESEX FM2X.
EPATANF1 FM3X.
EHRALL FM4X.
ERACE FM5X.
EMS FM6X.
;
post=0;
tanf_Post = EPATANF1*post;
run;
data tempset;
    set sasuser.cey5h3op sasuser.cey5hed9;
if erace=1 then caucasian=1; else caucasian=0;
if esex=2 then female=1; else female=0;
if ems<=2 then single=1; else single=0;
if 31<=Eeducate=39 then skill=1;else skill=0;
if epatanf1=1 then tanf=1; else tanf =0;
run;

proc reg data=tempset;
model ehrrall= tanf post tanf_Post caucasian female single skill;

run;
quit;
proc means data =sasuser.cey5hed9;
title 'Post DRA TANF recipients';
where epatanf1=1;
where ehrrall>0;
where erace=1;
where esex=2;
where ems>=2;
where 31<=eeducate=38;
var ehrrall;

run;
quit;
proc means data =sasuser.cey5hed9;
title 'Post DRA non TANF recipients';
where ehrrall>0;
where erace=1;
where esex=2;
where ems>=2;
where 31<=eeducate=38;
where epatanf1<=2;
var ehrrall;

run;
quit;

proc means data =sasuser.cey5h3op;
title 'Pre DRA TANF recipients';
where epatanf1=1;
where ehrrall>0;
where erace=1;
where esex=2;
where ems>=2;
where 31<=eeducate=38;

```

```
var ehersall;  
  
run;  
quit;  
  
proc means data =sasuser.cey5h3op;  
title 'Pre DRA Non TANF recipients';  
  
where ehersall>0;  
where erace=1;  
where esex=2;  
where ems>=2;  
where 31<=eeducate=38;  
where epatanf1<=2;  
var ehersall;  
  
run;  
quit;  
  
proc ttest data =sasuser.cey5h3op;  
class EPATANF1;  
  
var ehersall ems esex erace;  
  
proc ttest data = sasuser.cey5hed9;  
class EPATANF1;  
  
var ehersall ems esex erace;  
run;  
quit
```