Effects of Great Recession on Income Poverty

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INTRODUCTION

Insert Introduction.

Study Aim

The aim of this study is to analyze how households with a working age adult with disability compare with households with no working age adult with disability, during the *great recession* [1], using "Income Poverty" as a measure of economic wellbeing, controlling for demographic factors such as gender, marital status, education, race and origin.

BACKGROUND

Insert Literature review and background.

DATA AND METHOD

DATA

For this analysis data from US Census Bureau's SIPP 2008 panel survey was used. Insert SIPP details. [2]. There were three inclusion criteria for households in this study sample. First, the households that participated in wave six of the study were include in the study sample. Second, the reference persons of the households had to be same in all the waves the households participated in.

[1] Business Cycle Dating Committee, National Bureau of Economic Research (NBER)

[2] For more information on the SIPP 2008 panel schedule, please refer to this US Census Bureau website

Give the reason why. Third, the reference persons had to be adults (18 years and older) throughout the household's participation in the study. Full data from Jul 2008 through Jun 2013. This period overlapped with twelve of the eighteen months [3] of the "Great recession" and its long wake. In wave six, there were a total of 33,547 households that met the inclusion criteria. Of them, 7,865 households (23.44%) had at least one working age adult with disability.

MEASURES

Dependent variable

The ratio of average quarterly household income and federal poverty level (100% FPL) was chosen as a measure of income poverty and was used as the dependent variable in our analysis. We named the dependent variable FPL100-ratio. An FPL100-ratio lower than one in any quarter indicated the household was below 100% Federal poverty level in that quarter. In the sample, the quarterly income data ranged from -$27,180 to $108,900, the average being $5240 and median $3,874. The negative incomes were associated with households owning business that incurred lossed in those quarters. The FPL100-ratio ranged from -17.95 to 89.48, with the average being 3.817 and the median 2.924.

Key Predictors

There were two key predictors in our analysis: *time* and *adult disability*. We analyzed how households with a working age adult with disability differed from households with no working age adult with disability, over time. Time (quarters) was treated was a continuous variable, adult disability was treated as a dichotomous factor and the interaction between time and adult disability was treated as a continuous variable.

Control variables

The demographic factors like *gender*, *marital status*, *education*, *race*, and *ethnicity* of the reference persons of the households were used as control variables our analysis. The *race/ethnicity* factor had four categories "non-hispanic white", "non-hispanic black", "hispanic" and "others". For simplicity, "white" and "black" indicated categories "non-hispanic white" and "non-hispanic black". Explain combining race and ethnicity. *Gender* of reference persons had two categories: "male" and "female".

[3] NBER Recession Cycles

Education of reference persons had three categories: "high-school or less", "some college, diploma, associated degrees" and "bachelors or higher". *Marital status* of reference persons had two categories: "married" and "not married". Divorced or widowed reference persons were considered in the "not married" category.

ANALYTIC STRATEGY

A mixed (fixed and random) effects model was fit to analyze how households with a working age adult with disability differ from households with no working age adult with disability, during the great recession, using Income Poverty as a measure of economic wellbeing, controlling for demographic factors. Since this dataset is longitudinal in nature, to account for "between household" differences a mixed effect model was used. Y denoted the vector of responses (FPL100-ratio). Θ denoted the vector of fixed effect factors like gender, marital status, education level, race/ethnicity of reference person, along with their interactions. β denoted another fixed effect of time (in quarters), starting from 2008-Q3 and ending in 2013-Q1. b denoted the household level random effect (random intercept). The separate estimation of b_i from ϵ_{ij} ensures the separate estimation of the two types of variability (between household, b_i, and within household, ϵ_{ij}). For example, a simple mixed-effects model for the analysis could be written as

$$Y_{ij} = \beta_0 + \beta t_j + X_i\Theta + b_i + \epsilon_{ij} \tag{1}$$

where, ϵ_{ij} are measurement errors, i ranges from 1 to H, the number of households, j from 1 to T, the total number of quarters. In this model, the response from the i^{th} household at time t_j is assumed to differ from the population mean $\beta_0 + \beta t_j + X_i\Theta$ by a household effect b_i and a within household measurement error ϵ_{ij}. The within household and between household errors are assumed to be normal and independent [4]. "time" was a fixed effect.

The trough, of the great recession was reached in the second quarter of 2009 (marking the technical end of the recession, defined as at least two consecutive quarters of declining GDP) [5]. According to NBER, June 2009 was the final month of the recession. We checked if this was reflected

[4] $(b_i \sim \mathcal{N}(0, \sigma_b^2), \quad \epsilon_{ij} \sim \mathcal{N}(0, \sigma^2), \quad b_i \perp\!\!\!\perp \epsilon_{ij}, \forall i, j)$
[5] Business Cycle Dating Committee, National Bureau of Economic Research (NBER)

in the FPL100-ratio as a downward trend in the initial quarters followed by an upward trend. A linear term in "time" was insufficient to capture this effect. We added a second order term time^2 to test the change in direction of trend. The second order term was added after centering the original "time" variable, to avoid introducing multicollinearity. An indicator variable was used to denote the presence of working age adult with disability in a household. An interaction term between this indicator variable and time was also included to estimate the difference in slopes between households with and without a working age adult with disability. Below is the final model that was fit:

$$Y_{ij} = \beta_0 + \beta_1 t_j + \beta_2 t_j^2 + \beta_D \mathbb{1}_{D_i} + \beta_t(\mathbb{1}_{D_i} * t_j) + X_i\Theta + b_i + \epsilon_{ij} \tag{2}$$

where, $\mathbb{1}_{D_i} = 1$, if household i has a working age adult with disability, else $\mathbb{1}_{D_i} = 0$. The hypotheses of interests are:

1. $H_0 : \beta_1 = 0,$ vs $H_a : \beta_1 \neq 0$ tested if FPL100-ratio changed over time

2. $H_0 : \beta_2 = 0,$ vs $H_a : \beta_2 \neq 0$ tested if the trend of FPL100-ratio changed direction

3. $H_0 : \beta_D = 0,$ vs $H_a : \beta_D \neq 0$ tested if disability had any effect on FPL100-ratio

4. $H_0 : \beta_t = 0,$ vs $H_a : \beta_t \neq 0$ tested if disability had any effect on the slope of FPL100-ratio during the study period

5. $H_0 : \Theta = 0,$ vs $H_a : \Theta \neq 0$ tested if demographic factors had any effect on FPL100-ratio.

In addition, interactions between demographic factors, and between disability and demograhic factors were also tested. The demographic factors were considered as fixed effects.

The final model was fit with some of the fixed effect factors along with their interactions after performing "backward elimination" on the full model. Elimination of the fixed effects were done by the principle of marginality, that is: the highest order interactions are tested first: if they are significant, the lower order effects were included in the model without testing for significance. The p-values for the fixed effects are estimated from the F statistics, with "Satterthwaite" approximation (Satterthwaite (1946)) denominator degrees of freedom. The p-values for the random effect were computed from likelihood ratio tests (Morrell (1998)).

Post-hoc tests

Post-hoc tests were conducted between categories of all demographic factors and their interactions, by calculating differences of "Least Squares Means" using R package "lmerTest" (Kuznetsova et al. (2015)), with "Satterthwaite" approximation (Satterthwaite (1946)) of the denominator degrees of freedom.

Multiple testing correction

When conducting post-hoc tests for demographic factors and their interactions, due to multiple categories of these factors the size of the tests could be inflated. Sequentially rejective *Bonferroni procedure* (Holm (1979)) and *Benjamini-Hochberg procedure* (Benjamini and Hochberg (1995)) remain the two most popular multiple testing correction procedures. Holm's sequentially rejective Bonferroni procedure controls the family-wise type-I error rate (FWER) and is more powerful than the classical Bonferroni procedure. Benjamini-Hochberg controls the false discovery rate (FDR) which is the expected value of false discovery proportion. Controlling FWER usually proves to be too conservative. Hence, we used the Benjamini-Hochberg procedure, which is less conservative, but more powerful than Bonferroni correction. All post-hoc test p-values reported were Benjamini-Hochberg corrected.

Computational software

All analysis were conducted using the statistical software R (R Core Team (2016)), version 3.3.1. The mixed effects models were fit using the R-package "lme4" (Bates et al. (2014)) and all hypothesis tests were done using the R package "lmerTest" (Kuznetsova et al. (2015)).

RESULTS

Table 2 shows the coefficients of time (measured in year-quarters), and disability and the interaction between them. The model includes the demographic factors, as explained in equation 2. ANOVA table of these demographic factors is in table 3. The $\beta_1 = -0.0553, p < 0.01$ in the model, indicating, FPL100-ratio decreased by 0.0553 every year, during the study period. The coefficient of *Disability* is $\beta_D = -0.5061, p < 0.01$ indicating households with a working age adult with disability had their FPL100-ratios 0.5061 lower, on an average, compared to households without any working age adult with disability. Next, we observe that the coefficient of interaction between time and disability ($\gamma = 0.0150, p < 0.01$) is positive. This implies that the slope of FPL100-ratio for households with disability is $-0.0443(-0.0553 + 0.0150)$, which is less negative than the households without disability. This apparently contradictory finding leads us to conclude that households with disability although had "significantly" worse FPL100-ratio throughout the study period, the households without disability experienced more severe declines in their FPL100-ratios. This could throw some light on the impact of different supplementary coverage programs on households with disability. The coefficient of the quadratic term of Time ($\beta_2 = 0.0073, p < 0.01$) indicates rate of change of slope is positive. In other words, although the FPL100-ratio decreased over time (as $\beta_1 < 0$), it flattened out and even started increasing towards the latter parts of the study period. This is illustrated in figure 1. It shows the average fitted values of FPL100-ratios of households with and without a working age adult with disability. The FPL100-ratios decline sharply between 2008 and 2010, flatten out and then increase gradually after 2011. The quadratic term of Time in the model captures this behavior. It is noticable that the decline in FPL100-ratios was sharper than the gradual incline that followed. A similar behavior is observed in both types of households.

Figures 2a, 2b, 2c and 2d illustrate the FPL100-ratios of the different households differentiated by gender, marital status, race and ethnicity, and education levels of the reference persons. Figure 2c illustrates that households with "hispanic" reference persons had minimum FPL100-ratios throughout the study period. Another important observation is the different shapes of the FPL100-ratios of the four races. Households with "white" heads had a gradual and steady incline in their average FPL100-ratios after 2011. However, this behavior is not observed in households with "black", "hispanic" or "others" heads. In figure 2d, households where the education level of their heads are "high school or less" experienced a decline in their FPL100-ratios, just like the other groups, but never experienced any improvement in the latter parts. Figure 3 illustrates the evolutions of FPL100-ratios of two contrasting household types: one with white, married, male (with education bachelors or higher) as reference persons, the other with not married, black, female (with high school or less education).

Below are results from the post-hoc tests of all factors and their interactions.

Gender of reference person

Gender is statistically significant. In model 1, households with a “female” head has, on an average, 0.113 lower FPL100-ratio ($\theta_{\text{female}-\text{male}} = -0.113, p < 0.01$) in the sample, over the study preiod. This is also illustrated in figure 2a.

Marital status of reference person

Marital status is statistically significant. In model 1, households with a “not married” head, has, on an average 0.168 lower FPL-100 ratio ($\theta_{\text{not married}-\text{married}} = -0.168, p < 0.01$ in the sample, over the study period. This is also illustrated in figure 2b.

Race and Ethnicity of reference person

In table 5 we can see that regardless of disability, in Model 1, households with a “black” ($\theta_{\text{black}-\text{others}} = -0.54, p = 0.0000$) or “hispanic” ($\theta_{\text{hispanic}-\text{others}} = -0.54, p = 0.0000$) race/ethnicity as reference person is worse off compared to those with “others” race/ethnicity. The discrepancy is higher between “black” and “white” reference persons ($\theta_{\text{black}-\text{white}} = \theta_{\text{hispanic}-\text{white}} = -0.94, p = 0.0000$). This is also illustrated in figure 2c.

Education of reference person

In table 6, we see that regardless of disability, in Model 1, households in “high school or less” is worse off than “some college, diploma” ($\theta_{\text{HS}-\text{Col}} = -0.47, p = 0.0000$), which is in turn worse off than “bachelors or higher” ($\theta_{\text{Col}-\text{BS}} = -1.29, p = 0.0000$). This is also illustrated in figure 2d.

Interaction of Gender and Marital status

In table 7, we see that in Model 1 “female, not married” households are worse off than “male, married” ($\theta_{\text{female, not married}-\text{male, married}} = -0.94, p = 0.0000$), than “female, married” ($\theta_{\text{female, not married}-\text{female, married}} = -0.78, p = 0.0000$) and “male, not married” ($\theta_{\text{female, not married}-\text{male, not married}} = -0.67, p = 0.0000$).

Interaction of Gender and Education

Interaction of gender and education is also statistically significant. Following from the results of the main effects, the largest differences in average FPL100-ratios between two subgroups of this interaction is that between “female, with high-school of less” and “male, with bachelor or higher” ($\theta_{\text{diff}} = -2.09, p = 0.0000$). The other pairwise differences of average FPL100-ratios are listed in table 8

Interaction of Race/Ethnicity and Marital status

Table 9 lists the pairwise differences of the average FPL100-ratios between the levels of interacting race/ethnicity with marital status. The largest difference is between "not married, black" and "married, white" ($\theta_{\text{diff}} = -1.59, p = 0.0000$), followed by that between "not married, hispanic" and "married, white" ($\theta_{\text{diff}} = -1.43, p = 0.0000$)

Interaction of Marital status and Education

Interaction of marital status and education is also statistically significant. Table 10 lists the pairwise differences of the average FPL100-ratios between the levels of interacting race/ethnicity with marital status. The largest difference is between "not married, with high school or less" and "married, bachelors or higher" ($\theta_{\text{diff}} = -2.21, p = 0.0000$)

Limitations

1. Although a linear mixed effects regression model discovered some conventional and some interesting patterns in the relationships between response and demographic factors, along with disability, the trajectory of income poverty over the study period for some households were not linear. This modeling approach did not capture trajectory shapes of individual households. A non-parametric fitting of the income poverty trajectories could be tried as a pre-processing step before testing for differences in behavior between different groups of households.

2. Some households in the sample did not participate over all the waves. Since households that participated in wave six were included there were some households that were first interviewed in wave six and some that were no longer interviewed after wave six. There were no means of determining the reasons for dropping out from the survey, nor the reasons for late inception into the survey. Since the *great recession* was a significant economic and social event, we included households without complete participation in order to maximize the sample size, and incorporate the effect of the recession on more households. If, however, the reasons for dropping out or late joining had an association with the outcome of the study (income poverty), including those households could increase bias in the estimates, in spite of the estimates being more stable (less variance). Chapter 2 in SIPP users guide [6] mentions that

[6] https://www2.census.gov/programs-surveys/sipp/guidance/SIPP_2008_USERS_Guide_Chapter2.pdf

the survey weights are adjusted to account for some types of household nonresponse with the objective of ameliorating the nonresponse bias.

1 Figures

Figure 1: Trends of FPL100-ratios of households, by Disability status

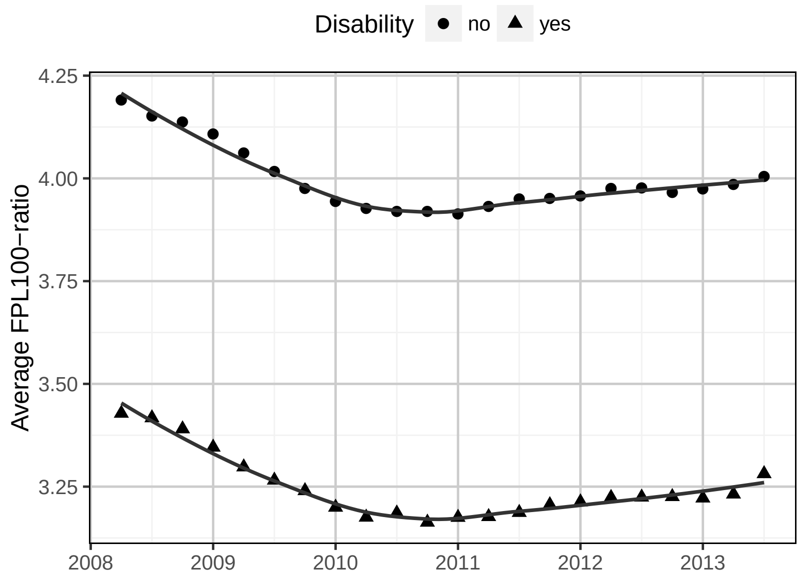
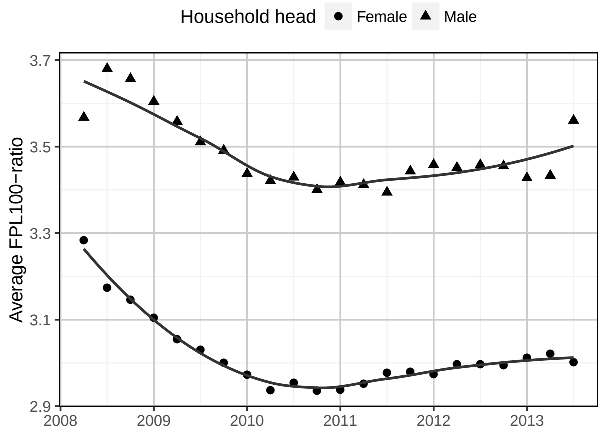
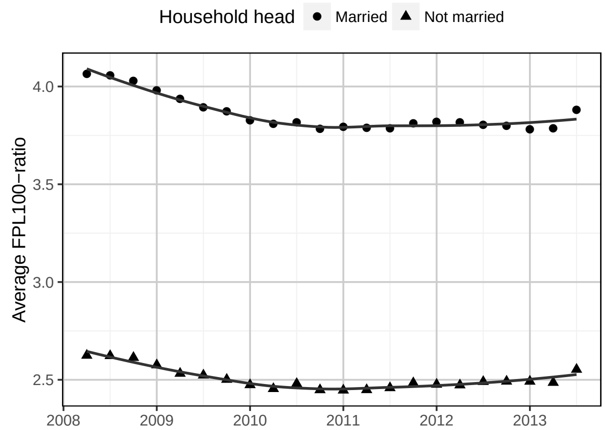


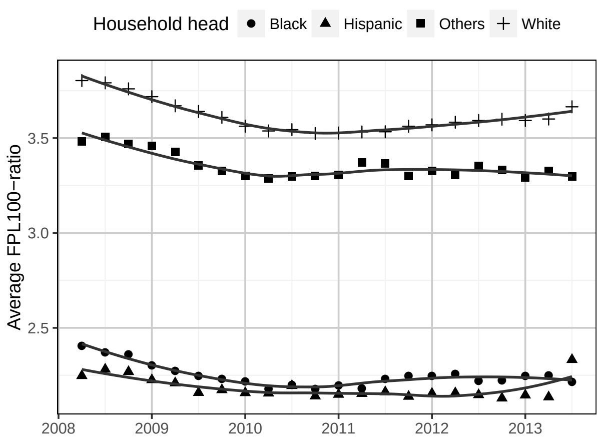
Figure 2: Trends of FPL100-ratios, for households with a working age adult with disability (a) by gender (b) by marital status (c) by race and ethnicity (d) by education, of reference person



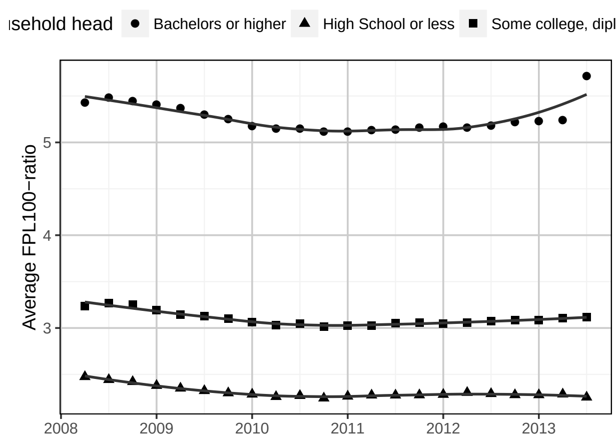
(a)



(b)



(c)



(d)

Figure 3: Trends of FPL100-ratios of households, for two contrasting household types

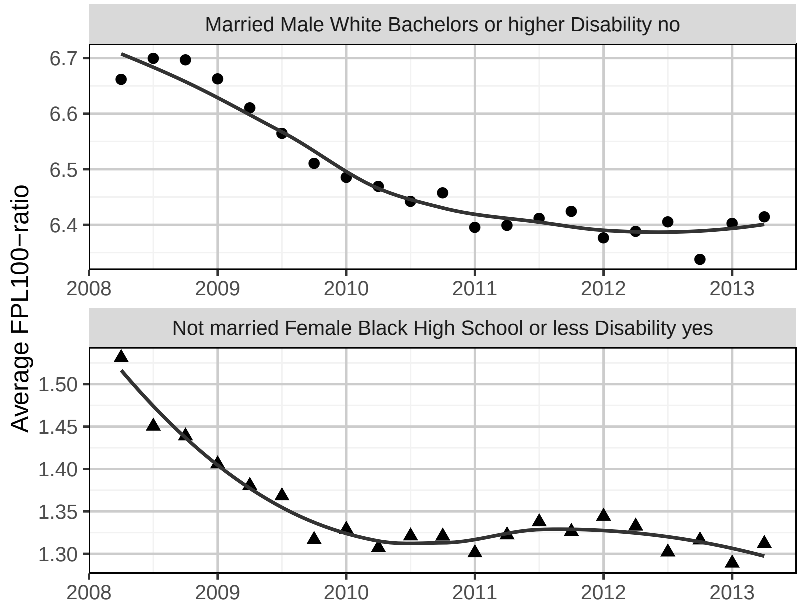
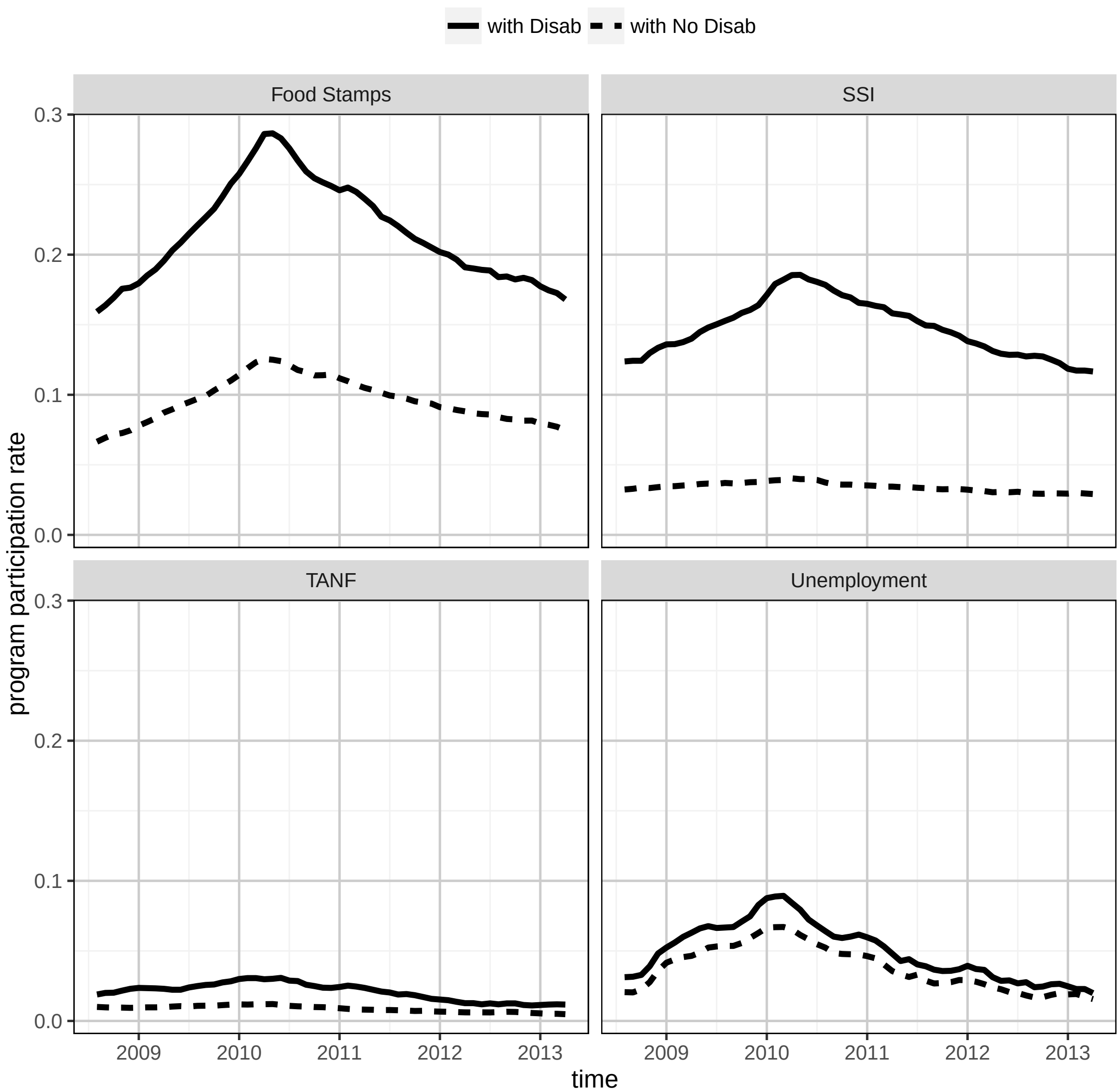


Figure 4: Participation rates in different safety net programs, in eligible households (below 200% of FPL)



2 Tables

Table 1: Descriptive statistics in wave six

	HH with No Disability		**HH with Disability**	
Demographic factors	**Number**	**Percentage**	**Number**	**Percentage**
Total	25,682	77	7,865	23

Table 2: Coefficients of Fixed effects in regression models

Continuous Indep Variables	Model coefficients
Intercept	2.779^{***}
	(0.0706)
time (Year-Quarter)	-0.0553^{***}
	(0.0021)
$time^2$	0.0073^{***}
	(0.0013)
Disability	-0.5061^{***}
	(0.0564)
Year-Quarter*Disability	0.0150^{***}
	(0.0043)
Gender (Female)	-0.113^{***}
	(0.0394)
Marital status (not married)	-0.1679^{***}
	(0.0545)

Note: *p<0.1; **p<0.05; ***p<0.01

Table 3: FPL100 vs demographic factors and time and disability status

	Sum Sq	Mean Sq	NumDF	F.value	p.value
Time	5380.93	5380.93	1	446.58	0.0000
Disability	2280.29	2280.29	1	189.25	0.0000
Gender	3143.82	3143.82	1	260.92	0.0000
Marital status	5788.34	5788.34	1	480.40	0.0000
Ethnicity	8743.91	2914.64	3	241.90	0.0000
Education	15873.19	7936.60	2	658.69	0.0000
Gender & Marital status	3184.05	3184.05	1	264.26	0.0000
Marital status & Ethnicity	1670.73	556.91	3	46.22	0.0000
Ethnicity & Education	652.73	108.79	6	9.03	0.0000
$Time^2$	414.33	414.33	1	34.39	0.0000
Marital status & Education	450.29	225.15	2	18.69	0.0000
Gender & Education	310.12	155.06	2	12.87	0.0000
Disability & Gender	182.78	182.78	1	15.17	0.0001
Time:adult_disb	143.66	143.66	1	11.92	0.0006
Disability & Education	116.32	58.16	2	4.83	0.0080

Table 4: FPL100 vs demographic factors and time, for households with Disability

	Sum Sq	Mean Sq	NumDF	F.value	p.value
Marital status	66.83	66.83	1	316.81	0.0000
Education	65.21	32.60	2	154.56	0.0000
Marital status & Ethnicity	18.18	6.06	3	28.73	0.0000
Ethnicity	14.34	4.78	3	22.66	0.0000
Gender	9.09	9.09	1	43.08	0.0000
Ethnicity & Education	11.36	1.89	6	8.98	0.0000
Marital status & Education	8.03	4.01	2	19.03	0.0000
Gender & Marital status	4.40	4.40	1	20.86	0.0000
Time	3.39	3.39	1	16.08	0.0001
$Time^2$	0.06	0.06	1	0.26	0.6074

Table 5: Post-hoc test of Ethnicity

Factor Levels	Estimate	Standard Error	t-value	p-value
Black - Others	-0.54	0.07	-8.02	0.0000
Black - White	-0.94	0.05	-20.16	0.0000
Hispanic - Others	-0.54	0.07	-7.78	0.0000
Hispanic - White	-0.94	0.05	-19.60	0.0000
Others - White	-0.40	0.05	-7.43	0.0000
Black - Hispanic	-0.00	0.06	-0.05	0.9611

Table 6: Post-hoc test of Education

Factor Levels	Estimate	Standard Error	t-value	p-value
High School or less - Some college, diploma, assoc	-0.47	0.04	-12.47	0.0000
High School or less - Bachelors or higher	-1.69	0.05	-36.04	0.0000
Some college, diploma, assoc - Bachelors or higher	-1.21	0.04	-27.03	0.0000

Table 7: Post-hoc test of Gender and Marital status

Factor Levels	Estimate	Standard Error	t-value	p-value
Male Married - Female Married	0.15	0.03	5.03	0.0000
Male Married - Male Not married	0.26	0.03	9.00	0.0000
Male Married - Female Not married	0.94	0.03	27.73	0.0000
Female Married - Female Not married	0.78	0.03	27.52	0.0000
Male Not married - Female Not married	0.67	0.03	22.30	0.0000
Female Married - Male Not married	0.11	0.04	3.03	0.0024

Table 8: Post-hoc test of Gender and Education

Factor Levels	Estimate	Standard Error	t-value	p-value
Male High School or less - Female High School or less	0.28	0.03	7.98	0.0000
Male High School or less - Male Some college, diploma, assoc	-0.55	0.05	-12.14	0.0000
Male High School or less - Male Bachelors or higher	-1.81	0.05	-33.25	0.0000
Male High School or less - Female Bachelors or higher	-1.28	0.05	-23.46	0.0000
Female High School or less - Male Some college, diploma, assoc	-0.82	0.05	-17.49	0.0000
Female High School or less - Female Some college, diploma, assoc	-0.39	0.04	-9.01	0.0000
Female High School or less - Male Bachelors or higher	-2.09	0.06	-37.35	0.0000
Female High School or less - Female Bachelors or higher	-1.56	0.05	-29.82	0.0000
Male Some college, diploma, assoc - Female Some college, diploma, assoc	0.43	0.04	11.59	0.0000
Male Some college, diploma, assoc - Male Bachelors or higher	-1.26	0.05	-23.80	0.0000
Male Some college, diploma, assoc - Female Bachelors or higher	-0.73	0.05	-13.44	0.0000
Female Some college, diploma, assoc - Male Bachelors or higher	-1.69	0.05	-30.91	0.0000
Female Some college, diploma, assoc - Female Bachelors or higher	-1.16	0.05	-23.24	0.0000
Male Bachelors or higher - Female Bachelors or higher	0.53	0.04	12.35	0.0000
Male High School or less - Female Some college, diploma, assoc	-0.12	0.05	-2.56	0.0105

Table 9: Post-hoc test of Marital status and Ethnicity

Factor Levels	Estimate	Standard Error	t-value	p-value
Married Black - Not married Black	0.54	0.05	11.34	0.0000
Married Black - Not married Hispanic	0.38	0.07	5.12	0.0000
Married Black - Married Others	-0.55	0.08	-6.83	0.0000
Married Black - Married White	-1.05	0.06	-18.44	0.0000
Married Black - Not married White	-0.30	0.06	-5.18	0.0000
Not married Black - Married Hispanic	-0.39	0.07	-5.70	0.0000
Not married Black - Married Others	-1.10	0.08	-14.39	0.0000
Not married Black - Not married Others	-0.53	0.08	-6.88	0.0000
Not married Black - Married White	-1.59	0.05	-32.10	0.0000
Not married Black - Not married White	-0.84	0.05	-16.91	0.0000
Married Hispanic - Not married Hispanic	0.22	0.04	5.25	0.0000
Married Hispanic - Married Others	-0.71	0.08	-8.99	0.0000
Married Hispanic - Married White	-1.21	0.05	-22.92	0.0000
Married Hispanic - Not married White	-0.45	0.05	-8.57	0.0000
Not married Hispanic - Married Others	-0.93	0.08	-11.72	0.0000
Not married Hispanic - Not married Others	-0.36	0.08	-4.55	0.0000
Not married Hispanic - Married White	-1.43	0.05	-26.45	0.0000
Not married Hispanic - Not married White	-0.68	0.05	-12.54	0.0000
Married Others - Not married Others	0.57	0.07	8.59	0.0000
Married Others - Married White	-0.50	0.06	-7.74	0.0000
Not married Others - Married White	-1.07	0.06	-16.50	0.0000
Not married Others - Not married White	-0.31	0.06	-4.84	0.0000
Married White - Not married White	0.75	0.02	40.59	0.0000
Married Others - Not married White	0.26	0.06	4.01	0.0001
Not married Black - Not married Hispanic	-0.16	0.07	-2.38	0.0193
Married Black - Married Hispanic	0.16	0.07	2.14	0.0347
Married Hispanic - Not married Others	-0.14	0.08	-1.76	0.0820
Married Black - Not married Others	0.02	0.08	0.21	0.8318

Table 10: Post-hoc test of Marital status and Education

Factor Levels	Estimate	Standard Error	t-value	p-value
Married High School or less - Not married High School or less	0.41	0.03	13.63	0.0000
Married High School or less - Married Some college, diploma, assoc	-0.53	0.04	-12.40	0.0000
Married High School or less - Married Bachelors or higher	-1.80	0.05	-35.43	0.0000
Married High School or less - Not married Bachelors or higher	-1.16	0.05	-21.21	0.0000
Not married High School or less - Married Some college, diploma, assoc	-0.93	0.04	-20.91	0.0000
Not married High School or less - Not married Some college, diploma, assoc	-0.42	0.04	-10.19	0.0000
Not married High School or less - Married Bachelors or higher	-2.21	0.05	-42.18	0.0000
Not married High School or less - Not married Bachelors or higher	-1.57	0.05	-31.25	0.0000
Married Some college, diploma, assoc - Not married Some college, diploma, assoc	0.52	0.03	16.60	0.0000
Married Some college, diploma, assoc - Married Bachelors or higher	-1.28	0.05	-26.12	0.0000
Married Some college, diploma, assoc - Not married Bachelors or higher	-0.63	0.05	-11.94	0.0000
Not married Some college, diploma, assoc - Married Bachelors or higher	-1.79	0.05	-34.60	0.0000
Not married Some college, diploma, assoc - Not married Bachelors or higher	-1.15	0.05	-23.79	0.0000
Married Bachelors or higher - Not married Bachelors or higher	0.64	0.03	18.55	0.0000
Married High School or less - Not married Some college, diploma, assoc	-0.01	0.05	-0.18	0.8540

Table 11

	Dependent variable:
	FPL100_num
Time	-0.054^{***}
	(0.002)
I(Timeˆ2)	0.007^{***}
	(0.001)
adult_disbyes	-0.506^{***}
	(0.056)
genderFemale	-0.113^{***}
	(0.039)
msNot married	-0.168^{***}
	(0.055)
race_originHispanic	-0.093
	(0.083)
race_originOthers	0.347^{***}
	(0.107)
race_originWhite	0.914^{***}
	(0.070)
educationSome college, diploma, assoc	0.655^{***}
	(0.077)
educationBachelors or higher	1.833^{***}
	(0.096)
adult_disbyes:genderFemale	0.195^{***}
	(0.050)
adult_disbyes:educationSome college, diploma, assoc	-0.107^{*}
	(0.057)
adult_disbyes:educationBachelors or higher	-0.219^{***}
	(0.072)
Time:adult_disbyes	0.015^{***}
	(0.004)
genderFemale:msNot married	-0.523^{***}
	(0.032)
genderFemale:educationSome college, diploma, assoc	-0.153^{***}
	(0.047)
genderFemale:educationBachelors or higher	-0.255^{***}
	(0.052)
msNot married:race_originHispanic	0.320^{***}
	(0.063)
msNot married:race_originOthers	-0.027
	(0.082)
msNot married:race_originWhite	-0.209^{***}
	(0.051)

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