

Abstract

By matching county-level data from the Quarterly Census of Employment and Wages (QCEW) program to data collected from Connecticut's Department of Social Services (DSS), we examined impacts of welfare reform on relative earnings in the low-wage, retail sector. The statistical analysis in this study adjusts for endogenous caseloads using an instrumental variables approach while testing for instrument strength and over-identification. We found that Connecticut's "Jobs-First" approach to welfare reform significantly reduces the relative wages of retail workers. Among several important welfare characteristics, percent of welfare cases placed under time limits, the proportion of time-limited cases requesting extensions, and the ratio of extensions granted to extensions denied have sizeable influence on this process. In demonstrating that a "Jobs-First" reform contributes to increased wage inequality, the results provide motivation for policy makers to consider these specific distributional effects when designing welfare policy and related income-support programs.

The Data

To construct our data set, we

1.Recorded the monthly data on welfare implementation for each of the five DSS regions; Central, South West, South East, North West, North East

2.Converted the monthly regional data to quarterly figures for each region

3.Matched this regional information on welfare characteristics to quarterly county-level QCEW data on employment and wages by detailed industry category

•The resulting data set provides a quarterly, regional panel containing six years of *post*-reform information along with a considerable stretch of *pre*reform information on local labor markets and welfare attributes for the period from 1990:1 to 2002:4

| Variable Name | Variable Description | Mean | Standard Deviation | Min | Max |
|-----------------------|---|-------|-----------------------|-------|------|
| | Welfare Variables | | | | |
| CASES | " <u>Total Welfare Cases</u> " The number of welfare cases per capita (multiplied by 100), for DSS region i in quarter t. This figure includes cases on AFDC (Aid to Families with Dependent Children) and cases on TANF (Temporary Assistance to Needy Families) | 1.3% | 0.49 | 0.47 | 2.3 |
| TIMED | " <u>Time Limited Cases</u> " The proportion of the total welfare cases subject to the Connecticut welfare time limit of 21 months, for DSS region i in quarter t. | 0.57 | 0.12 | 0.4 | 0.86 |
| SANCTIONED | "Sanctioned Cases" The proportion of time-limited cases under sanction for non- compliance, including cases under a first, second, or higher number of sanctions, for DSS region i in quarter t. | 0.03 | 0.03 | 0.01 | 0.06 |
| AT-RISK | " <u>At-Risk Cases</u> " The proportion of time-limited cases at risk of having benefits discontinued, for DSS region i in quarter t. These are cases with at least two sanctions <i>or</i> cases with one sanction and one work-test failure. | 0.05 | 0.03 | 0.008 | 0.12 |
| REQUESTS | "Extensions Requested" The number of extensions requested as a proportion of all the time-limited cases, for DSS region i in quarter t. Administrators of the program used "diversion and discouragement" tactics to dissuade people from entering the welfare program or requesting extensions. This variable thus measures the success of these diversion and discouragement practices. | 0.018 | 0.013 | 0.004 | 0.06 |
| GRANTED-TO- DENIED | " <u>Granted-to-Denied Extensions</u> " The ratio of extensions granted to extensions denied, for DSS region i in quarter t. The higher this figure, the more <i>lenient</i> is the DSS office in enforcing time limits. | 2.16 | 1.20 | 0.61 | 8.0 |
| QUITS | "Sanctioned for Voluntary Quit" The proportion of time-limited cases sanctioned specifically for a voluntary job termination, for DSS region i in quarter t. DSS does not include such cases in the simple "Sanctioned" figures described above. | 0.02 | 0.01 | 0.009 | 0.05 |
| | Labor-Market Variables | | | | |
| WAGE | " <u>Relative Retail Wages</u> " Wages per worker in the retail sector divided by wages per worker in the non-retail sector, for DSS region i in quarter t. For each sector, wages per worker equals total quarterly wages divided by the average number of workers employed in that quarter. | 0.48 | 0.05 | 0.35 | 0.66 |
| EMPLOYMENT | " <u>Non-retail Employment</u> " Non-retail employment per capita, for DSS region į in quarter t. | 0.36 | 0.14 | 0.19 | 0.64 |
| HOURS | " <u>Manufacturing Hours</u> " Average weekly hours in manufacturing, for DSS region į in quarter t. | 42 | 1.4 | 39 | 45 |
| PROJECTED JOBS | "Projected Number of Retail Jobs" The projected number of jobs in retail, for DSS region i in quarter t. Region-specific projections are based on actual national trends in retail employment growth combined with base-year retail shares of employment for each Connecticut DSS region. | 9.3 | 1.6 | 6.4 | 13.1 |

Table 1. Descriptive Statistics of Welfare Variables and Labor-Market Variables

Sources:

• Authors' calculations based on monthly, internal reports from the Connecticut Department of Social Services: "Temporary Family Assistance Program Summary Reports." •Authors' calculations based on the "Quarterly Census of Employment and Wages." (QCEW) "Local Area Employment Statistics," Connecticut Department of Labor. •Authors' calculations, based on the QCEW, of national trends in retail employment growth, combined with base-year retail employment shares for each DSS region.

WELFARE REFORM AND WAGES IN THE RETAIL SECTOR

Angela Lee, with Professor Rayack

Department of Economics, Wesleyan University, Middletown CT

The Empirical Specification

Limits of OLS estimation

• OLS produces biased estimates of the link between caseload reductions and wages;

as tight labor markets push wages upward, the expansion of job opportunities causes welfare caseloads to fall. This spurious, negative correlation between wages and caseloads can swamp the *direct* impact on wages of policy-induced caseload reductions

Two Stage IV Procedure

To identify the size and significance of such effect, we implemented the following IV procedure (all estimates approach a fixed-effects model):

First-Stage Equation: estimates and predicts welfare caseloads

$$Cases_{it} = \boldsymbol{b}_0 + \boldsymbol{b}_1(Wages_{it-1}) + \boldsymbol{b}_2(\mathbf{L}_{it}) + \boldsymbol{b}_3(\mathbf{P}_{it}) + r_i + \boldsymbol{t}_t + \boldsymbol{n}_{it} \qquad \text{W}$$

 $Wages_{i+1}$ = Relative wages per worker in retail trade for DSS region i, quarter t-1. L_{it} = Vector of labor demand and supply conditions for DSS region i, quarter t. \mathbf{P}_{it} = Vector of welfare program variables in DSS region i, quarter t.

- $r_{\rm i}$ = Vector of regional fixed effects for each of the DSS regions.
- t_{t} = Vector of time-specific fixed effects for each quarter.

 $v_{it} = An i.i.d.$ random error term

Second-Stage Equation: explains wages using the predicted values of the caseload variable derived from the first equation

 $Wages_{it} = \mathbf{a}_0 + \mathbf{a}_1(Wages_{it-1}) + \mathbf{a}_2(\mathbf{L}_{it}) + \mathbf{a}_3(Cases_{it}) + r_i + \mathbf{t}_t + \mathbf{w}_{it}$

 $Wages_{it}$ = Relative wages per employee for retail trade in DSS region i, quarter t. L_{it} = Vector of labor demand and supply conditions for DSS region i, quarter t.

 $Cases_{it} = predicted$ caseloads per capita for DSS region i, quarter t.

- r_i = vector of regional fixed effects for each of the five DSS regions.
- t_{t} = vector of quarterly, time-specific fixed effects.

 \boldsymbol{W}_{it} = an i.i.d. random error term

Results

The Initial Estimates from the Caseload Equation

- 1. Analysis limited to the labor market variables only (EQ1):
- All labor-market variables have a negative and significant impact on caseloads except for hours and lagged wage variables:
- > a negative spurious correlation is swamping a positive causal link 2. Welfare instruments and squares, one-period lags of the labor-market variables to added to EQ1:
- All welfare instruments exhibit joint significance with their squared terms
- No major changes in the estimated impacts of the welfare measures or in
- their significance. Although not much changes with the new labor market specification, the lags help in correcting the model for over-identification

Initial Estimates from the Wage Equation

. Analysis limited to the labor market variables only (EQ1):

- Changes in actual caseload not significantly different from zero \succ implies a lack of relationship or a relationship hidden by opposing spurious correlation
- 2. Adding the welfare instruments & squares, and one-period lags to EQ1:
 - With IV procedure, the estimated coefficient on the caseload rises from 0.01 to 0.11 with a significance level of 0.1 percent
- This estimate links a one *percentage point* (or 78%) decline in the predicted caseload figures with a 23.8% decline in relative retail wages.

Sensitivity of the Results

The models above suffer from *over-identification* and *weak instrument bias*. and relative retail wages are not significantly linked to declines in actual caseloads. To correct for such problem, we:

• varied the combination of instruments by dropping any instruments that lack significance at 10% level while looking for a model that passes both the identification and the tests for adequate instruments. Subsequently: we omitted the variable SANCTIONS and its square based on their high

correlation with the remaining welfare instruments

[°] then basing our decision on high collinearity with other instruments, we also omitted the variable AT-RISK and its square • the test for weak instruments and over-identification improved the most with: TIMED, REQUESTS and its squared term, and GRANTED-TO-DENIED

- ? F statistic: 15.088 with p-value [0.000]
- ? Stock and Yogo test at 5% significance level:
- > the estimated coefficient bias relative to OLS: 0.5% > the bias relative to OLS in terms of size: 15%
- ? Sargan test:
- Chi-square: 2.886 with p-value [0.4096]
- > Low Chi-square and high p-value: more forceful case for rejecting the hypothesis of over-identification

With the new specification, we found that: • estimated impact rose from 0.015 to 0.11, with a p-value 0.003 • a JF-related decline in welfare cases of 10% is associated with a 3.05% drop in relative wages

Simulation of a "No-Reform" Counterfactual

With the range of estimates obtained, we constructed a "reform" simulation and a "no-reform" counterfactual



Figure 1. Wage paths with and without welfare reform

Welfare reform results in greater wages for non-retail worker and smaller wages for retail worker, thereby inducing greater income gap between the retail sector and non-retail sector

The two dashed lines show that, in the *absence* of the program, the gap between retail and non-retail workers in CT would have narrowed. In the presence of the JF pressures (the solid lines), the wage gap clearly expands

Conclusion

• Caseloads respond significantly to time-limiting, to extensions granted relative to those denied, and to the act of sanctioning *specifically* for a voluntary quit. • A reform-driven reduction in caseloads per capita of 10 percent will lower relative wages in the retail sector by 3 percent, a non-trivial loss for workers already in one of the lowest wage sectors.

• The estimated loses in relative wages are far from negligible for low-wage workers especially since they already face heightened international competition and technological change that frequently favors higher skills

What's Next?

How did welfare reform affect relative wages in *service sector?*

here

where