

Exploring the Relationship between Progressivity of State Taxes and Welfare Cases

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Research Question

- Do progressive state taxes redistribute income?
- Do states with more progressive taxes have fewer welfare cases?

Possible Outcomes

- Progressive tax systems may lower the need for the temporary income support offered by welfare programs
- OR, progressive tax systems may generate revenue for a more generous welfare program, resulting in more cases

Introduction

- Income redistribution is usually (and best) undertaken by the federal government
 - Prevents perverse sorting of low-income and high-income individuals among states
- In reality, income redistribution does occur at the state level
 - Income taxes, sales taxes, property taxes
 - Health programs, education, welfare
- Is this redistribution purely political, or does it serve a purpose?

Prior Literature

- Chernick (2005)
 - Measure of progressivity is the ratio of the total state and local tax burdens of the highest quintile of a state's income distribution to that of the lowest quintile
 - **Distributional patterns of expenditures and taxation are not closely linked**
 - States with a strong taste for welfare tend to increase the tax burden proportionally

Prior Literature

- Bahl, Martinez-Velazquez, and Wallace (2002)
 - Estimate a “revenue distribution index” that proxies for progressivity – share of state taxes collected through personal income taxes and corporate income taxes
 - Proxy for pro-poor expenditures with the share of the budget devoted to welfare and K-12 education
 - State and local governments use revenue and expenditure policies as complements

Empirical Analysis

- State well-being is estimated using *TANF* or *AFDC* cases per capita
 - Number of welfare recipients per month, averaged over each year, and divided by the state's population
- Two measures of progressivity are tested
 - Revenue Distribution Index (Bahl, et al.)
 - $[\text{PIT collections} + \text{CIT collections}] / \text{total tax revenue}$
 - Average Tax Rate Progressivity
 - Change in the average tax rate relative to a \$20,000 change around a state's median income

Data

- State-level data from 1990-2002
- Demographic variables that affect welfare caseloads: % unemployed, % age 0-14, % age 65 and above, % non-white, % female, % with a HS degree, median income, population density
- TANF and tax variables: Lifetime limit, work requirement hours, State Earned Income Tax Credit and refundability

Summary Statistics

Variable	1990		1997		2002	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Cases PC	3.90	1.30	3.07	1.52	1.67	0.88
RDI	34.90	16.78	36.73	16.79	35.49	17.07
ATR	7.77	8.54	8.28	8.96	8.33	8.49
% Unemployed	5.45	1.14	4.71	1.15	5.37	1.04
% age 0-14	22.22	2.23	21.60	1.51	20.66	1.63
% age 65 and above	12.45	2.14	12.68	1.98	12.50	1.83
Median Income	41020	6003	53026	7239	61872	8456
Pop. Density	166.62	235.82	177.39	244.77	185.65	254.99
% non-white	14.14	11.61	15.45	12.08	17.22	12.37
% female	51.08	0.91	50.92	0.80	50.77	0.75
% HS deg	76.29	5.63	83.15	4.32	85.56	4.01
AFDC dummy	1.00	0.00	0.18	0.39	0.00	0.00
Lifetime limit < 60	0.00	0.00	0.20	0.40	0.16	0.37
Lifetime limit = 60	0.00	0.00	0.00	0.00	0.74	0.44
Work Requirement Hrs.	0.00	0.00	2.10	6.40	26.00	11.73
State EITC	0.08	0.27	0.18	0.39	0.28	0.45
EITC Refundable	0.04	0.20	0.10	0.30	0.18	0.39
All percents are on a 0-100 scale.						

Regression Results

Dependent Variable: Log of Average Monthly Cases Per Capita					
	Coefficient	Std. Error		Coefficient	Std. Error
RDI	-0.006 *	0.004	ATR	-0.004	0.006
% Unemployed	-0.005	0.014	% Unemployed	-0.003	0.014
% age 0-14	0.077 *	0.021	% age 0-14	0.073 *	0.021
% age 65 and above	0.001	0.048	% age 65 and above	0.009	0.048
Median Income	0.006	0.005	Median Income	0.005	0.006
Pop. Density	0.000	0.002	Pop. Density	0.001	0.002
% non-white	0.054 *	0.026	% non-white	0.057 *	0.026
% female	0.556 *	0.127	% female	0.521 *	0.126
% HS deg	0.003	0.006	% HS deg	0.003	0.006
AFDC dummy	0.219 *	0.090	AFDC dummy	0.222 *	0.090
Lifetime limit < 60	-0.047	0.040	Lifetime limit < 60	-0.051	0.040
Lifetime limit = 60	0.099	0.068	Lifetime limit = 60	0.073	0.066
Work Req. Hrs.	-0.008 *	0.002	Work Req. Hrs.	-0.008 *	0.002
State EITC	0.074	0.075	State EITC	0.062	0.076
EITC Refundable	-0.206 *	0.088	EITC Refundable	-0.202 *	0.088
Overall R-sq: 0.308			Overall R-sq: 0.308		
* indicates significance at the 10% level or better					

Results

- Relationship between tax progressivity and welfare cases per capita is sensitive to specification
 - If progressivity in a given state, as measured by RDI, increases to 36% from the mean of 35%, the number of welfare recipients per capita decreases to 99.4% of the previous level.
- Common determinants of welfare caseloads are significant, such as % female, % age 0-14, % non-white, and work requirement hours
- A refundable EITC seems to be key in reducing welfare cases