Tax Competition and Income Inequality
Why Did Welfare States Do Better than Liberal Market Economies?

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Competitive Advantage in the Global Economy

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Income Inequality

Income inequality in the OECD has increased since the early 1980s in almost all countries

The OECD blames technological change and policy deregulation

Inconsistent with data

3 facts:

1. The rise in inequality was on average more pronounced in post-tax income than pre-tax → declining levels of redistribution.

2. rise in post-tax inequality: LME > Welfare States

3. governments can prevent increase in post-tax income inequality

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Our Argument

Tax competition contributes to the rise in post-tax inequality

Tax competition can explain why post-tax inequality rose more sharply in LMEs than in continental and Scandinavian welfare states

Explanation: dominant redistribution strategy implemented before tax competition

Welfare states: reduces income inequality by transferring income to poorer parts of population

LMEs: redistribute income by collecting relative more taxes from relative wealthy part of population

Differences are relative but impact inequality through tax competition

Consequence:

Welfare states: shifting tax burden towards labor
LMEs: 'flatter' tax system and less redistribution

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Contribution

Contributing to and merging two strands of literature:

1. tax competition – governments have various strategies to react to tax competition, this depends on initial fiscal conditions, size and politics of income redistribution

2. survival of the welfare state – since governments have different strategies and redistribute differently, tax competition only had minor effects on welfare states

Empirical test of simultaneous decisions about taxation, fiscal policies and redistribution

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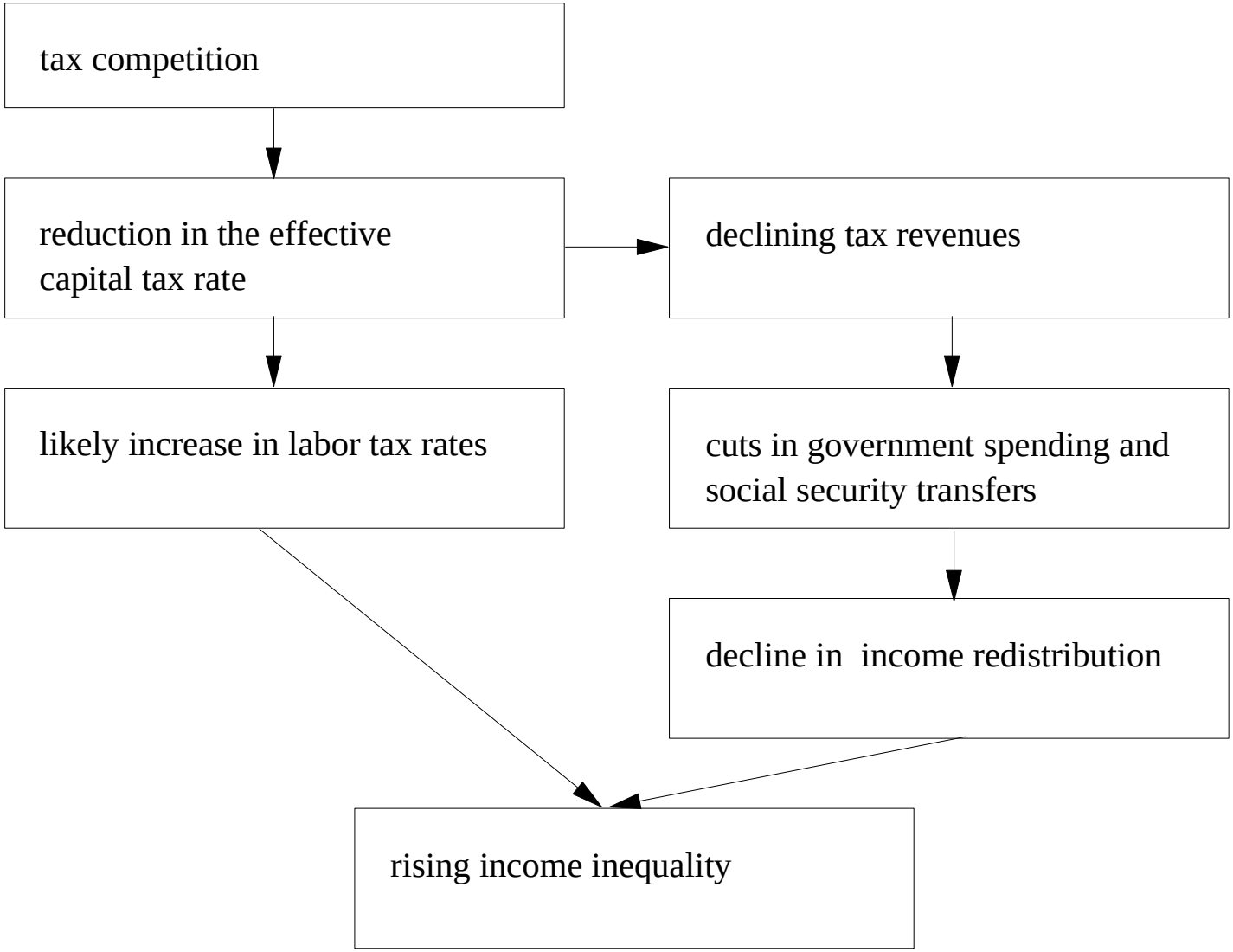
Literature

An Arrow-Diagram of the Effect of Tax Competition on Income Inequality



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Literature

the welfare state has survived:

- social welfare institutions must be stronger than suspected (Soskice)

- veto-players (partisan, electoral, coalitonal) prevent governments from choosing the optimal level of capital tax rates to start with (Basinger and Hallerberg)

BUT: uniform predictions – failure to explain divers strategies and outcomes

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The Argument in 4 Steps

studying tax policies in isolation from fiscal policies can lead to wrong predictions

Why do governments respond differently to tax competition?

Tax competition does not affect all governments equally

1. tax comptition with incomplete capital mobility
2. Initial conditions and heterogeneity in tax comptition creates likely winners and losers
3. different strategies to respond to tax competition: fiscal policy reforms
4. effect of tax competition on income inequality depends on initial conditions and redistributive institutions

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1. Incomplete capital mobility

de facto capital mobility varies and depends on various factors: capital concentration, size of the service sector etc.

consequence: governments can stabilize revenue by increasing capital tax rates

2. Initial conditions and heterogeneity

small is beautiful: size effect generates likely winners and losers

whether a country wins or loses tax competition depends on size and the ability to finance deficits for a limited amount of time

'fabric of the welfare state': how do countries redistribute income initially (e.g. before 1980) ?

1. social security transfers: continental European and Scandinavian welfare states

2. relatively high capital and low labor tax rates: Australia, Canada, Japan, US, UK, Luxembourg

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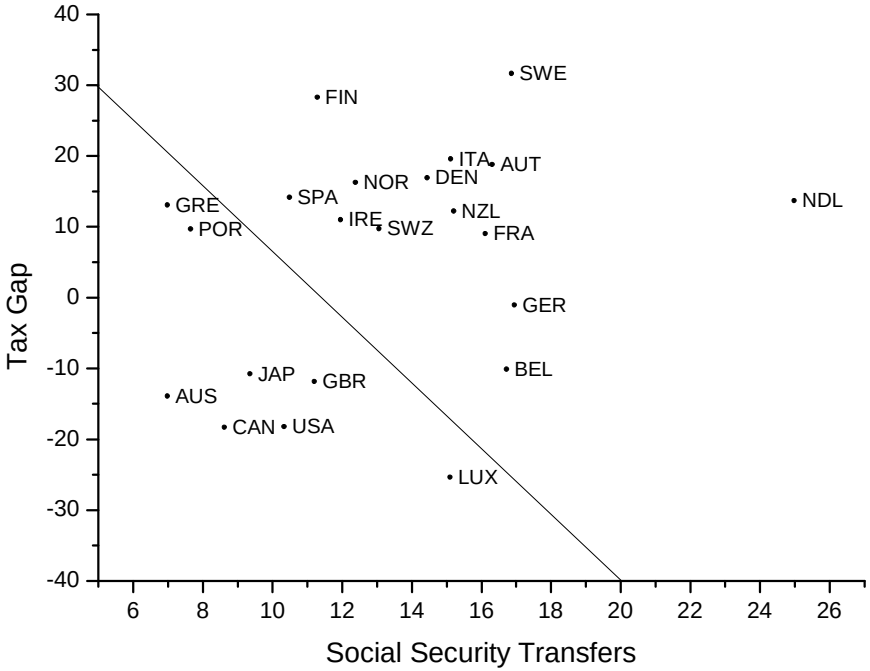
Redistribution in two Dimensions, Average 1975-1980



In the early 1990s - steep decline in capital revenue, but the welfare state survived

governments still gather revenue from capital - no race to the bottom in capital taxation

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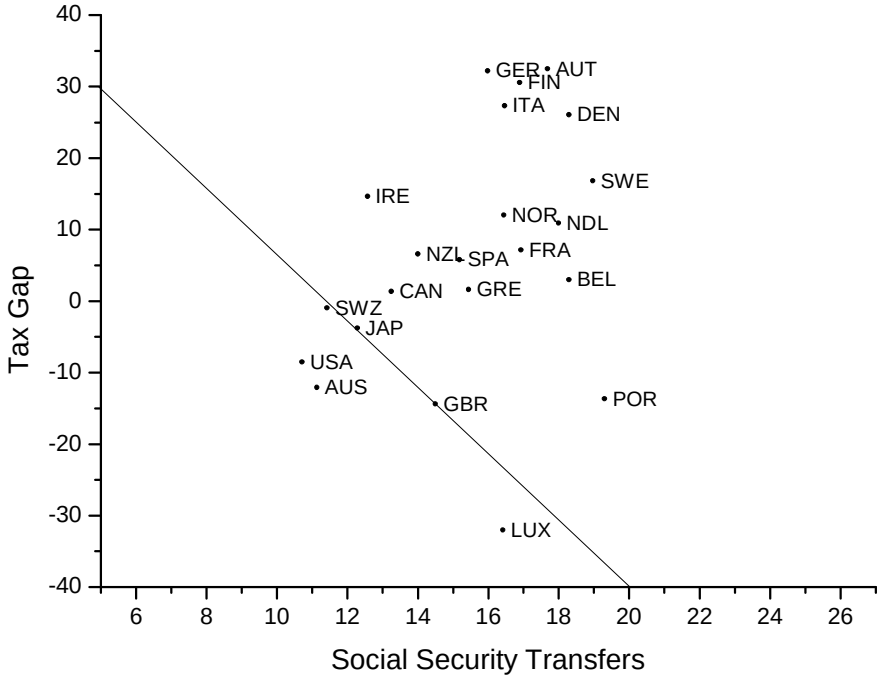
Redistribution in Two Dimensions, Average 2000-2004



if early globalization theories were correct, countries should move to the left and up.

we expect a right shift of LMEs and a general upward shift because of the initial way to redistribute income and the resulting adjustment strategies

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3. Fiscal Policy Reform - Options

1. increase effective capital tax rates - Australia, Greece, Portugal, Spain, Sweden

2. increase labor taxation - Portugal, Finland, Greece, Italy

3. reduction of social transfers - Belgium, Ireland, the Netherlands

Governments try to maximize political support

Predictions Stage 1 and 2: Determinants of Policy Adjustment

outcome cause	capital tax rates	labor tax rates	social security transfers
country size	+	+	..
low capital mobility	+	+	..
initial transfer level	− .. 0	+	+
relative capital tax	..	..	+
relative labor tax	..	..	+

+ indicates that a 'cause' exerts a positive influence on an 'outcome'
− indicates that the influence is negative
0 indicates that the influence is close to zero
.. indicates that the model does not make a prediction

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Predictions Stage 3: Impact of Policy Adjustments on Redistribution and Income Inequality

Whether policy adjustments exert an influence on income inequality depends on how countries redistribute income.

In Anglo-Saxon and Scandinavian countries, redistribution depends on the tax system. Unless these countries profited from significant capital inflows, tax competition had at least a small influence on income inequality.

In contribution based social welfare states, the redistribution of income depends much more on social transfers. Since the pressure on fiscal policies remained weak, governments found it comparably easy to defend the welfare state without having to accept raising income inequality.

	redistribution	disposable income inequality
pre-tax income inequality	+	..
social security transfers as compared to initial level	+	–
change in social security transfers*relative effective capital tax rate	+	–
change in social security transfers*relative effective labor tax rate	–	+

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Research Design

panel study

22 countries over up to 26 years
(due to missing data we analyze only 537 out of 572 possible observations)

AR1 error correction (all time-series stationary)

3-SLS plus incorporated 2-SLS for spatial lag
2-SLS for all stages as robustness check

theory-based identification
passes Hansen J, Sargan, Anderson LR, quasi Hausman misspecification test
comparison with 2SLS

all equations overidentified (73 exclusion restrictions, 30 simlutaneous): 35 necessary

error terms correlated across equations (ML)

Tax Competition and Income Inequality
Why Did Welfare States Do Better than Liberal Market Economies?
Results 1: Stage 1 & 2 – Tax Competition and Social Security Transfers

VARIABLES	average effective capital tax rate	average effective labor tax rate
spatial capital tax lag weighted by inverse distance (prediction) /	2549.601**	
	(744.234)	
IA effect spatial tax lag * log(GDP)	-86.463**	
	(28.168)	
effective capital tax rate		-1.143**
		(0.137)
total GDP in current US$, natural logarithm	4.864**	1.326**
	(0.513)	(0.312)
Social Security Transfers as percentage of GDP in 1975	-0.857**	0.639**
	(0.130)	(0.068)
Value added of service sector as percentage of GDP	0.294**	0.717**
	(0.094)	(0.058)
Union density (OECD)	0.037	-0.211**
	(0.026)	(0.063)
left cabinet portfolio as percentage of all cabinet seats		-0.014
		(0.022)
IA effect between capital tax rate and left		0.001+
		(0.001)
IA effect between capital tax rate and union density		0.018**
		(0.002)
legal capital mobility (Quinn)	0.656	
	(0.789)	
Constant	-117.084**	-31.126**
	(13.532)	(7.163)

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Results 1: Stage 1 & 2 – Tax Competition and Social Security Transfers, cont.

VARIABLES	social security transfers
Social Security Transfers as percentage of GDP in 1975	0.090*
	(0.045)
Union density (OECD)	-0.104**
	(0.012)
left cabinet portfolio as percentage of all cabinet seats	-0.014**
	(0.003)
difference between domestic capital tax rate and mean of capital tax rate in other countries	0.001
	(0.012)
difference between domestic labor tax rate and mean of labor tax rate in other countries	0.360**
	(0.030)
EMU membership	-0.222
	(0.339)
Majoritarion system (DPI)	-3.531**
	(0.416)
unemployment rate (WDI)	0.140**
	(0.034)
share of population above 65	0.205**
	(0.060)
trade ((imp+exp)/gdp)	-0.002
	(0.005)
Constant	16.293**
	(1.604)

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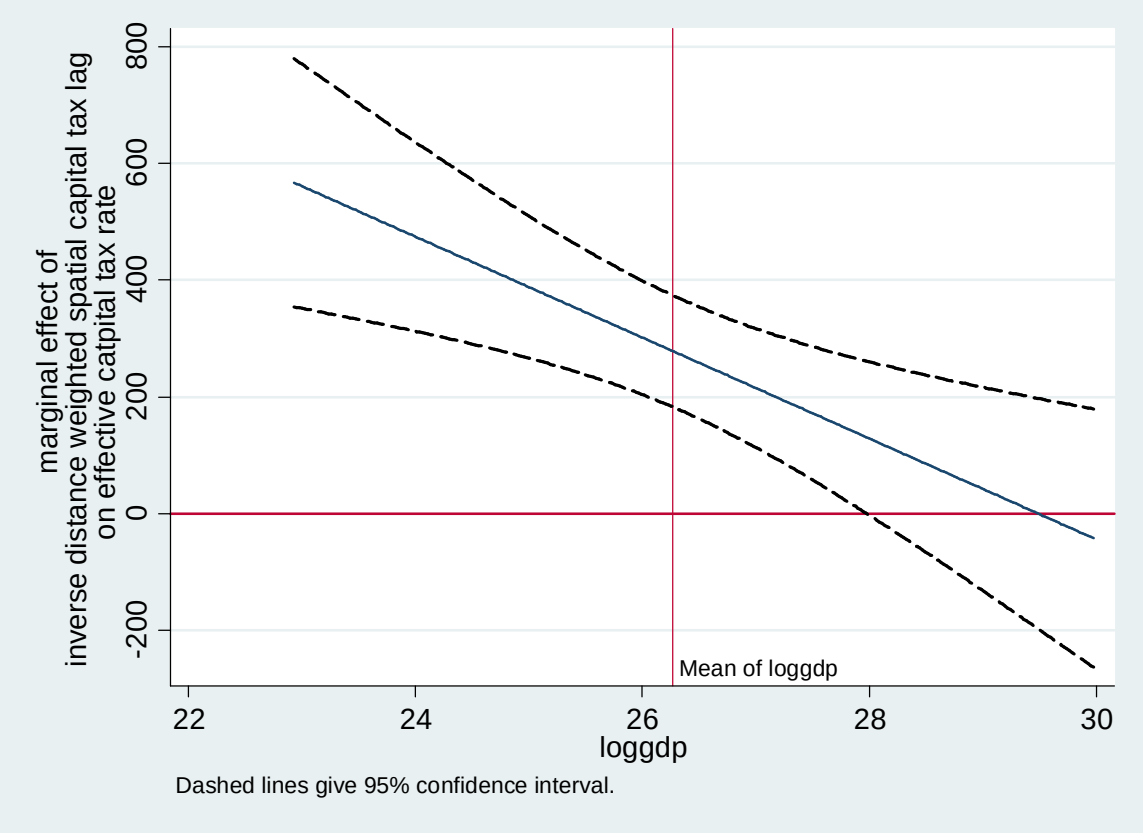
Why Did Welfare States Do Better than Liberal Market Economies?
The intervening effect of size



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Results 2: Tax competition and Fiscal Policy Adjustment

	capital tax rates	labor tax rates	social security transfers
country size	+ 4.9 (±0.5)	+ 1.3 (±0.3)	..
low capital mobility	+ 0.3 (±0.1)	+ 0.7 (±0.1)	..
initial transfer level	– .. 0 -0.9 (±0.1)	+ 0.6 (±0.1)	+ 0.1 (±0.0)
relative capital tax	..	..	+ 0.0 (±0.0)
relative labor tax	..	..	+ 0.4 (±0.0)

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Results 3: Third Stage – Redistribution and Disposable Income Inequality

VARIABLES	effective redistribution	disposable income inequality
difference between domestic capital tax rate	-0.003**	0.001**
and mean of capital tax rate in other countries	(0.000)	(0.000)
difference between domestic labor tax rate	0.006**	-0.002**
and mean of labor tax rate in other countries	(0.001)	(0.000)
Majoritarion system (DPI)	-0.016*	0.007*
	(0.008)	(0.003)
unemployment rate (WDI)	-0.003**	0.001*
	(0.001)	(0.000)
share of population above 65	-0.008**	0.004**
	(0.002)	(0.001)
market income inequality (gini)	0.793**	0.291**
	(0.121)	(0.052)
change in social security transfers as compared to 1975	0.005**	-0.002**
	(0.001)	(0.000)
IA effect between mean difference in capital taxation	0.011	-0.005
and change in social security transfers†	(0.008)	(0.003)
IA effect between mean difference in labor taxation	-0.036**	0.015**
and change in social security transfers†	(0.011)	(0.005)
Constant	0.163**	0.087**
	(0.052)	(0.023)

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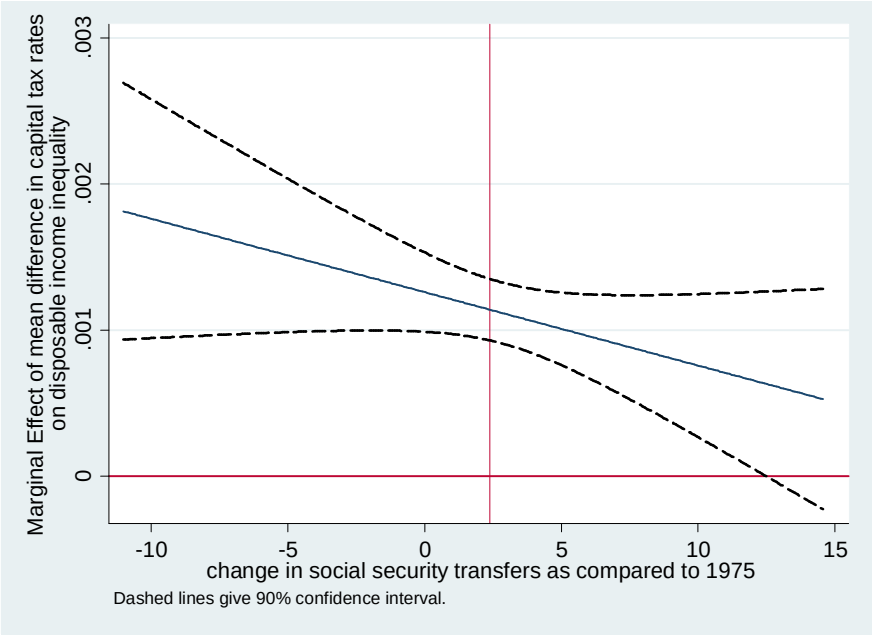
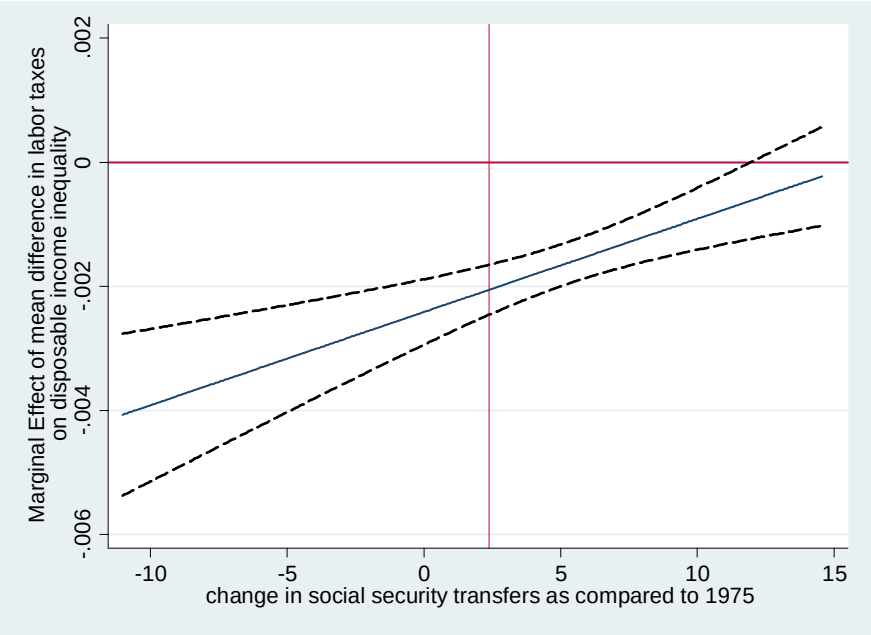
The Effect of Tax Competition and Fiscal Policy Adjustment on Disposable Income Inequality





	redistribution	disposable income inequality
pre-tax income inequality	+ 0.793 (±0.121)	..
social security transfers as compared to initial level	+ 0.005 (±0.001)	– -0.002 (±0.000)
change in social security transfers*relative effective capital tax rate	+ 0.011 (±0.008)	– -0.006 (±0.004)
change in social security transfers*relative effective labor tax rate	– -0.035 (±0.011)	+ 0.015 (±0.005)

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(Subjectively) Most Interesting Results

Level 1 (tax policies)

tax competition effect (pos. sign of spatial lag)

strong tax system effect: shift from capital to labor taxes, which is damped by institutions such as strong unions

country size effect

effect of de facto capital mobility (non-tradable sector)

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(Subjectively) Most Interesting Results

Level 2 (fiscal policies)

uncompetitively high tax rates lead to higher social security spending

higher initial levels of social security transfers are associated with higher actual social security transfers

strong pressure on welfare state increases transfers

Level 3 (redistribution and inequality)

the effect of tax rates on redistribution and inequality is conditioned on changes in welfare state spending

countries predominantly redistributing via progressive taxes experience an increase in inequality because of the tax competition effect, while countries which redistribute mainly via social spending reduce disposable income inequality or at least keep it stable.

Conclusions

Tax competition influences tax and fiscal policies, but not in the simple, homogeneous fashion predicted by previous theories.

Rather, the absence of perfect capital mobility leads to 'separating equilibria', some governments compensated for capital outflows by maintaining high capital and even higher labor tax rates.

cuts in social security transfers are used as alternatives to increasing capital and labor tax rates.

Given this, the effect of tax competition on inequality and redistribution depends on the redistributive policies:

In countries which use taxation to redistribute income, tax competition caused a small increase in inequality.

Countries that redistribute via social security transfers, maintained higher tax rates and high social security transfers.