Equality as equilibrium: The political economy of welfare spending and wage compression

Kalle Moene

Winter School, January 2013

Background

- Equality as equilibrium

small wage differentials — large welfare states

- I.Northern Europe as an example —taking wages out of market competition

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- V. Equality multiplier

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- **Not intelligent design — but evolution**

Misunderstandings

- Unions — Employers' associations

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- Autonomy—high local effort even with low local rewards

Autonomy

- no conflict distribution and efficiency

Local wages

- effort l and pay w

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- when $\pi_w = -u_w \Rightarrow$ **Socially optimal efforts:** $\pi_l = -u_l$,
- even though workers bear the costs of higher effort and don't receive all benefits

Peace clause and work to rule

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- As we proceed: $l^* = 1$ and $v(1) = 0$

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  - higher average productivity for constant employment

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- **Free exit:** destruction of jobs age $\theta(t)$

$$F(t-\theta(t)) - w(t-\theta(t),t) = (1-\alpha\xi)F(t-\theta(t)) - q(t) = 0$$

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- exit

$$(1 - \alpha\xi)F(t - \theta) = qe^{\lambda t} \Rightarrow q = (1 - \alpha\xi)Fe^{-\lambda\theta}$$

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  - higher $q \rightarrow$ wage compression and lower wage inequality

Income per capita

$$X(t) = \int_{t-\theta}^{t} Fe^{\lambda s} ds = \frac{1 - e^{-\lambda\theta}}{\lambda} Fe^{\lambda t}$$

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- **centralized wage setting — like the textbook of case of decentralized labor markets?**

III. Equality magnifying effect

- How equality induce further equality

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- median income w_m where $w_m < \bar{w}$

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$$\text{with} \quad t\bar{w} = kG \text{ and } i = p, m, r$$

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- given social vulnerability h_i the preferred G goes up with class income

Ideological sympathies differ within income classes

- expected vote share of left

$$s_L = 1/2 + \sum_{i \in J} n_i f \Delta_i \quad \text{where} \quad \Delta_i \equiv V_i(G_L; w_i) - V_i(G_R; w_i)$$

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- Proposition

  Keeping policies $G_L > G_R$ and the distribution of vulnerability constant, **the expected vote share of the left is higher in affluent societies**: *The left vote share increases with the left-right utility threshold Δ_i of each income class i. All these thresholds increase with higher average incomes. Each individual threshold increases with higher incomes within own class.*

Party factions

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- Opportunists: impatient — concerned with the chances of winning elections

Party programs

- bargaining between idealist and opportunists

$$N_L(G_L, G_R) = [q(G_L, G_R)]^{\alpha_L} [W_L(G_L) - W_L(G_R))]^{1-\alpha_L}$$
$$N_R(G_L, G_R) = [1 - q(G_L, G_R)]^{\alpha_R} [W_R(G_R) - W_R(G_L))]^{1-\alpha_R}$$

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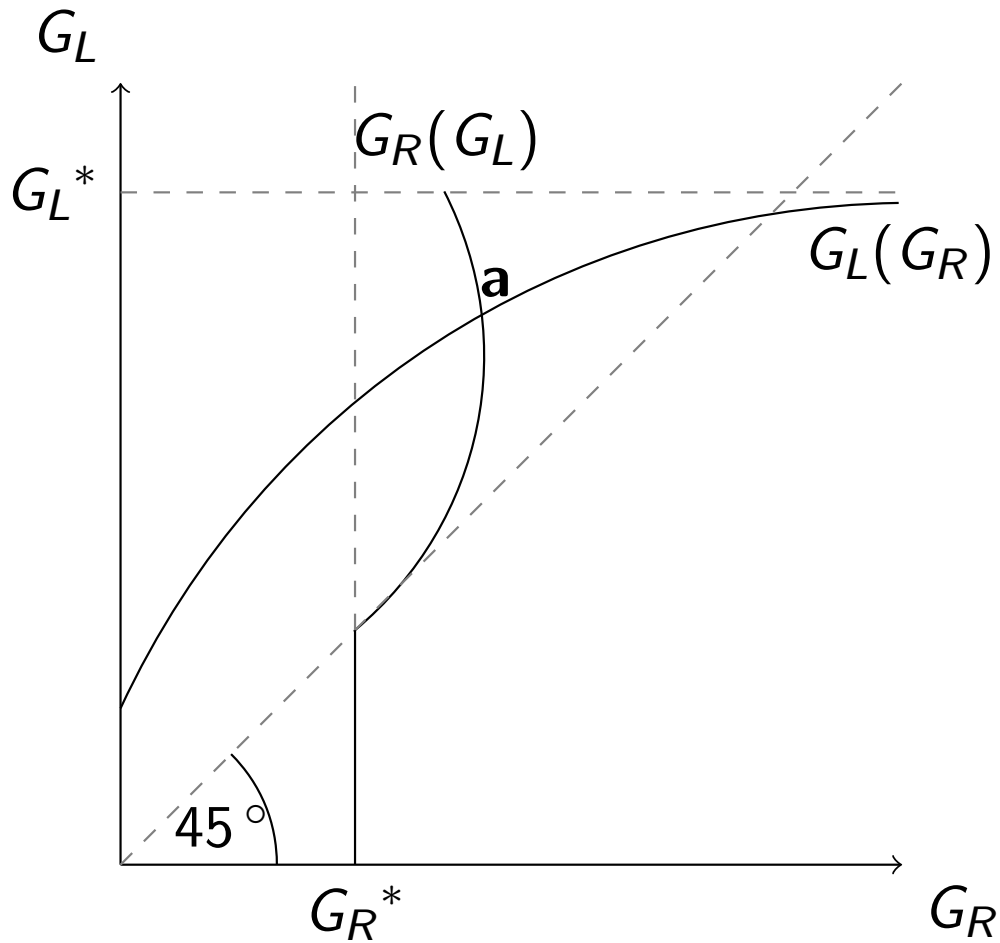
$$N_R(G_L, G_R) = [1 - q(G_L, G_R)]^{\alpha_R} [W_R(G_R) - W_R(G_L))]^{1-\alpha_R}$$

- mixed cooperative non-cooperative equilibrium

$$\max_{G_L} N_L(G_L, \tilde{G}_R) = N_L(\tilde{G}_L, \tilde{G}_R)$$
$$\max_{G_R} N_R(\tilde{G}_L, G_R) = N_R(\tilde{G}_L, \tilde{G}_R)$$

Figure: The political party equilibrium



Party programs and inequality

Proposition

i) As long as party ideals remain unchanged a mean preserving overall increase in earnings inequality leads each party to offer a less generous welfare policy in their programs.

ii) If the party ideals reflect the interests of the core group of each party the adjustments of ideals reinforce the effect of inequality on the welfare policy of the left party, while it moderates the effects on the welfare policy of the right party.

Pure idealism: $\alpha_L = \alpha_R = 0$

Proposition

When idealists are all powerful and their preferences reflect the interest of core groups, a mean preserving overall increase in earnings inequality implies that the left party moves to the right, while the right party if anything would move to the left, implying less polarization of welfare platforms. Hence, welfare generosity of the left $G_L = G_p^*$ goes down and welfare generosity of the right $G_R = G_r^*$ goes up (as long as $h_r > 0$).

Pure opportunism: $\alpha_L = \alpha_R = 1$

Proposition

When opportunists are all power full in both parties, policies converge and rising inequality leads to a lower common value of $G_L = G_R = G^*$.

Fair compromise: $\alpha_L = \alpha_R = 1/2$

opportunists and idealists are equally strong

- Each party maximizes Expected party utility EW_L and EW_R
- Compared to pure ideals, some convergence
- Fair compromise is a special case where proposition 2 applies.

Welfare support. Dependent variable: Party bloc position on welfare

	(1) Left bloc	(2) Left bloc	(3) Right bloc	(4) Right bloc
Wage inequality	-0.685***	-0.723***	-0.273	-0.231
	(0.233)	(0.215)	(0.561)	(0.477)
Economic growth		0.076*		0.079
		(0.044)		(0.063)
Percentage elderly		0.070		0.036
		(0.066)		(0.086)
Trade openness (log)		1.116		4.215***
		(1.022)		(1.348)
Union density		0.071*		0.013
		(0.041)		(0.079)
Union density-sq.		-0.001*		-0.001
		(0.000)		(0.001)
Trend	-0.024***	-0.044	0.001	-0.113**
	(0.008)	(0.040)	(0.024)	(0.054)
Trend-sq.	0.002***	0.002**	0.001	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Country FE	Yes	Yes	Yes	Yes
R-squared (within)	0.139	0.235	0.089	0.345
Number of countries	22	22	22	22
Number of elections	120	120	120	120

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  - the poor get poorer: two negative effects on the manifested welfare generosity
  - the rich get poorer: two effects in opposite directions
- The polarization in manifested welfare support is not driven by inequality

Party platforms are not only political cosmetics

Table: Actual welfare generosity of left governments.

	(1) Overall index	(2) Unemployment	(3) Sickness	(4) Pensions
Left bloc position	0.848***	0.381***	0.322*	0.144
	(0.286)	(0.139)	(0.163)	(0.121)
Country FE	Yes	Yes	Yes	Yes
Time trend	Yes	Yes	Yes	Yes
R-squared	0.465	0.349	0.421	0.294
Number of countries	18	18	18	18
Number of elections	68	68	68	68

Table: Instrument variable (IV) regression models. Dependent variable is party bloc position on welfare policy.

	Left bloc	Right bloc
Wage inequality (90/10)	-1.400*	-1.639
	(0.723)	(1.027)
Economic growth	0.096**	0.094
	(0.044)	(0.065)
Percentage elderly	0.072	0.014
	(0.050)	(0.070)
Trade openness (log)	0.976	3.961**
	(1.056)	(1.575)
Union density	0.071*	-0.022
	(0.038)	(0.070)
Union density-squared	-0.001**	-0.001
	(0.0004)	(0.001)
Trend	-0.045	-0.122**
	(0.036)	(0.055)
Trend-sq.	0.002**	0.002
	(0.001)	(0.001)
Country FE	Yes	Yes
R-squared	0.199	0.239
Number of countries	21	21
Number of elections	117	117
Kleibergen-Paap F-statistic	11.69	11.69
Sargan statistic p-value	0.79	0.37

IV. Wage equalization effect

- How a generous welfare state compresses the wage distribution

- Workers

$$r_i V_i^e = U(c_i) - \lambda_i [V_i^e - V_i^u]$$

$$r_i V_p^u = U(g) + m_i [V_i^e - V_i^u]$$

- Firms

$$r\Pi_i^f = p_i - w_i - \lambda_i [(\Pi_i^f - \Pi_i^v] \quad \text{with } \Pi_i^v = 0$$

- the Nash product

$$\max_{w} \left(V_i^e - V_i^u\right)^{\alpha_i} \left(\Pi_i^f - \Pi_i^v\right)^{1-\alpha_i}$$

- simplified

$$\max_{w} \left((r_i + m_i)U(c_i) - m_i U(\bar{c}_i) - r_i U(g)\right)^{\alpha_i} \left(p_i - w_i\right)^{1-\alpha_i}$$

- with $c_i = (1 - bg)w_i$
- The first order condition

$$\alpha_i U'\left(c_i\right)\left(1 - bg\right)(p_i - w_i) = \frac{(1-\alpha_i)}{1 + m_i/r_i}\left(U\left((1 - bg)w_i\right) - U(g)\right)$$

Empowerment

Proposition

Higher welfare generosity g reduces the wage inequality $I = w_s/w_\omega$ between strong groups s and weak groups ω.

V. Equality Multiplier

- How the welfare states empowers weak groups and creates smaller wage differences
- How smaller wage differentials support more generous welfare spending
- Combined: social multiplier.

In sum

- Local wage adjustments: High effort without large pay differentials.

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In sum

- Local wage adjustments: High effort without large pay differentials.
- Peace clause: restrictions on local industrial actions: small differences between enterprizes and sectors with big differences in productivity
- Central wage coordination: wage moderation to achieve low unemployment
- Wage compression: high investments, high degree of modernization, reinforce small differences in pay.
- Equality magnifies: Small wage differences lead to high average productivity: high support for welfare spending. High welfare spending increase productivity

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