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ABSTRACT

A Call for Comparative Research: Consequences of a Rising Income Inequality for State Activities

The aim of this discussion paper is not only to activate a debate over the interrelation between rising income inequality and economic policy measures but also to initiate comparative research in several European countries and North America. It discusses the consequences of a rising income inequality and its implications for state activities and economic policy. Using a simple model it becomes evident that an increasing income inequality leads to higher government spending, as a share of Gross Domestic Product, though the state does not take over more responsibilities. It also leads to a higher tax share though rates of taxation are not increased. This forces economic politicians to act. If they want to prevent an increase of these shares in order not to fall behind in the international competition, they must accept a rising public debt and/or must move away from socially accepted value judgments about “social standards”, the degree of redistribution by taxes and/or an “adequate” supply of public goods. This might result in disenchantment with politics.

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A Call for Comparative Research – Consequences of a Rising Income Inequality for State Activities

In many OECD-countries a rising income concentration could be – and can be – observed and has been discussed widely (e.g. OECD, 2008; International Monetary Fund, 2007; Berthold, 2007, Krämer, 2005; Atkinson, 2003, Alderson and Nelsen, 2002, Gottschalk and Smeeding, 1997). After the Second World War the distribution of incomes had become more equal at first, but since the early to mid-1970s a long-lasting rise in income inequality started. Therefore Harrison and Bluestone (1988) refer to the "great u-turn" (though Gustafsson and Johansson, (1999) contradict this concept). First, a rising income concentration is proven by a considerable decrease in wage ratios indicating a redistribution from earners of wage incomes to proprietors of capital. Second, differences in earned incomes increased as incomes at the top "exploded" while medium incomes grew moderately and low incomes nearly stagnated.

On the contrary, it was hardly discussed what are the implications of an increased income inequality would be for state activities and for the strategical options of economic policy and hence for the attitude towards politics of citizens (and voters).

The object of this paper is not only to activate a debate over the interrelation between rising income inequality and economic policy measures but also to initiate comparative research in several European countries and North America. We would especially like to draw attention to the following questions:

– Does a considerable increase of income inequality lead to less redistribution of market incomes by the government and furthermore to a lower amount of basic social care (lower "social standards")? and

  Does a higher income concentration cause a lower supply with public goods?

– Do citizens accept, in this context, that politicians move away from previous, socially accepted value judgements?

The plan of our short discussion paper is as follows: In Section 1 the implications of rising income inequality for taxes, transfer payments and government spending, as a share of Gross Domestic Product (GDP), are demonstrated with a simple model. Section 2 discusses why this puts (economic) politicians under the obligation to act and which options of reaction they have. Section 3 concludes with an outlook on further research, determining which empirical investigations would be interesting for different countries, and is simultaneously a call for comparative research.

1. A simple model

We have designed a simple theoretical approach to demonstrate the effects of rising income inequality on public revenue and public spending, assuming:

A country's income distribution can be characterized by the average income of income earners below the median ($\bar{Y}_1$) and above the median ($\bar{Y}_2$) defining

(1) $$\bar{Y}_1 = \sum_{i=1}^{n/2} Y_i : \frac{n}{2} \quad \text{and} \quad \bar{Y}_2 = \sum_{i=(n/2)+1}^{n} Y_i : \frac{n}{2}$$

(Respectively the total income below the median (Y_1) and above the median (Y_2) is:

(2) $$Y_1 = \sum_{i=1}^{n/2} Y_i \quad \text{and} \quad Y_2 = \sum_{i=(n/2)+1}^{n} Y_i \quad).$$

Accordingly, the average income in the economy is:

(3) ,

and the total income amounts to:

(4) $$Y = \frac{n}{2} \cdot \bar{Y}_1 + \frac{n}{2} \cdot \bar{Y}_2 = Y_1 + Y_2 \ .$$

We speak of a *concentration of the income distribution* if the total income (Y) remains constant while the income in the upper half (Y_2) increases and the income in the lower half (Y_1) decreases and hence the following equation applies:

(5) $$\Delta Y_2 = -\Delta Y_1 \ .$$

Thereby we assume, which is of course a simplification, that the income distribution within both halves does not change, i.e. all Y_i , for which applies $i \leq n/2$, decrease by the same percentage and all Y_i , for which applies $i > n/2$, increase by the same percentage.

The *system of taxation only* consists of an *income tax* and earners of both income groups are taxed with a unitary rate t_1 and t_2 respectively. (There is no tax-free amount.)

There is a simple *system of transfer payments:* Earners with an income falling below a certain minimum income (Y_{min}) get transfer payments. Accordingly, public spending for transfer payments (Tr) adds up to:

(6) $$\begin{aligned} Tr = tr \cdot \sum_{i=1}^{n} Y_{Tr_i} \quad & \text{with } Y_{Tr_i} = Y_{min} - Y_i \text{ for } Y_{min} > Y_i \\ & \text{and } Y_{Tr_i} = 0 \qquad \text{for } Y_{min} \leq Y_i \\ = tr \cdot Y_{Tr} \ . \end{aligned}$$

(In the equation tr is the transfer rate, Y_{Tr_i} is the assessment basis for the transfer payment of the ith income earner and Y_{Tr} is the macroeconomic assessment basis.)

Public revenue equal tax revenue (T) amounting to:

(7) $$T = t_1 \cdot Y_1 + t_2 \cdot Y_2 \ .$$

Public spending (G) includes transfer payments (Tr) and spending for public consumption (C_G) and for public investment (I_G):

(8) $$G = Tr + C_G + I_G \ .$$

In the initial situation the budget is balanced, i.e. the following equation is met:

(9) $$T = G = Tr + C_G + I_G \ .$$

Thereby the following factors are the result of social value judgements in a country:

- The transfer rate tr and the minimum income Y_{min} , below which an individual gets transfer payments. (For tr = 1, all lower market incomes add up to Y_{min} .)
- Public spending for consumption and for investment. These mirror which duties and responsibilities the government should take and which supply with public goods is seen as "adequate".
- The tax rates t_1 and t_2. They reflect how much the citizens should pay for public goods and to what degree incomes should be redistributed.

Implications of rising income inequality for state activities

If Y_2/Y_1 increases, while the total income Y is remaining unchanged we interpret this as a higher concentration of the income distribution. In that case $\Delta Y_2 = -\Delta Y_1$ applies.

This has – ceteris paribus – far-reaching consequences for government revenue and spending and hence for state activities:

- *Tax revenue* increases by

  (10) $\Delta T = t_2 \cdot \Delta Y_2 + t_1 \cdot \Delta Y_1 = (t_2 - t_1) \cdot \Delta Y_2$ (as $\Delta Y_2 = -\Delta Y_1$).

  This leads to a *higher tax share* T/Y – though rates of taxation are not increased.

- *Transfer payments rise* by

  (11) $\Delta Tr = tr \cdot \Delta Y_{Tr}$.

  (The assessment basis for transfer payments increases if the concentration of the income distribution rises. One reason is that more income earners get transfer payments, the other reason is that previous transfer recipients get higher payments.)

  The result is a higher share of transfer payments Tr/Y – though the transfer rate and the income below which individuals qualify for transfers Y_{min} remain unchanged.

Note that it would be mere chance, if ΔT would equal ΔTr as both values are influenced by different factors:

- The increase of the taxes ΔT depends on the two tax rates t_1 and t_2 and on the degree of income redistribution $-\Delta Y_1 = \Delta Y_2$.
- The growth of the transfer payments ΔTr is influenced by the transfer rate tr and the rise of the assessment basis for the transfer payment ΔY_{Tr} which again, depends on the extent of redistribution between the two groups of income earners and on the (unchanged) income distribution within the lower half of earners.

Nevertheless, for the sake of transparency of our argument, we assume:

(12) $\Delta T = \Delta Tr = \Delta G$ and $\Delta T/Y = \Delta Tr/Y = \Delta G/Y$ respectively.

This simple model only serves the purpose of demonstrating the essential problem. It cannot be used to predict how taxes, transfer payments and government spending, as a share of GDP, will increase in a specific economy if the income inequality rises by a definite extent.

This will be the result of a multitude of country-specific institutional rules. The system of taxation, for example, is of particular importance, especially the share of indirect taxes of tax revenue, the form of progressive taxation and tax exemptions. Furthermore, the form and amounts of social welfare and the preconditions for drawing benefits are relevant. Accordingly different macroeconomic models are required for the simulation of the effects of a rising income inequality on the shares of taxes, transfer payments and government expenditures in different economies.

2. "Strategical Options" of Economic Policy

Which options do politicians have to respond to an increase of the tax burden and higher public spending, as a share of economic output? Which "scenarios" are possible and in which way do they "force" politicians to move away from previous value judgements concerning redistribution, duties and responsibilities of the government and "social standards"?

One can imagine four "scenarios":

(1) Politicians hold fast to previous value judgements. Accordingly, they do not change tax rates, quantity and quality of public goods and the system of transfer payments. In that case they have to accept that the *tax share* and the *share of transfer payments* in GDP *increase* and hence the *share of government spending* goes up.

(2) Fearing that the international competitiveness of the economy could deteriorate, economic politicians decrease tax rates (or broaden tax exemptions) until the tax share of the economy reaches its old level. (The background is that macroeconomic key figures, like tax shares in GDP, are often used for international comparisons and for measuring competitiveness.) These *tax cuts* lead to *less redistribution* though the concentration of market incomes has increased. Furthermore, they cause a *budget deficit* and hence a rising public debt (as transfer payments remain on their higher level).

The increasing public debt puts politicians under the obligation to act because rising government spending is often interpreted as a sign of the increasingly "exorbitant" demands of the state (Plickert, 2007). Moreover, the increase of the tax ratio is often equated with a loss of international competitiveness. Therefore politicians do not only aim at the old tax share but also at the old share of government spending in GDP, which leads to the third and forth scenario:

(3) If politicians do not lower "social standards", the increased share of transfer payments in GDP implies a reduction of government expenditures for consumption and investment. This deteriorates the supply with public goods, i.e. it interferes with the needs of a modern educational system, a well functioning infrastructure and an efficient public administration including high public safety.

(4) The alternative way for economic politicians is to "downsize" social benefits, especially to pay less social welfare and to reduce contributions to (public) health care and pension schemes.

(Another possibility is combining a reduction of public spending for consumption and investment and a decrease of "social standards".)

Table 1: "Scenarios" for Economic Policy in Case of Rising Income Inequality

Table 1 gives an overview of politicians' options in handling the implications of a rising income concentration. They either have to ignore the criticism that a higher tax share in GDP and higher government expenditures indicate a lower international competitiveness and "exorbitant" demands of the state, or they have to diverge from established value judgements in the society.

In most countries a rising concentration of market incomes will induce economic politicians to say good-bye to existing and accepted value judgements about an "adequate" supply with public goods, redistribution and "social standards". However, if the citizens (and voters) hold on to their value judgements and politicians refuse to follow these, this might result in disenchantment with politics.

3. Research outlook

The aim of our short discussion paper is to *initiate comparative research* in several European countries and North America about the *development of the income distribution* and its *implications for state activities*.

– The starting point is the question if and how much the income distribution in the investigated countries changed. This requires an agreement on how *to measure income inequality and its change*, i.e. similar statistical metrics have to be used.

– In order to investigate how much the observed rise of the income concentration would have increased the share of transfer payments and the share of taxes in GDP ceteris paribus (i.e. without any change of tax system; system of transfer payments and supply of public goods) *macroeconometric models* are necessary. These country-specific models "mirror" different institutions and institutional rules. On this basis the differing effects of a rising income concentration can be *simulated*.

– Against this background researchers should focus on the question, which *options* the different *politicians chose* if the income inequality in their country increased. Did they accept an increase of the tax share, the share of transfer payments and the share of government spending in GDP or did they diverge from value judgements concerning redistribution, "social standards" and/or an "adequate" supply with public goods?

– Especially from a political point of view, it is interesting to investigate whether the citizens and voters of the different countries have accepted these changes of value judgements or have instead reacted with "disenchantment with politics".

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Table 1: "Scenarios" for Economic Policy in Case of a Rising Income Inequality

	T	G	Tr	C_G+I_G	
• **Initial situation**					**T = G** Balanced budget (assumption)
• **Consequences of a rising income inequality**	Changes compared to the initial situation				
1. Adhering to previous (socially accepted) value judgements about "social standards", the degree of redistribution by taxes and an "adequate" supply with public goods.	↑	↑	↑	o	**T = G** (simplifying assumption) Taxes, transfer payments and government expenditure, as well as share of GDP, increase, whereas government expenditures for consumption and investment remain unchanged.
2. Decreasing tax rates (and redistribution) to return to the previous tax share in GDP for "regaining" international competitiveness (otherwise value judgements are maintained).	o	↑	↑	o	**T < G**, i.e. a **budget deficit** leads to a higher public debt. The tax share remains unchanged, whereas transfer payments and government spending, as share of GDP, increase.
Returning to previous tax share and government spending share in GDP keeping international competitiveness and balanced budget in view.	o	o			**T = G**, i.e. **balanced budget**, by reverting to the tax share and government spending share in GDP in the initial situation.
3. Adhering to value judgements concerning "social standards" implies a reduction of government expenditures for consumption and investment.	o	o	↑	↓	– The increased share of transfer payments "forces" the government to spend less for consumption and investment.
or					or
4 Adhering to value judgements concerning an "adequate" supply with public goods implies a decrease of "social standards" (so that transfer payments do not increase, except for the fact that income inequality has risen).	o	o	o	o	– If the government wants to return to the share of transfer payments in GDP in the initial situation it "is forced" to decrease the "social standards".
or					or
A combination of a reduction of public expenditures for consumption and investment and a decrease of "social standards".	o	o	↑ I	I ↓	– To reach a moderately increased share of transfer payments the government "is forced" to decrease "social standards" *and* to spend less for consumption and investment.