A reform-oriented approach to political parties’ revealed social preferences

Felix Bierbrauer    Maximilian Blömer    Lilly Fischer
Emanuel Hansen    Manuel Pannier    Andreas Peichl

January 9, 2024
This paper in a nutshell

Can we measure political parties’ social preferences by solely analyzing the effects of the reforms proposed in their election proposals?
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This paper: studies the question in the context of German parties’ tax-transfer proposals from 1990-2021
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estimate MVPFs for German parties’ tax-transfer proposals

- examine more than 300 party election proposals related to the tax-transfer system
- use microsimulation (ifo-MSM) to compute their hypothetical impacts
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Can we measure political parties’ social preferences by solely analyzing the effects of the reforms proposed in their election proposals?

This paper: studies the question in the context of German parties’ tax-transfer proposals from 1990-2021

estimate MVPFs for German parties’ tax-transfer proposals

- examine more than 300 party election proposals related to the tax-transfer system
- use microsimulation (ifo-MSM) to compute their hypothetical impacts

estimate German parties’ social welfare preferences

- use inverted MVPF to recover implied welfare weight for reform beneficiaries
- aggregate welfare weights of single proposals for each party in each election year
Roadmap of Talk

MVPF and parties’ social welfare weights - method

MVPF and parties’ social welfare weights - results

Conclusion and next steps
Microsimulation for Reform Proposal Evaluation

Problem: large majority of reform proposals never implemented, let alone evaluated

Solution: ifo Microsimulation Model to generate a counterfactual post-reform state

- based on microdata from the German Socio-economic Panel (SOEP)

- ifo MSM's comprehensive representation of the German tax and transfer system
  → obtain accurate measures of individuals’ taxes, transfers and disposable income
MVPF and welfare weights

MVPF for tax reform $j$ (Hendren and Sprung-Keyser 2020): 

\[ MVPF_j = \frac{WTP_j}{\text{Net Costs}_j} \]
MVPF and welfare weights

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$$MVPF_j = \frac{WTP_j}{Net\ Costs_j} = \frac{E[T^0(y^0_i) - T^1(y^0_i)]}{E[T^0(y^0_i)] - E[T^1(y^1_i)]}$$
**MVPF and welfare weights**

**MVPF for tax reform** \( j \) (Hendren and Sprung-Keyser 2020):

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MVPF_j = \frac{WTP_j}{\text{Net Costs}_j} = \frac{E[T^0(y^0_i) - T^1(y^0_i)]}{E[T^0(y^0_i)] - E[T^1(y^1_i)]}
\]

mean mechanical change in disposable income due to reform
MVPF and welfare weights

MVPF for tax reform $j$ (Hendren and Sprung-Keyser 2020):

\[ MVPF_j = \frac{WTP_j}{Net\ Costs_j} = \frac{E[T^0(y^0_i) - T^1(y^0_i)]}{E[T^0(y^1_i)] - E[T^1(y^1_i)]}\]

change in mean tax revenue inclusive of behavioral responses
MVPF and welfare weights

MVPF for tax reform $j$ (Hendren and Sprung-Keyser 2020):

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welfare weight for tax reform $j$:

$$\bar{\eta}_j = \frac{1}{MVPF_j} = \frac{E[T^0(y^0_i)] - E[T^1(y^1_i)]}{E[T^0(y^0_i) - T^1(y^0_i)]}$$
MVPF and welfare weights

MVPF for tax reform $j$ (Hendren and Sprung-Keyser 2020):

$$MVPF_{j} = \frac{WTP_{j}}{\text{Net Costs}_{j}} = \frac{E[T^{0}(y^{0}_{i}) - T^{1}(y^{0}_{i})]}{E[T^{0}(y^{0}_{i})] - E[T^{1}(y^{1}_{i})]}$$

Welfare weight for tax reform $j$:

$$\bar{\eta}_{j} = \frac{1}{MVPF_{j}} = \frac{E[T^{0}(y^{0}_{i})] - E[T^{1}(y^{1}_{i})]}{E[T^{0}(y^{0}_{i})] - T^{1}(y^{0}_{i})}$$

$\Rightarrow \bar{\eta}_{j}$ the same for all reform beneficiaries
Roadmap of Talk

MVPF and parties' social welfare weights - method

MVPF and parties' social welfare weights - results

Conclusion and next steps
Reform MVPFs

Example: Greens 2013

![Graph showing MVPFs for different income levels and political parties]
Reform welfare weights

Example: Greens 2013

- Left
- SPD
- CDU
- FDP
Aggregated welfare weights

Example: 2013 (dpi-weighted smoothed average)
Roadmap of Talk

MVPF and parties' social welfare weights - method

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Conclusion & Outlook

Takeaways:
1. microsimulation can help us compute MVPFs of hypothetical reforms
2. MVPF framework can be used to recover parties’ social preferences

Outlook:
- compare to inverse-optimum tax approach [Jacobs et al. 2017]
- take statements favoring the status quo into account
- simulate a ‘marginal reform on top’
- what if parties disagree on elasticities?
- extension to political economy: are parties’ election proposals informative for policies enacted by a coalition government?
Thank you!

Comments and suggestions very welcome!
Post-reform income and revenue effects

\[ y_i^1 = (1 - \frac{\tau_i^1 - \tau_i^0}{1 - \tau_i^0} \varepsilon_i) y_i^0 \]

\[ \Delta T_i = (1 - \pi_i \frac{t_i^1 - t_i^0}{1 - t_i^0}) t_i^1 y_i^1 - t_i^0 y_i^0 \]

**Assumptions:** \( \pi = 0.2 \); \( \varepsilon = 0.25 \)
MVPF and welfare weights

social welfare impact of policy $j$:

$$\frac{dW}{d\tau_j} = \bar{\eta}_j \sum_i WTP^j_i + \frac{dR}{d\tau_j}$$

assuming optimality of policy $j$:

$$\frac{dW}{d\tau_j} = \bar{\eta}_j \sum_i WTP^j_i + \frac{dR}{d\tau_j} = 0$$

$$\bar{\eta}_j = -\frac{dR(\tau_j)}{\sum_i WTP^j_i} = E[T_0(y^0_i) - T_1(y^1_i)] = \text{Net Costs}_{j}$$

$WTP^j_i = \frac{1}{MVPF^j}$

$\Rightarrow \bar{\eta}_j$ the same for all reform beneficiaries

$\Rightarrow$ identify $\bar{\eta}_j$ for all reform proposals of party $p$

$\Rightarrow$ construct social welfare function by combining $\bar{\eta}_j$'s along the income distribution
MVPF and welfare weights

social welfare impact of policy $j$:

$$\frac{dW}{d\tau_j} = \bar{\eta}_j \sum_i WTP^j_i + \frac{dR}{d\tau_j}$$

assuming optimality of policy $j$:

$$\frac{dW}{d\tau_j} = \bar{\eta}_j \sum_i WTP^j_i + \frac{dR}{d\tau_j} = 0$$
MVPF and welfare weights

Social welfare impact of policy $j$:

$$\frac{dW}{d\tau_j} = \bar{\eta}_j \sum_i WTP_i^j + \frac{dR}{d\tau_j}$$

Assuming optimality of policy $j$:

$$\frac{dW}{d\tau_j} = \bar{\eta}_j \sum_i WTP_i^j + \frac{dR}{d\tau_j} = 0$$

$$\bar{\eta}_j = \frac{-dR(\tau_j)}{\sum_i WTP_i^j} = \frac{E[T^0(y_i^0)] - E[T^1(y_i^1)]}{E[T^0(y_i^0) - T^1(y_i^0)]} = \frac{\text{Net Costs}_j}{WTP_j} = \frac{1}{\text{MVPF}_j}$$

⇒ The same for all reform beneficiaries

⇒ Identify $\bar{\eta}_j$ for all reform proposals of party $p$

⇒ Construct social welfare function by combining $\bar{\eta}_j$'s along the income distribution
MVPF and welfare weights

social welfare impact of policy $j$:

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$\Rightarrow \bar{\eta}_j$ the same for all reform beneficiaries
MVPF and welfare weights

social welfare impact of policy \( j \):

\[
\frac{dW}{d\tau_j} = \eta_j \sum_i WTP_i^j + \frac{dR}{d\tau_j}
\]

assuming optimality of policy \( j \):

\[
\frac{dW}{d\tau_j} = \eta_j \sum_i WTP_i^j + \frac{dR}{d\tau_j} = 0
\]

\[
\eta_j = \frac{-dR(\tau_j)}{\sum_i WTP_i^j} = \frac{E[T^0(y_i^0)] - E[T^1(y_i^1)]}{E[T^0(y_i^0) - T^1(y_i^0)]} = \frac{\text{Net Costs}_j}{WTP_j} = \frac{1}{\text{MVPF}_j}
\]

⇒ \( \eta_j \) the same for all reform beneficiaries
⇒ identify \( \eta_j \) for all reform proposals of party p
⇒ construct social welfare function by combining \( \eta_j \)'s along the income distribution
Reform MVPFs

Example: Left 2013

> Greens
Reform MVPFs

Example: Social Democrats 2013 ➔ Greens
Reform MVPFs

Example: Christian Democrats 2013 ▸ Greens

![Graph showing MVPFs for Christian Democrats 2013](image)
Reform MVPFs

Example: Liberals 2013 ➤ Greens
Reform welfare weights

Example: Left 2013  

Gross income

Welfare weight
Reform welfare weights

Example: Social Democrats 2013 → Greens
Reform welfare weights

Example: Christian Democrats 2013 ➤ Greens
Reform welfare weights

Example: Liberals 2013 ➤ Greens

![Graph showing welfare weights across different gross incomes for Liberals 2013 and Greens.](image)

- Welfare weight vs. Gross income
- Line graph illustrating the welfare weights for different gross income levels.
Aggregated welfare weights

Example: 2013 (smoothed average)
Aggregated welfare weights

Example: 2013 (simple average)
Aggregated welfare weights

Example: Left 2013

- Simple average
- dpi-weighted smoothed average
- Smoothed average
Aggregated welfare weights

Example: Social Democrats 2013

Graph showing welfare weights against gross income with different weighting methods.
Aggregated welfare weights

Example: Christian Democrats 2013

![Graph showing welfare weights vs. gross income with different weighting methods: simple average, dpi-weighted smoothed average, and smoothed average.](image-url)
Aggregated welfare weights

Example: Liberals 2013

![Graph showing aggregated welfare weights for different gross income levels, with lines indicating simple average, dpi-weighted smoothed average, and smoothed average.](image)
Aggregated welfare weights

1990-2021 (dpi-weighted smoothed average)
Hypotheses

1. The coalition government does not enact anything that is explicitly ruled out by one coalition partner.  

2. Only such reforms, which are welfare-enhancing according to all coalition partners’ revealed preferences, are enacted.

3. Only such reforms, which are welfare-enhancing for one of the coalition partners and not ruled out by any other coalition partner, are enacted.
Hypotheses

1. The coalition government does not enact anything that is explicitly ruled out by one coalition partner.  
   exclusion restrictions

2. Only such reforms, which are welfare-enhancing according to all coalition partners’ revealed preferences, are enacted.

3. Only such reforms, which are welfare-enhancing for one of the coalition partners and not ruled out by any other coalition partner, are enacted.

→ results coming soon - WIP  
   Conclusion
Hypothesis 1

The coalition government does not enact anything that is explicitly ruled out by one coalition partner.

Ex.1  CDU/CSU 2013: ’maintain income splitting and add family splitting’
      SPD 2013: ’we reject family splitting as it favors top incomes’

Ex.2  SPD 2021: ’[...] we want to reinstall the wealth tax.’
      FDP 2021: ’[...] we reject the reinstallment of the wealth tax.’

⇒ none of these proposals has been implemented