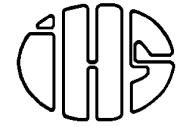




Why are mothers working longer hours in Austria than in Germany?

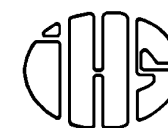
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efas Tagung zum Thema „Familienpolitik“
November 2008



Overview

- Research question and motivation:
Descriptive facts on mothers' employment
- Comparison of important institutions
- Methodological issues
- Empirical findings
- Conclusions



Research question and motivation

Participation rates of mothers with young children
(by age of youngest child) in Austria and Germany

	Mothers with youngest child aged 0–2			Mothers with youngest child aged 3–10			All mothers		
	<i>Austria</i>	<i>West Germ.</i>	<i>East Germ.</i>	<i>Austria</i>	<i>West Germ.</i>	<i>East Germ.</i>	<i>Austria</i>	<i>West Germ.</i>	<i>East Germ.</i>
<i>Married/ cohabiting</i>									
Not working	77.4	63.0	58.1	36.6	32.0	28.9	52.1	42.7	38.3
Part-time working	12.2	31.0	20.3	35.2	56.0	34.1	26.5	47.3	29.7
Full-time working	10.4	6.1	21.6	28.2	12.0	37.0	21.4	10.0	32.1



Research question and motivation (II)

Can these differences in working behaviour be explained by differences in institutions?

If so, how much of the differences is explained by institutional differences?



Comparison of Institutions

Institutional differences and similarities between Austria and Germany: Overview

Similarities:

- Child care institutions
- Child benefits

Differences:

- Income taxation
- Parental leave benefit

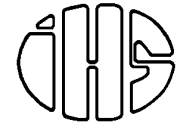
Comparison of Institutions (II)



Child care institutions

	Children aged 0–2		Children aged 3–6 ^a		Children aged 7–10	
	<i>Austria</i>	<i>Germany</i>	<i>Austria</i>	<i>Germany</i>	<i>Austria</i>	<i>Germany</i>
Number of part-time childcare slots per 100 children	3.4	0.8	19.3	57.1	26.9	8.9
Number of full-time childcare slots per 100 children	12.9	7.7	44.0	32.7	–	–
Average parental fee for a part-time slot (€/month)	118	62	118	60	131	49
Average parental fee for a full-time slot (€/month)	199	127	199	96	–	–

Comparison of Institutions (III)



Child benefits

In both countries, the most important child-related transfer is a **non means-tested general benefit** amounting to

- **1,871 Euro per year in Austria** (“Familienbeihilfe und Kinderabsetzbetrag”); for older children it is increased to 2,711 Euro per year
- **1,848 Euro per year in Germany** (“Kindergeld”); for high-income parents the “Kinderfreibetrag” is better that yields a maximum tax relief of about 2,500 Euro per year

Comparison of Institutions (IV)



Income Taxation of Married Spouses

- In Germany, married spouses can choose **joint filing with full income splitting**:

$$t(Y_M, Y_F) = 2 \cdot t\left(\frac{Y_M + Y_F}{2}\right)$$

- In Austria, everyone is **taxed individually**:

$$t(Y_M, Y_F) = t(Y_M) + t(Y_F)$$

However, there is a small **single earner's allowance** amounting to 364 Euro per year (increased if there are children in the household)

Comparison of Institutions (V)



Parental leave benefit

Germany: "Erziehungsgeld"

- Amounts to **3,684 Euro** per year (maximum)
- Maximum duration period is **2 years**
- Means-tested on the **household level** (income threshold about 50,000 Euro in the first 6 months, 16,500 Euro thereafter)

Austria: "Kinderbetreuungsgeld"

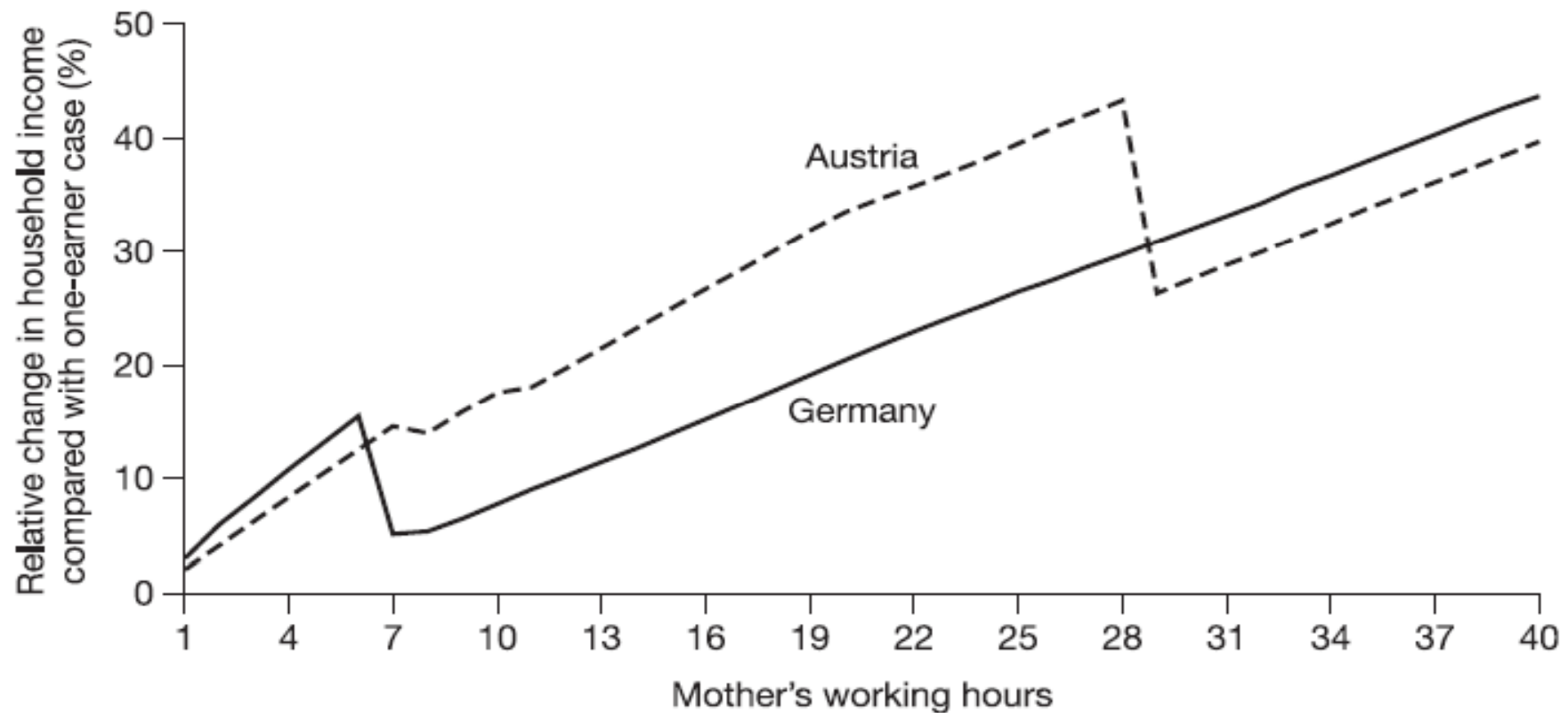
- Amounts to **5,303 Euro** per year;
- The maximum duration of this benefit is **3 years** if both parents share (at least 6 months have to be drawn by the other parent)
- It is means-tested not at the household but at the **individual level** (income threshold: 14,600 Euro per year)

Comparison of Institutions (VI)



Budget Lines for Stylized Households:

Married Couple with 1 child, 1 year



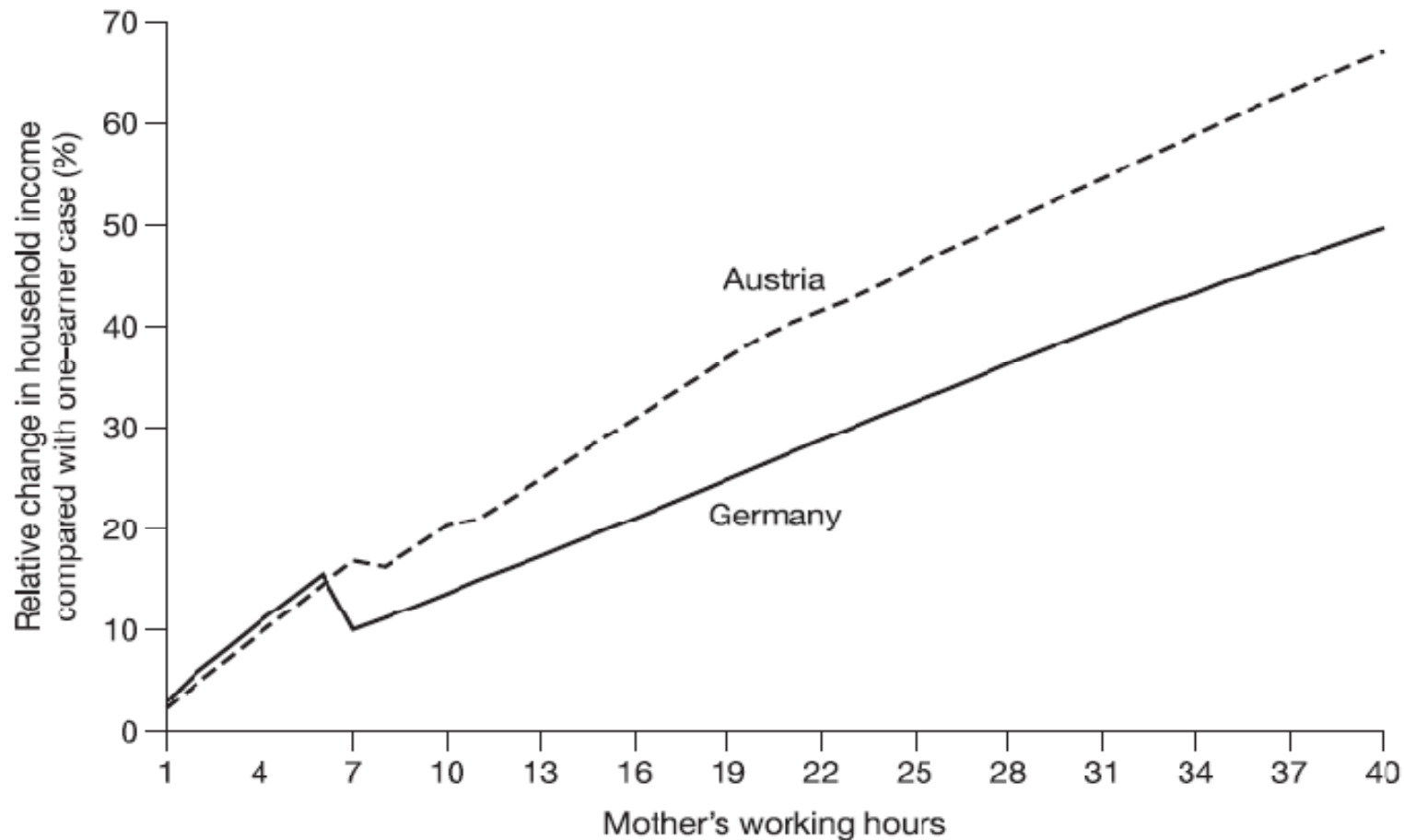
Sources: ITABENA based on Austrian version of SILC 2004; STSM based on SOEP 2004.

Comparison of Institutions (VII)



Budget Lines for Stylized Households:

Married Couple with 2 children, 4 and 7 years



Sources: ITABENA based on Austrian version of SILC 2004; STSM based on SOEP 2004.

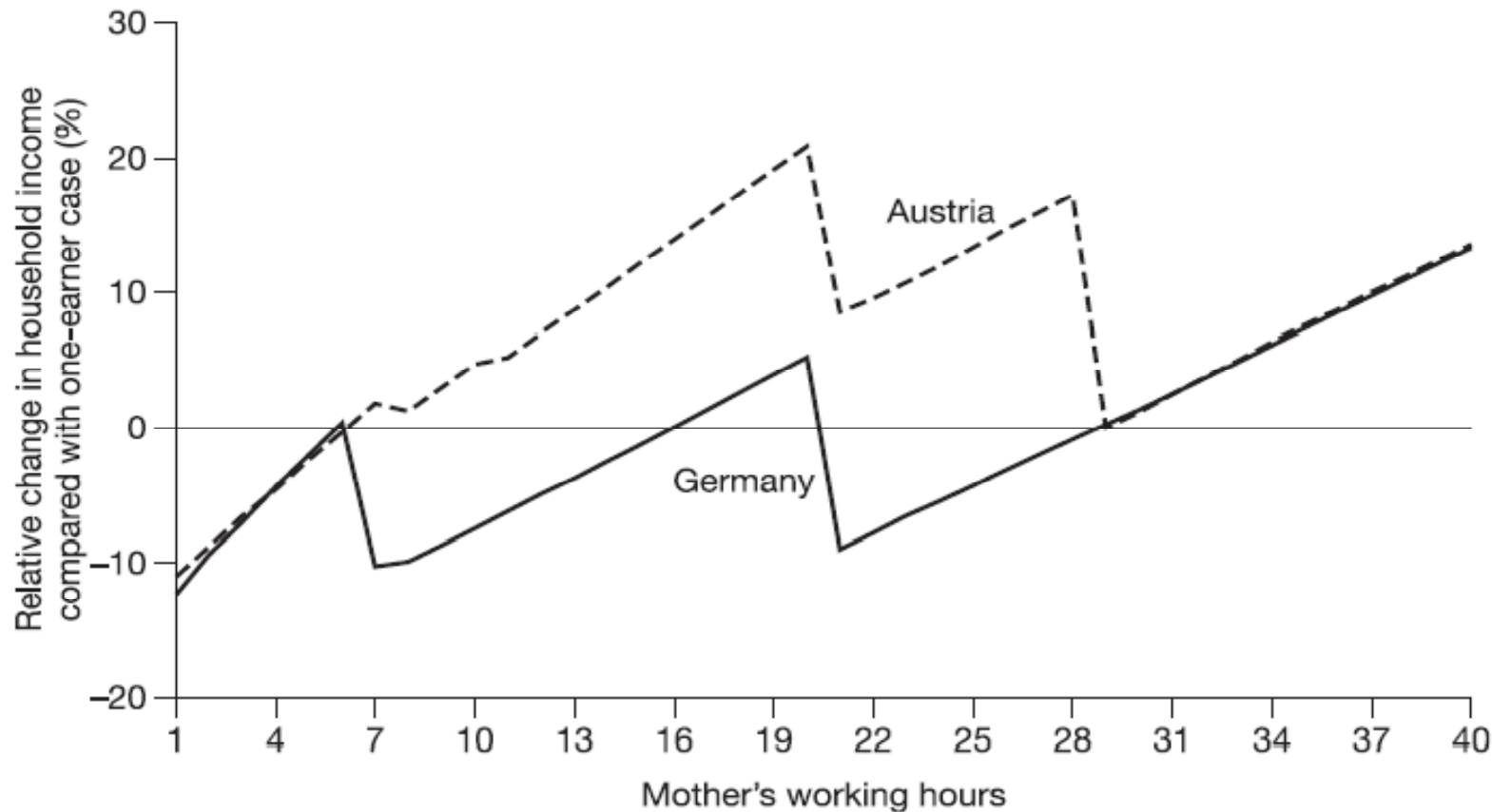
Comparison of Institutions (VIII)



Budget Lines for Stylized Households (including childcare costs): Married Couple with 1 child, 1 year

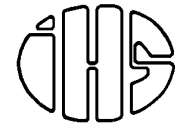
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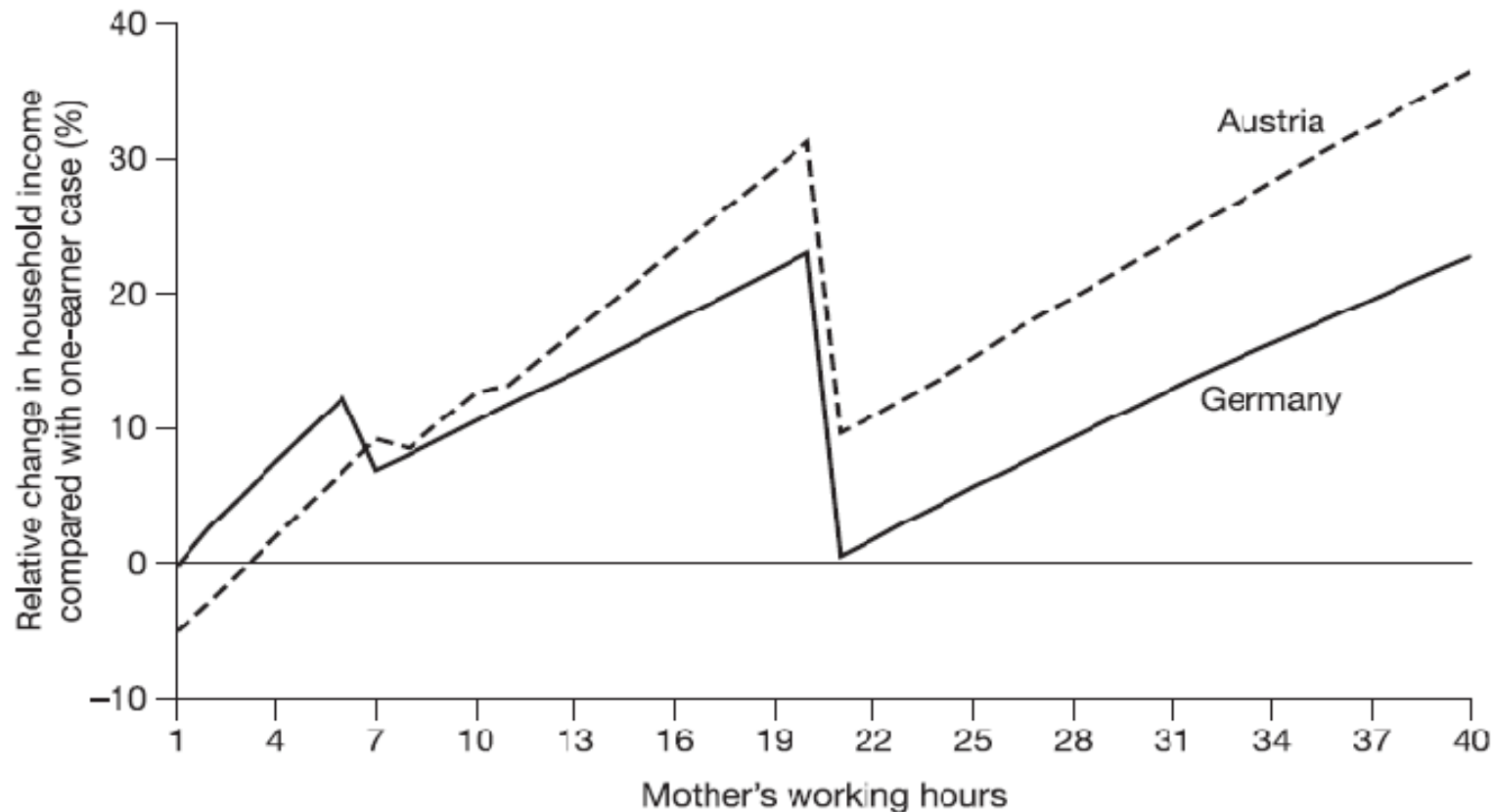


Sources: ITABENA based on Austrian version of SILC 2004; STSM based on SOEP 2004.

Comparison of Institutions (IX)



Budget Lines for Stylized Households (including childcare costs): Married Couple with 2 children, 4 and 7 years



Sources: ITABENA based on Austrian version of SILC 2004; STSM based on SOEP 2004.

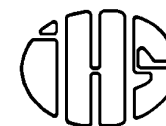


Methodological issues (I)

We employ **behavioural microsimulation models** in order to quantify how much of the observed difference in working hours can be explained by different institutions (income tax and parental leave)

- For Austria, we use the model “ITABENA” that is based on the 2004 wave of the SILC data set for Austria
- For Germany, we use the model “STSM” based on SOEP data for the year 2004

Sample Selection: We look at families with at least 1 child aged 10 years or younger (couples and single mothers)



Methodological issues (II)

We use a very simple **labor supply model**,

1. assuming that fathers' labor supply is exogenous
2. assuming that mothers can choose one out of 3 choice categories: non-participation, part-time work and full-time work

We estimate a linear-quadratic specification of the mother's utility function with the arguments leisure and net household income:

$$U_k(x_k) = x_k'Ax_k + \beta'x_k + \varepsilon_k \quad \text{where} \quad x = (y, l)'$$

Assuming that the error terms follow an Extreme-Value distribution yields:

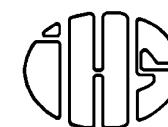
$$P(U_k > U_l) = \frac{\exp(x_k'Ax_k + \beta'x_k)}{\sum_m \exp(x_m'Ax_m + \beta'x_m)}$$

Methodological issues (III)



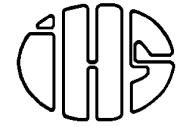
After having estimated the labor supply model, we use the structural parameters in order to predict mothers' labor supply under 3 reform scenarios for both countries:

Policy simulations	Austria	Germany
Replacing the definition of the income tax unit in the case of married spouses	A1	G1
Replacing parental leave benefit scheme	A2	G2
Replacing both	A3	G3



Data: Descriptive Statistics

	Austria		Germany	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Households	846	100	1,322	100
Couples: total	733	87	1,195	90
Couples: married	673	80	1,131	86
Couples: cohabiting	60	7	64	5
Singles	113	13	127	10
Youngest child aged 0–2	316	37	386	29
Youngest child aged 3–6	265	31	490	37
Youngest child aged 7–10	265	31	446	34



Empirical findings (I)

Change in participation rates in percentage points
by a **one percent increase in gross hourly wage**

	Austria	Germany
total	0.155	0.189
part-time	0.058	0.083
full-time	0.098	0.105



Empirical findings (II)

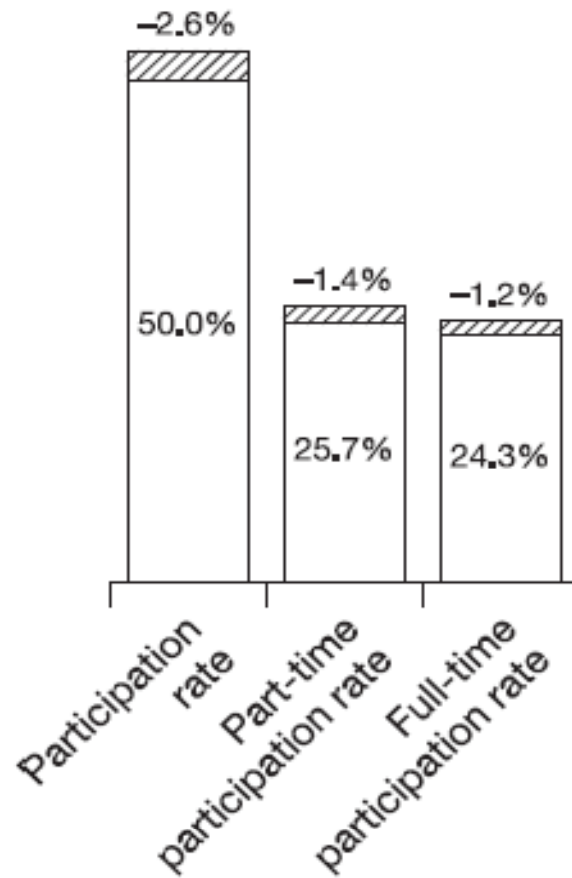
Change in participation rates in percentage points
by **swapping income taxation**

	Austria	Germany
total	-2.39	6.15
part-time	-1.02	4.47
full-time	-1.37	1.68

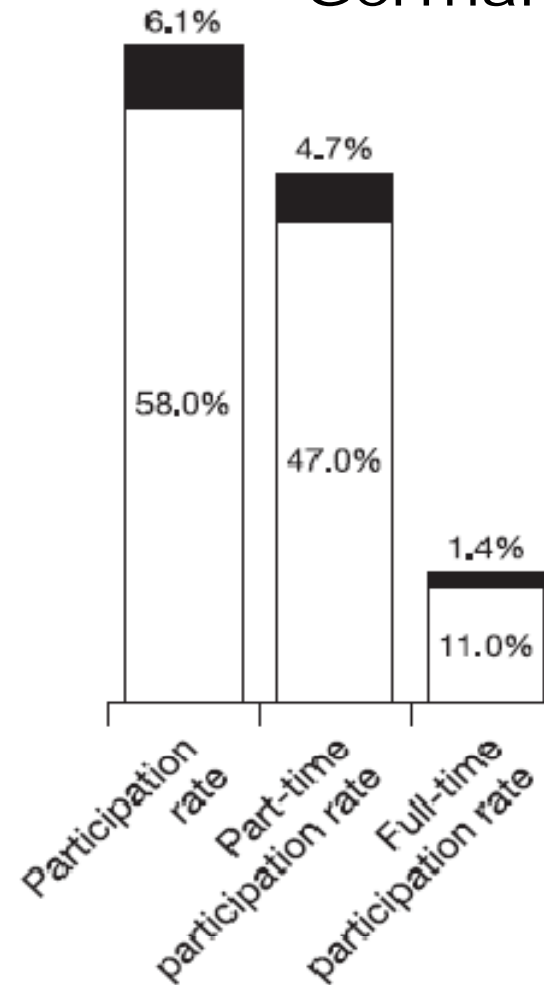


Empirical findings (IV)

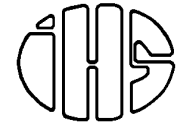
Austria



Germany



Discussion: What drives the remaining 80%?



- Technical problems: marginal employment
- Income tax tariff is not changed
- Gender wage gap or wage penalty due to employment breaks might differ
- There might be differences in labour demand (e.g. less demand for part-time jobs in Austria?)
- Fiscal neutrality
- Differences in childcare costs
- Preferences?



Conclusions

- Labour force participation of German mothers would rise considerably (6%)
- A small share of Austrian mothers would withdraw from the labour market (2.6%)
- Most of the German mothers, however, would prefer to take up part-time work (75%)
- The difference in the investigated policy instruments can explain roughly 20% of the difference in the full-time participation rate of mothers.



Child Care Costs (I)

Expected costs for part-time care:

$$ec_{pt} = c_{pt}^s (p_{pt} + p_{ft}) + c_{pt}^{ns} (1 - p_{pt} - p_{ft})$$

Expected costs for full-time care:

$$ec_{ft} = c_{ft}^s p_{ft} + (c_{pt}^s + c_{pt}^{ns}) p_{pt} + c_{ft}^{ns} (1 - p_{pt} - p_{ft})$$



Child Care Costs (II)

'Expected costs of childcare'

	Children aged 0–2		Children aged 3–6		Children aged 7–10	
	<i>Austria</i>	<i>Germany</i>	<i>Austria</i>	<i>Germany</i>	<i>Austria</i>	<i>Germany</i>
<i>Average expected childcare costs for part-time care</i>						
Per month	€311	€315	€163	€69	€253	€280
Per cent ^a	13.3%	10.3%	7.0%	2.3%	10.8%	9.2%
<i>Average expected childcare costs for full-time care</i>						
Per month	€635	€636	€387	€286	–	–
Per cent ^a	27.2%	20.8%	16.6%	9.4%	–	–

^aPercentage of median male income of persons aged 20 to 50 with a child younger than 14 in the household.

Sources: Authors' calculations based on: Statistik Austria, 2003/04; Stadt Wien, MA 11A; Statistisches Bundesamt, 2004; SOEP 2002 and 2004.