Department of Economics
Research Area: Public Economics, Labor Economics, Microsimulation

Freie Universität Berlin

Getting the Poor to Work:

Three Welfare Increasing Reforms for a Busy Germany
(FU Berlin Discussion Paper No. 2015/22)

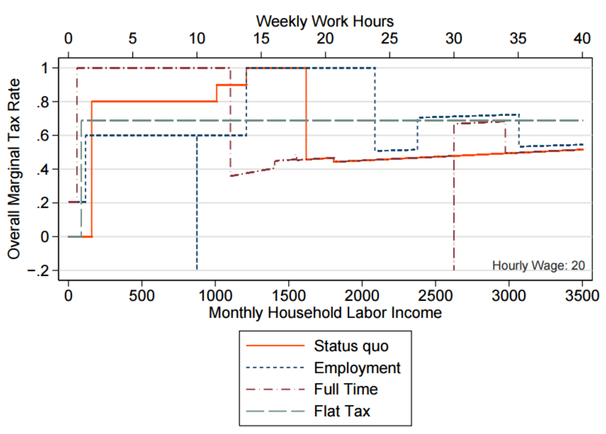
Three Reform Scenarios

Employment	Full-Time	Basic Income/Flat Tax
No Change	No Change	-
increasing MTR from 0.21	No Change	-
increasing MTR from 0.245	No Change	-
From 13,470		
No Change	No Change	MTR of 0.6885
No Change	No Change	-
No Change	No Change	Basic income of 800 Euro/month
No Change	No Change	380 Euro/month for children
MWR of 0.6 up to income of 1,200 Euro (1,500 Euro with children in household)		MWR of 0.6885
MWR of 1 afterwards	MWR of 1	(All other transfers for people under 65 are abolished)
Subsidy of 1,560 Euro/year for people working at least 10 h/week	Subsidy of 1,560 Euro/year for people working at least 10 h/week	-
Withdrawn at rate of 0.19 from 28,250 Euro/year	Withdrawn at rate of 0.19 from 28,250 Euro/year	

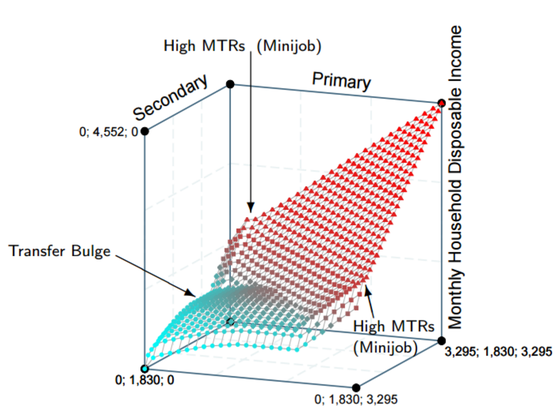
Note: MWR – Marginal Withdrawal Rate
MTR – Marginal Tax Rate

Incentives and Budget Constraints

Single Person without Children



Married Couple with two Children



Structural Labor Supply Model

A discrete choice model of weekly working hours (van Soest 1995)

- Data from the Socioeconomic Panel (SOEP)
- Wages from a wage regression with selection correction (Heckman 1979)
- Net incomes from the microsimulation model STSM (Steiner et al. 2012)
- Couples maximize joint utility in leisure and consumption by choosing hours category (e.g., wife works in a mini-job, husband works full-time):

$$\max_{Lf_{ij}, Lm_{ij}} V_{ij} = U(C_{ij}, Lf_{ij}, Lm_{ij}, X_i) + \varepsilon_{ij}$$

with: Lf_{ij} leisure of the female partner in household i in hours category j, Lm_{ij} leisure of the male partner, C_{ij} consumption, ε_{ij} iid random disturbance from the Gumbel distribution, X_i individual and houshold characteristics

- Probability that household i chooses hours category k (McFadden 1974)

$$P_{ik} = \Pr(V_{ik} > V_{ij}, \forall j = 1 \dots J) = \frac{\exp(U_{ik})}{\sum_{j=1}^{J} \exp(U_{ik})}, k \in J$$

- Estimation of extensive (employment) and intensive (working hours) elasticities which are used to simulate labor market effects of reforms

Labor Supply Effects

	Employment			Full-Time			Basic Income/Flat Tax		
	Women	Men	Total	Women	Men	Total	Women	Men	Total
Changes in Hours Worked (in Percent)									
Deciles of Net Equivalence Income									
1st	-0.0	0.8	0.3	-0.7	3.8	0.9	-0.1	4.1	1.4
2nd	-0.4	-0.2	-0.3	-0.1	0.0	-0.0	-2.5	-0.1	-1.5
3rd	-1.1	-0.7	-0.9	-0.8	0.1	-0.4	-7.2	-0.7	-1.4
4th	-3.2	-0.1	-1.7	0.1	0.0	0.1	-3.2	-0.9	-2.0
5th	-1.7	-0.2	-0.9	-0.2	-0.1	-0.0	-7.2	-2.3	-4.7
6th	-4.8	-0.2	-2.4	-0.2	0.0	-0.1	-9.2	-4.0	-6.5
7th	-2.3	-0.9	-1.6	0.5	-0.1	0.2	-10.0	-1.6	-5.6
8th	-0.7	-0.6	-0.7	0.0	0.0	0.0	-13.4	-3.0	-8.1
9th	-0.6	-0.1	-0.3	-0.1	-0.1	-0.1	-9.1	-2.6	-5.4
10th	-1.7	-0.2	-0.8	-0.0	0.0	-0.0	-12.0	-5.1	-8.0
All Households	-1.7	-0.3	-1.0	-0.1	0.2	0.0	-7.7	-2.2	-4.9

Income and Welfare Effects

	Employment		Full-Time		Basic Income/Flat Tax	
	Income Change	Comp. Variation	Income Change	Comp. Variation	Income Change	Comp. Variation
Deciles of Net Equivalence Income						
1st	1,943	1,920	229	98	4,296	4,210
2nd	1,558	1,600	515	511	4,065	4,078
3rd	941	992	741	747	2,941	3,330
4th	389	613	750	805	2,178	2,561
5th	-73	134	613	696	1,067	1,830
6th	-852	-294	459	543	-48	1,165
7th	-928	-498	424	463	-948	48
8th	-1,137	-885	348	375	-2,822	-998
9th	-1,418	-1,215	242	264	-4,531	-2,827
10th	-2,209	-1,515	117	228	-10,387	-6,715
All Households	-182	81	444	473	-423	662

Conclusions

1. A basic income that covers the socio-cultural subsistence level is fundable
   - People in the bottom decile increase working hours, while all others increase leisure
   - Women would reduce labor supply substantially under basic income
   - Accounting for hours reductions, budgetary balance is achieved with a flat tax of about 70% (including social security contributions)
2. Introducing an hours subsidy of 1,560 Euro per year at 10 hours per week increases working hours for the first and second decile and overall welfare
3. Introducing an hours subsidy of 1,560 Euro per year at 30 hours per week increases overall working hours (including strong effect for the first decile) and overall welfare
4. Compared to reforms that involve subsidies at specific working hours, the basic income reform increases welfare the most.

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