

# Getting the Poor to Work:

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

#### Three Reform Scenarios

#### **Full-Time Basic Income/Flat Tax Employment** 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  | Subsidy of 1,560 Euro/year            | -   |  |  |
| for people working at least 10 h/week   | for people working at least 10 h/week |   |  |  |
| Withdrawn at rate of 0.19   | Withdrawn at rate of 0.19             | Note: MWR – Marginal Withdrawal Rate                    |  |  |
| from 28,250 Euro/year   | from 28,250 Euro/year                 | MTR – Marginal Tax Rate                                 |  |  |

| _                | Empl                                 | Employment |       |       | Full-Time |       |       | Basic Income/Flat Tax |       |  |
|------------------|--------------------------------------|------------|-------|-------|-----------|-------|-------|-----------------------|-------|--|
|                  | Women                                | Men        | Total | Women | Men       | Total | Women | Men                   | Total |  |
| Changes in Hou   | Changes in Hours Worked (in Percent) |            |       |       |           |       |       |                       |       |  |
| Deciles of Net E | quivalence Ir                        | icome      |       |       |           |       |       |                       |       |  |
| 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  |  |

### Incentives and Budget Constraints



Labor Supply Effects

| Single Person without Children   | Married Couple with two Children  |  |  |  |
|--|---|--|--|--|
| Weekly Work Hours  0 5 10 15 20 25 30 35 40  1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 | Transfer Bulge  0; 4,552; 0  Primary  High MTRs  (Minijob)  Primary  High MTRs  (Minijob)  3,295; 1,830; 3,295  0; 1,830; 3,295 |  |  |  |

| 0 5                       | Weekly Work Hours  10 15 20 25 30 35 40  High MTRs (Minijob)        |
|---------------------------|---|
| ax Rate<br>-8. Hate       | 10 15 20 25 30 35 40  High MTRs (Minijob)  Primary  0; 4,552; 0     |
| Overall Marginal Tax Rate | Transfer Bulge  |
| 0<br>2<br>0 500           | 1000 1500 2000 2500 3000 3500                                       |
|                           | Monthly Household Labor Income  ——————————————————————————————————— |
|                           | ——— Flat Tax  |

## 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,  $\varepsilon_{ij}$  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) elasticties which are used to simulate labor market effects of reforms

|                                   | Employ | ment      | Full-T | ime       | Basic Income/Flat Tax |           |  |
|-----------------------------------|--------|-----------|--------|-----------|-----------------------|-----------|--|
|                                   | Income | Comp.     | Income | Comp.     | _                     | Comp.     |  |
|                                   | Change | Variation | Change | Variation | Change                | 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
- 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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