

Institute for Employment
Research

The Research Institute of the
Federal Employment Agency

IAB

Give them a break! Did activation of young welfare recipients overshoot in Germany? A regression discontinuity analysis.

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Background

- Why preventing youth unemployment is important?
 - Society level: youth unemployment may lead to crime, social exclusion and political unrest.
 - Individual level: loss of human capital, "scarring effect", stigmatization and decrease in life satisfaction.
- Experience of EU-15 countries shows that programmes for young people perform generally well.
- Programmes that had too broad coverage tend to perform the worse.

Institutional set-up

- According to the current regulation and adopted practices, welfare recipients younger than 25 years old
 - should be placed immediately after their benefit claim into work, training/education or work opportunities,
 - should be registered as unemployed for no longer than three months,
 - face very strict benefit sanctions.

Monthly average inflow rates (in per cent) into work opportunities and other ALMPs by age

Age	23	24	25	26
Period: 2005 to 2007				
Work Opportunities				
as One-Euro-Jobs (workfare)	5.31	5.06	2.03	1.83
as subsidized contributory jobs	0.40	0.37	0.12	0.10
Selected other ALMPs	6.84	6.66	4.26	3.94
Period: 2008 to 2010				
Work Opportunities				
as One-Euro-Jobs (workfare)	5.70	5.34	2.09	1.91
as subsidized contributory jobs	0.71	0.66	0.22	0.21
Selected other ALMPs	9.14	8.96	6.57	6.06

Note: Average monthly inflow of welfare recipients into the programmes considered relative to the average stock of unemployed welfare recipients during the period under review.

Identification

- We can use the Regression Discontinuity Design (RDD) to study the effect of the policy (Imbens and Lemieux, 2008; Lee and Lemieux, 2010).
- Inference made on the basis of a sample of individuals marginally younger and older than 25 years old, under certain conditions, may be as good as a randomized experiment.

Assumptions

- *Continuity Assumption (CA)*
 - CA implies that none of the factors except for treatment changes at the age threshold.
- *Homogeneity of the treatment effect*
 - The RDD provides effect of treatment only for the subpopulation of people marginally younger than 25 years old (i.e. Local Average Treatment Effect).

Sample drawn from administrative data

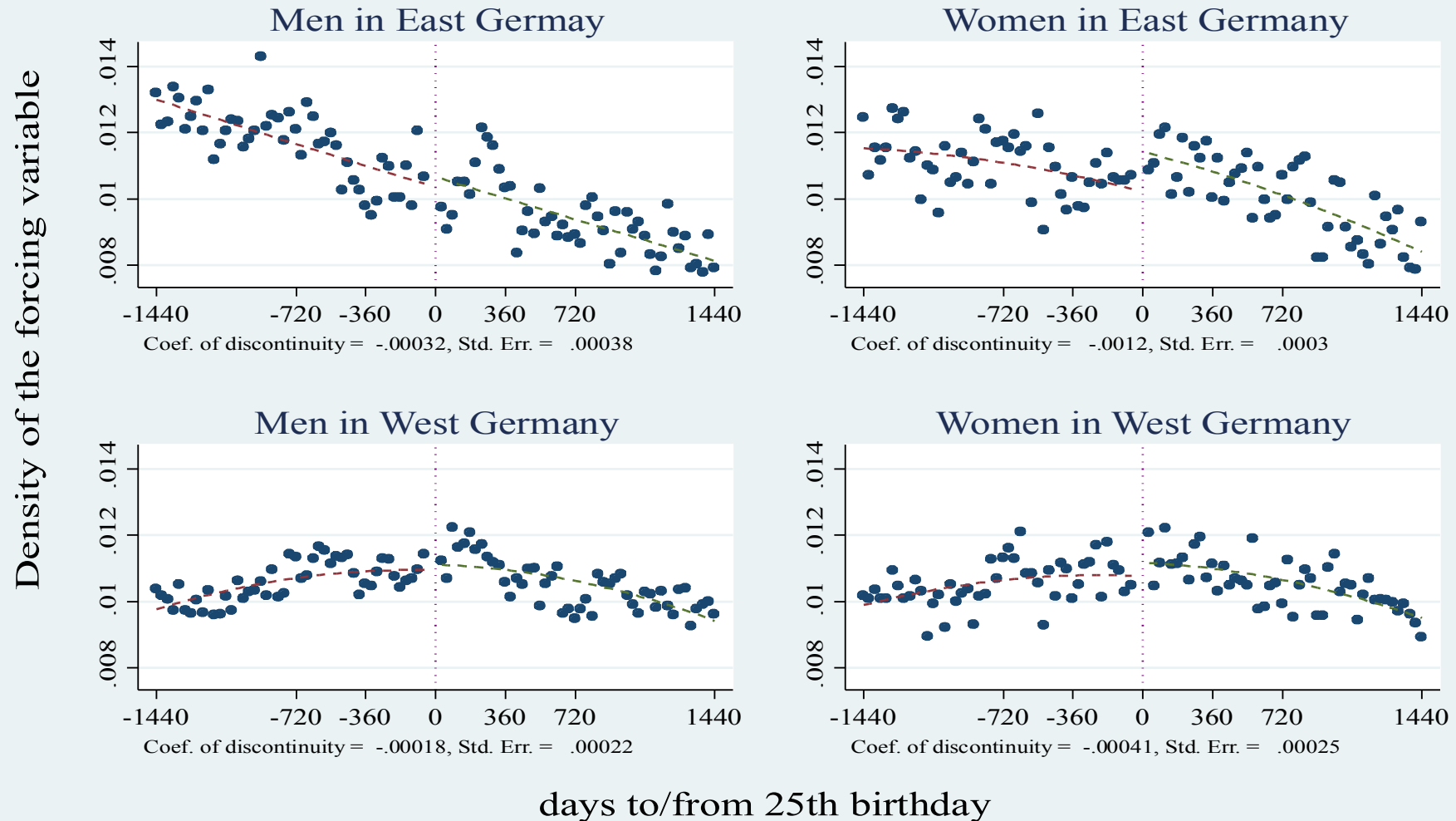
- *People* who for the first time in their life were both registered as unemployed and as welfare recipients under the regime of Social Code II.
- *Inflow period* from October 2005 until the end of January 2006.
- *Age* within 1440 days before and after 25th birthday.
- *The final number* of individuals is 127,122.

Outcomes

- Cumulative number of days spent in unsubsidized contributory employment during first, second and third year since registration with PES.
- Real annual earnings, in Euro in the years 2006, 2007 and 2008. We deflated earnings by the consumer price index.
- Monthly average equivalent real income from welfare of household, during first, second and third year since registration with PES.

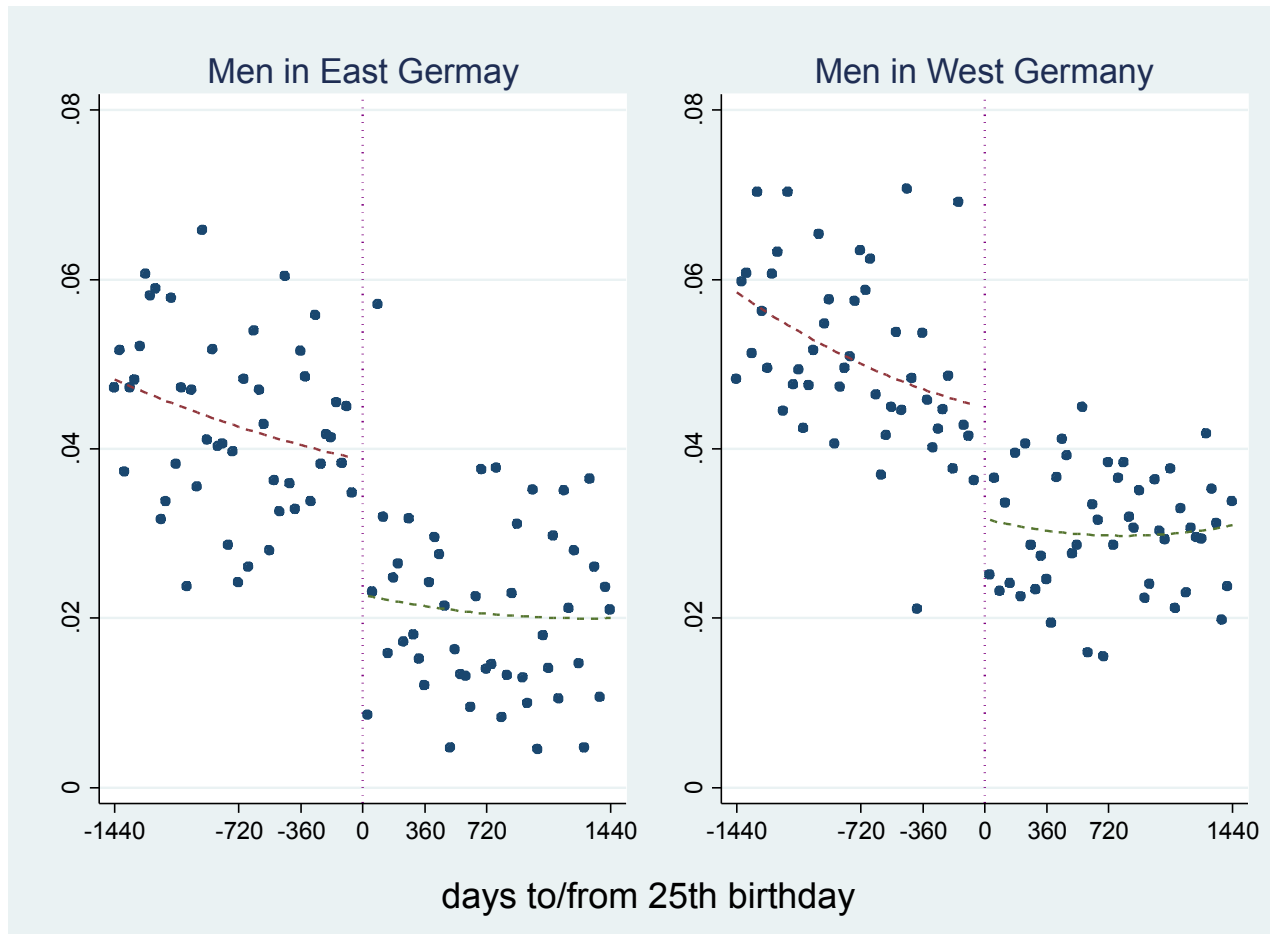
Test for the continuity in the density function of the forcing variable

- McCrary (2008) suggested a test that involves an examination of the density of the assignment variable X .
- A jump in the density of X at the threshold may indicate that there is some sorting of individuals around the threshold.
- We performed a test for men and women in East and West Germany separately.



Note: The graph shows the share of observations in different age-bins of a width of 30 days, along with the regression line of a second order polynomial model.

Treatment Intensity



Note: The graph shows the share of observations receiving treatment in different age-bins of a width of 30 days, along with the regression line of a second order polynomial model. As treatment intensity, we considered the share of people who within the first 30 days after registration either started a One-Euro-Job or short-term training.

Model specification

- Following Lee and Lemieux (2010), we define pooled regression for the estimation of the treatment effect as:

$$Y = \alpha + \tau D + f(X-c) + u,$$

where D is a treatment parameter, X is age and c is an age threshold.

- It is possible to allow regression to differ on both sides of the threshold, so that

$$Y = \alpha + \tau D + f^*(X-c) + f(X-c) + u,$$

where $f^*(X-c)$ represent a function of interaction between polynomial terms of $(X-c)$ with D .

- The polynomial function is assumed to be constant within 30 days intervals but varies over different intervals.

Robustness checks

- For each outcome/year, we estimate specifications which include up to a fourth order polynomial.
- We report the specification selected by the AIC-criteria.
- We compare a restricted model, which includes a series of polynomials, to an unrestricted one.
- We consider 3 different observation windows: 360, 720, 1440 days before and after 25th birthday.
- We test the robustness of the results towards the width of the interval at which the polynomial function remains constant by considering interval widths equal to 15, 30 and 60 days.

Robustness checks: Results

- We cannot reject the hypothesis that the restricted model fits the data better than an unrestricted one.
- Width of the observation window and smoothing interval do not affect the results.
- Results of the model with restricted and unrestricted slopes are similar.
- Including covariates in the regression function does not significantly affect the size of the estimated treatment effect but decreases the standard errors of the main effect.
- We checked for discontinuities at the age of 25 years in baseline covariates: no discontinuities are observed.

Results

Period	Men in East Germany		Men in West Germany		
Effect on cumulative number of days spent in unsubsidized contributory employment, in days					
	Coef.	Std. Err.	Coef.	Std. Err.	
1 st year since registration	3.49	(3.23)	-2.24	(2.67)	
2 nd year since registration	-0.39	(6.10)	-22.64	(13.13)	*
3 rd year since registration	-4.15	(5.98)	-2.58	(3.35)	
Effect on real annual earnings, in Euro					
2006	321.92	(251.69)	-588.47	(319.72)	*
2007	-48.57	(327.55)	-1209.69	(520.71)	**
2008	-73.15	(357.03)	-370.47	(236.37)	
Effect on monthly average real equivalent income from welfare, in Euro					
1 st year since registration	-12.63	(9.30)	9.68	(15.68)	
2 nd year since registration	10.48	(11.42)	18.88	(9.19)	**
3 rd year since registration	-4.92	(11.29)	9.55	(9.65)	
N	23,801		45,716		

Note: * p<0.05, ** p<0.01, *** p<0.001. Standard errors (in parentheses) are estimated assuming a cluster structure by age. The order of polynomial was chosen according to AIC criterion separately for each regression. Additional regressors for the specifications which include covariates are: German nationality, education (5 categories); number of children (3 categories); presence of a partner and employment status of the partner; duration of contributory employment in the past two years, real annual earnings in 2000-2004

Summary of the Results

- Number of days in unsubsidized contributory employment.
 - Zero or negative and statistically insignificant results for East Germans.
 - Negative result for West Germans in the second year after registration.
- Real annual earnings.
 - No effect for East Germans.
 - Loss of 588 Euro in the year 2006 and 1,210 Euro in the year 2007 for West German men.
- Monthly average equivalent real income from welfare.
 - No effect for East Germans.
 - Small increase in benefit receipt for West Germans in the second year after registration.

Relation to the current literature

- Recent study Caliendo et al. (2011) finds an overall positive impact of different programme participations on unemployed youth.
 - Effects of participating in programmes vs. the impact of the entire policy targeted on young welfare recipients.
 - Pre-reform period (different population, different programme mix).
- Hohmeyer and Wolff (2012) find adverse employment effects of participating in One-Euro-Jobs for welfare recipients aged below 25, but not for older individuals.

Discussion

- Excessive targeting of the young welfare recipients may lead to too many false (poor quality) assignments to programmes and cause a delayed re-entry into jobs or training and the acceptance of less well paid work.
- As of April 2012 the rules of targeting young people by work opportunities will be relaxed but the rules on sanctions will remain the same.
- **A general lesson. Focussing efforts on one group of individuals is likely to achieve no progress for the target group. It can even lead to adverse impacts on their future performance in the labour market.**