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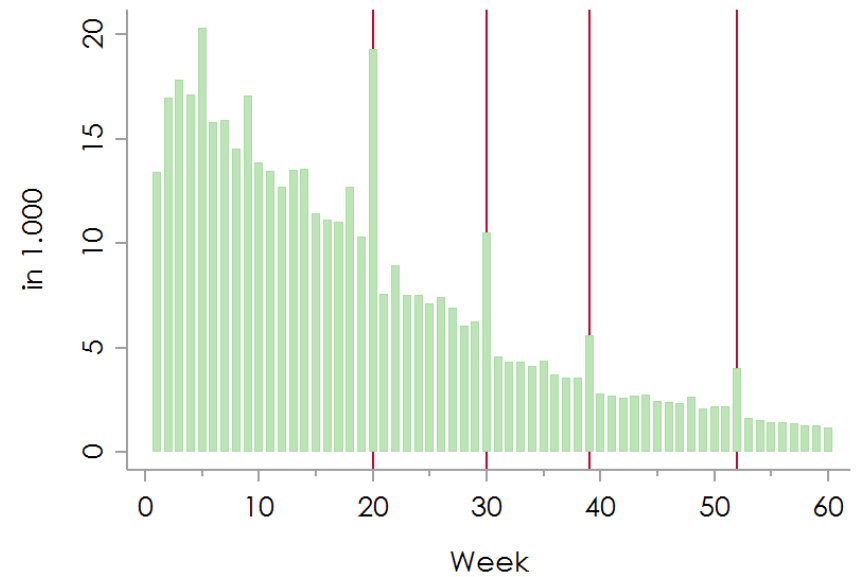
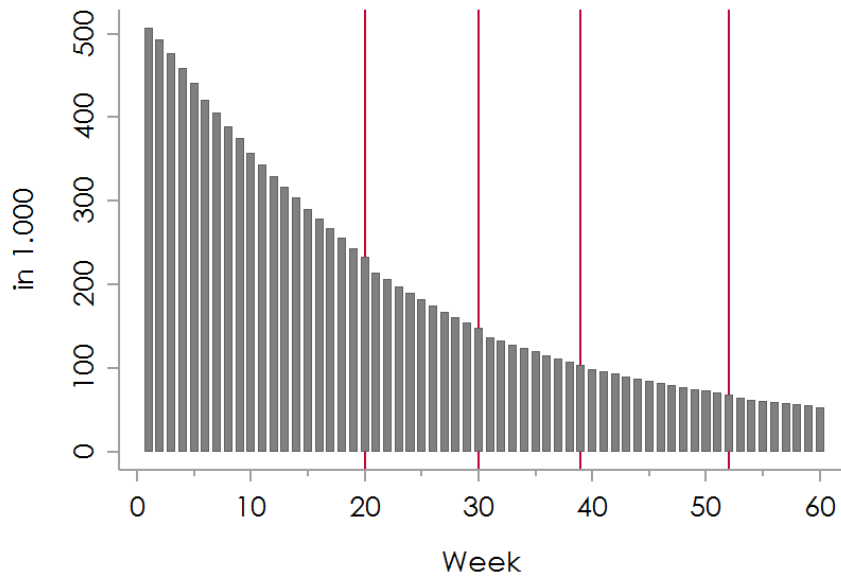
## How Extending the Maximum Benefit Duration Affects the Duration of Unemployment A Regression Discontinuity Approach

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- **Evidence from empirical studies**
    - longer periods of entitlement for UB cause longer benefit receipt  
e.g. Card et al., 2007
    - in line with theoretical considerations  
e.g. Mortensen (1977), Chetty (2008)
  
  - **Effects of longer entitlement may depend on**
    - Institutional settings of labor market policies
    - Outcome variables considered  
e.g. Card – Chetty – Weber (2007)
  
  - **Labor market policy has to deal with the trade-off between social transfer and incentive to return to work**  
Holmlund (2014), Tatsiramos – van Ours (2014)

- Exits from unemployment react to the maximum entitlement for UB



**What is the effect of an extended maximum UB-entitlement ...**

- ... on the duration of benefit claims
- ... exit rate from unemployment ...
  - to employment
  - to labor market inactivity
- ... on non-employment duration (time to next job)
- ... on re-employment wage
  
- ... within the institutional setting of Austrian labor market policy

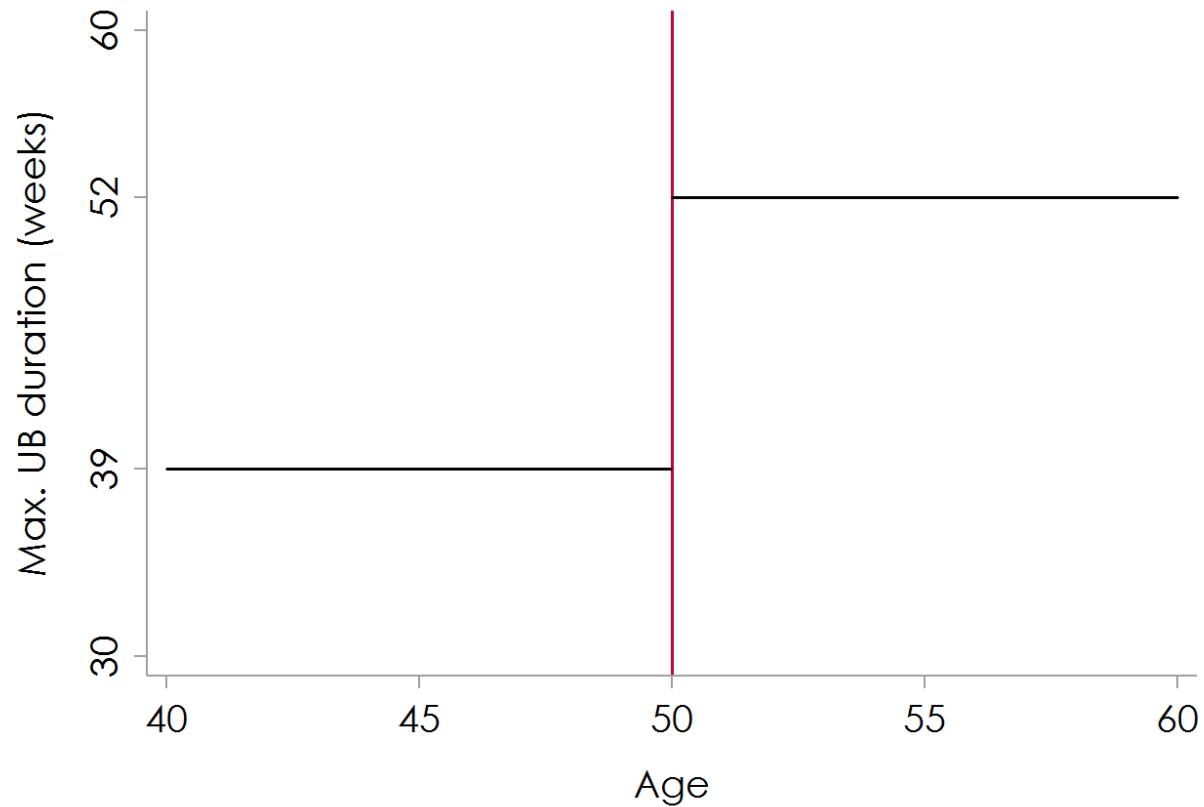
- Public Employment Service (AMS)
  - Administration of UB and (means-tested ) UA
  - Counselling and placement service
  - Active measures
  
- Policy objectives
  - Reduction of unemployment duration
  - Sustained reintegration into employment
  
- UI system provides two types of benefits
  - UB ~55% net replacement rate
  - UA ~92% of UB

### ■ Unemployment benefit (UB)

- Claimant must meet eligibility requirements
- Maximum entitlement period depends on age and work experience (insurance time)
- Magnitude of financial drop after exhaustion of UB depends on partners income and the number of dependent children.

Age at claim	# Claim	Time preceding claim	Insurance time	Max. UB duration
< 25 years	–	1 year	26 weeks	20 weeks
–	first	2 years	1 year	20 weeks
–	consecutive	1 year	28 weeks	20 weeks
–	–	5 years	3 years	30 weeks
≥ 40 years	–	10 years	6 years	39 weeks
≥ 50 years	–	15 years	9 years	52 weeks

- Graphical representation of discontinuity: Unemployed who worked at least 9 out of 15 years preceding the claim



## Sharp Regression Discontinuity Design (RDD)

$$y_i = \tau D_i + f(x_i) + g(x_i)D_i + \varepsilon_i,$$

where

$$D_i = \mathbf{1}(age_i \geq 50)$$
$$x_i = age_i - 50$$

and  $f(\cdot), g(\cdot)$  assumed to be smooth

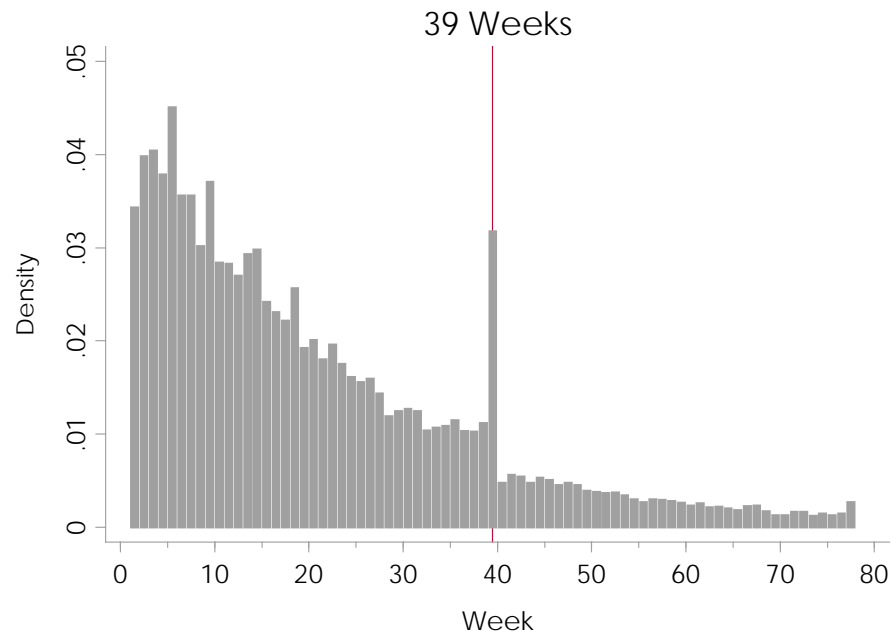
- Identifying assumption:
  - all other unobserved determinants of  $Y$  are continuously related to age:  $\varepsilon$  continuous at  $x = 0$
  - then treatment is locally randomized
- “Sharp” – Age strictly determines UB duration



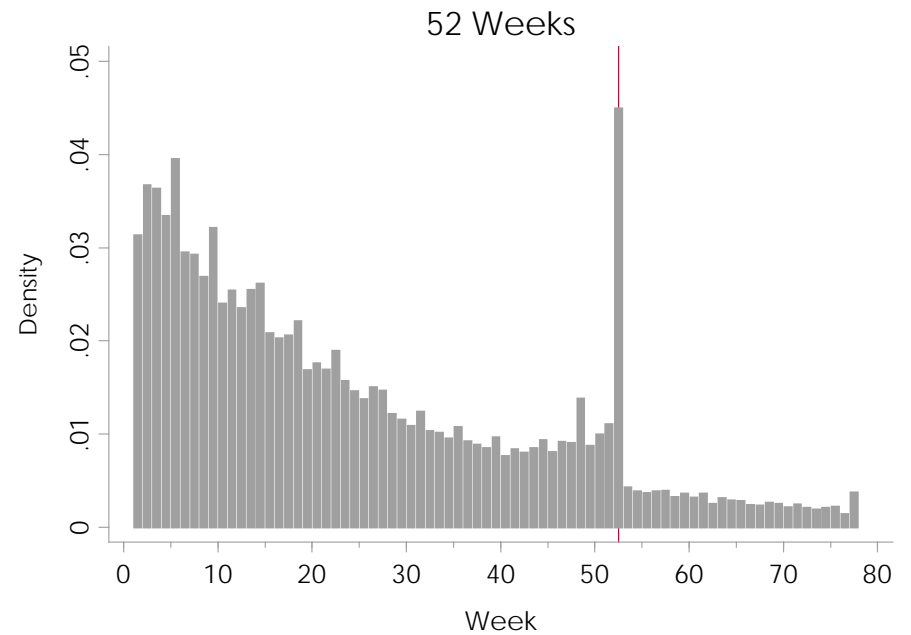
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- **Administrative individual data (full population)**
    - **Austrian social security records:** an administrative matched employer-employee data set regularly processed at WIFO
      - Employment relationships (duration on daily basis, wages on yearly basis)
      - Employee characteristics (age, gender, full labor market career back to 1972, ...)
      - Employer characteristics (industry, number of employees, ...)
    - **Administrative PES-data:**
      - Unemployment episodes on daily basis, including information on participation in active measures and other temporary reasons for interruption of UB receipt
      - Individual characteristics (age, gender, level of education, existence of health restrictions, care responsibilities ...)
      - Interventions by PES (monitoring appointments, placement suggestions, assignment to training, ...)

- 
- **Sample:** Inflow into unemployment in years 2010 to 2013,
    - age-group 42-57 years old
    - unemployed who worked at least 9 out of 15 years preceding their UB claim
    - with (new) UB entitlement
    - no recall (promis) by former employer
  - **Outcome variables:**
    - Outflow from unemployment in employment and out-of-labor-force, respectively
    - Wage in new job (standardized to monthly wage)
      - Contribution base to social insurance (top-coded)
    - Duration of unemployment episodes
    - Duration of UB receipt
      - Net of short interruptions
    - Time to next job
    - Hazard rates for leaving unemployment and finding a job

### Distribution of actual duration of benefit receipt



**Median = 114.0 days / 16.3 weeks**  
**N = 65,401**

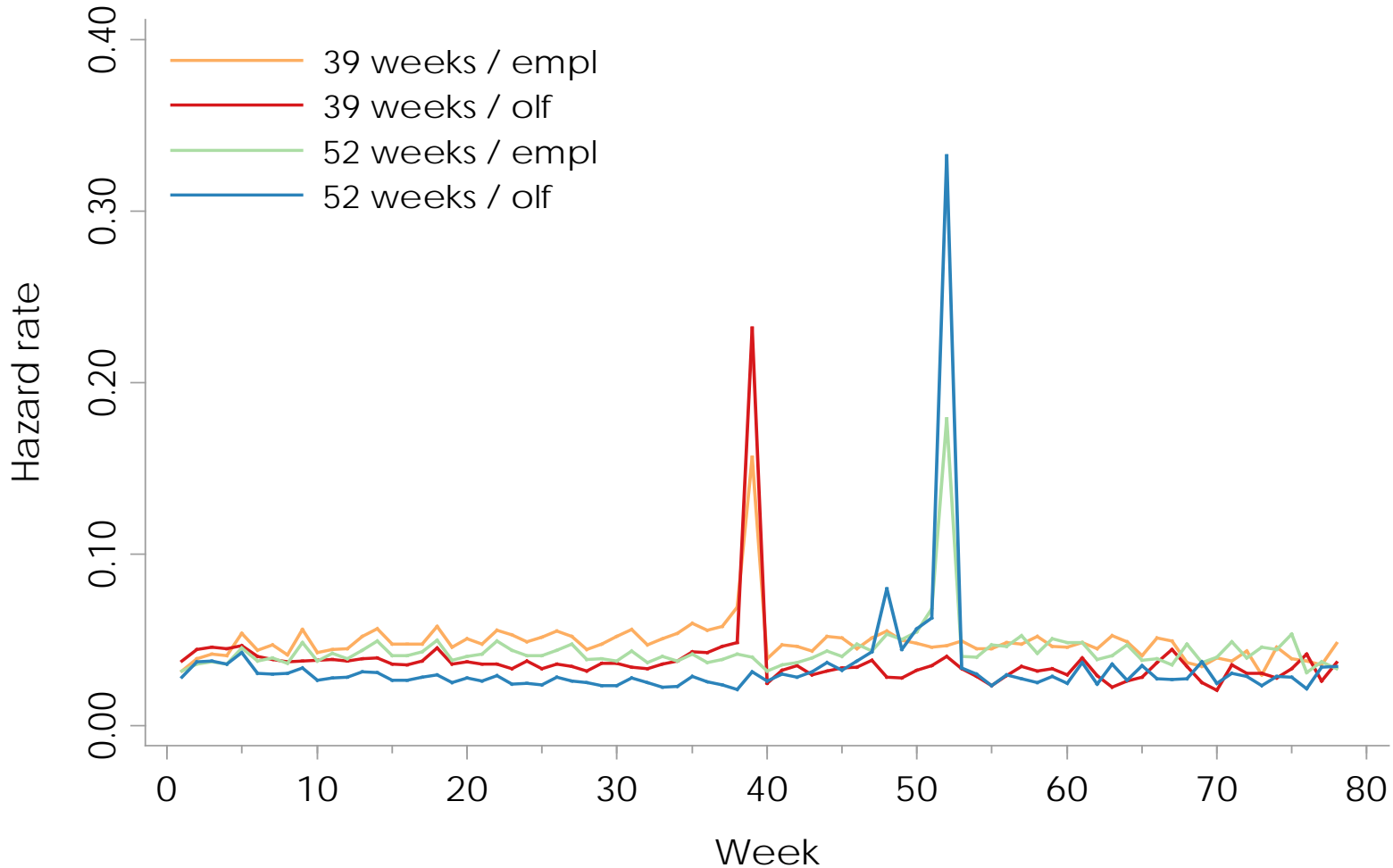


**Median = 149.0 days / 21.3 weeks**  
**N = 46,796**

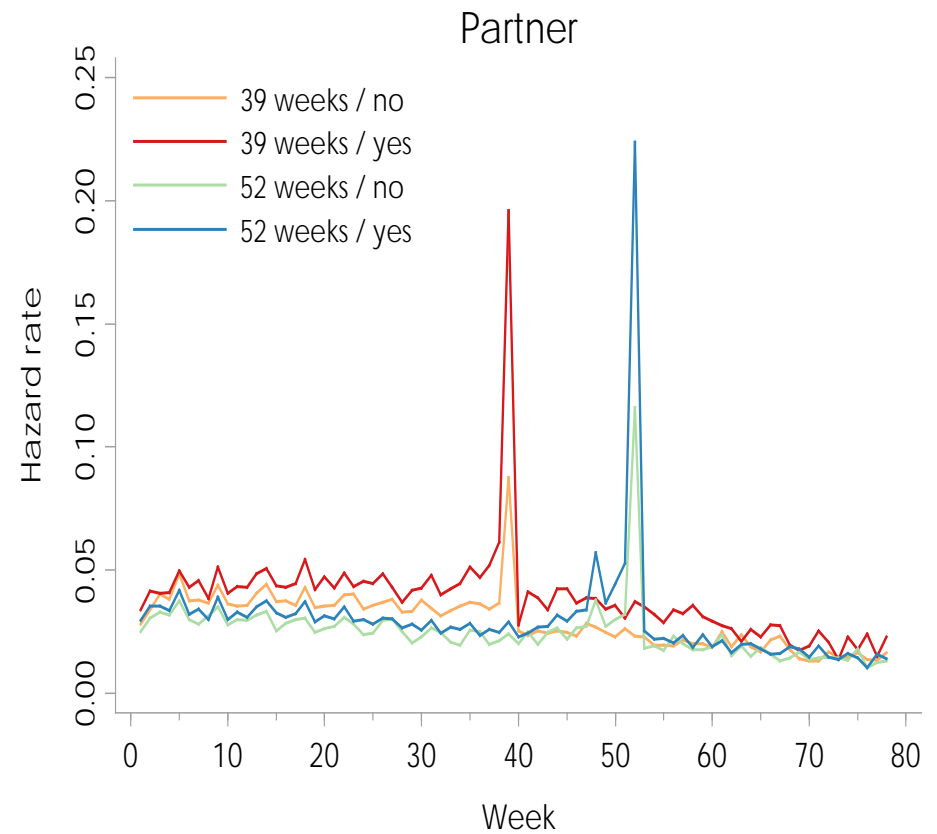
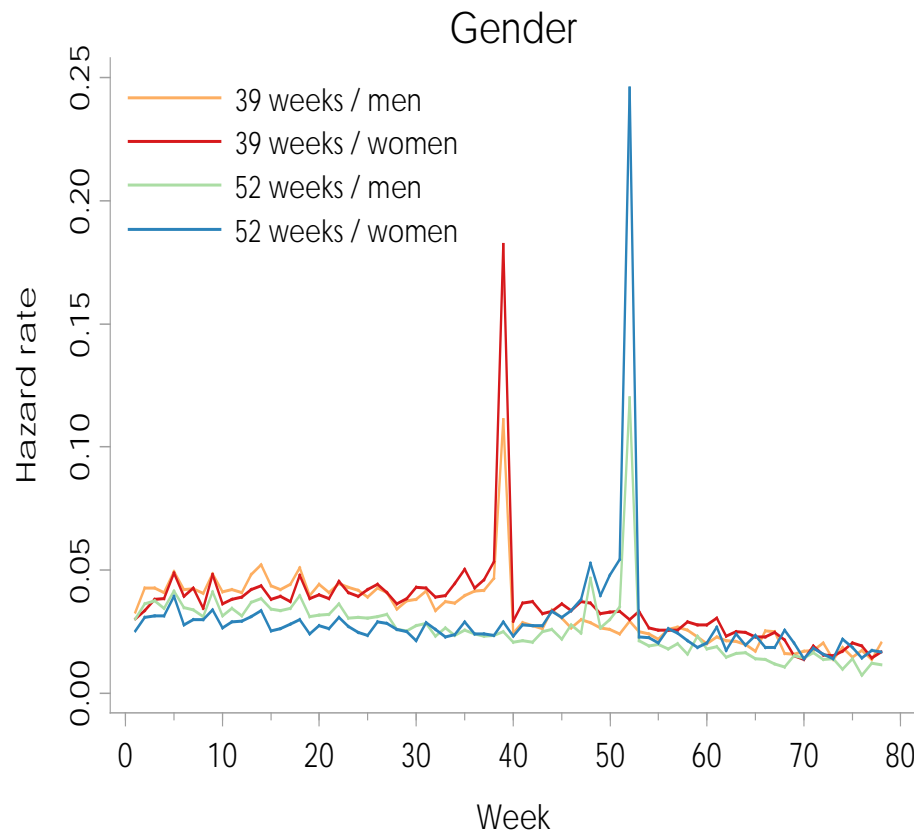
- 47.1% women
- 37.4% single household
- 35.5% unemployed with kids
  
- Distribution of exit types

Exit to	39 weeks	52 weeks
Employment (dependent unsubsidized)	<b>55.82</b>	<b>29.25</b>
Subsidised employment	10.18	17.77
Self employment	5.78	3.53
OLF	<b>23.58</b>	<b>42.19</b>
Censored	4.65	7.27

- Hazard rate by week, max. UB duration and exit type



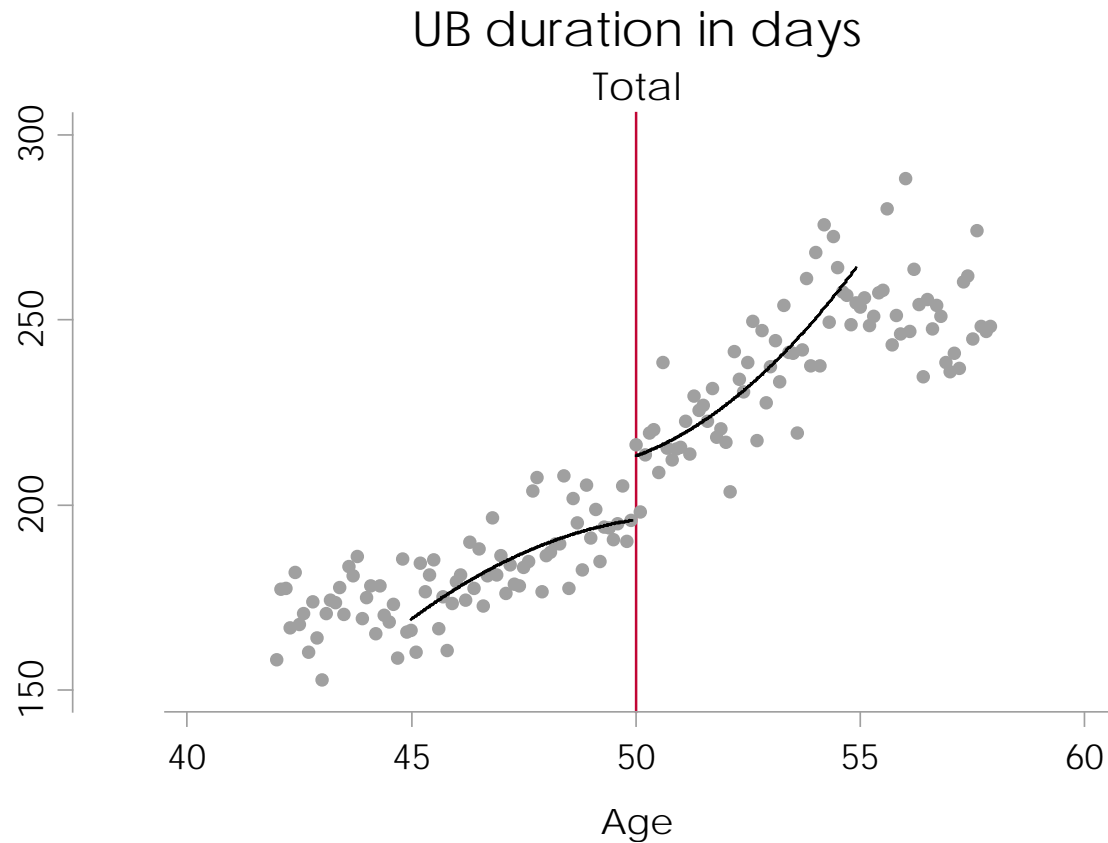
- Hazard rate by week, max. UB duration, gender / partner in household



- **Nonparametric local polynomial estimator without/with additional explanatory variables (following Calonico et al., 2014)**
  - Results shown for bandwidth 5 (to both sides: 45 to 54 years) and polynomial degree 2
  - robust (bias corrected with robust standard errors) estimators
- **Sensitivity analysis**
  - OLS for bandwidth (3-7years) and degree of polynomial (1-3)
  - with optimal bandwidth (following Imbens and Kalyanaraman, 2011, Calonico et al., 2014)
- **Definition of outcome variables:**
  - Durations are censored at the last observable day (June 30 2015)
  - Time to job can become maximum 104 weeks for all observations: otherwise transitions to retirement might influence results

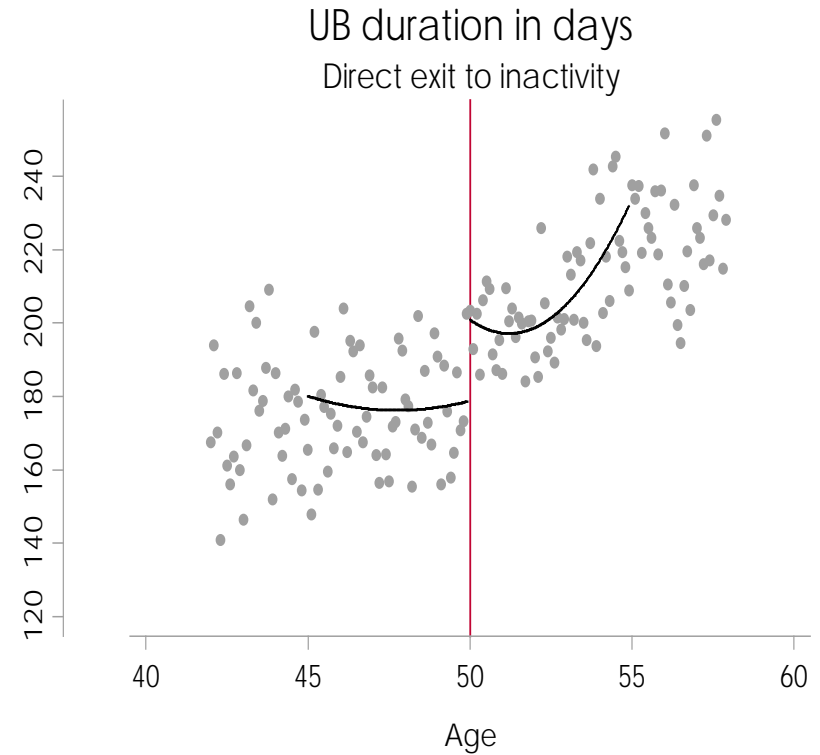
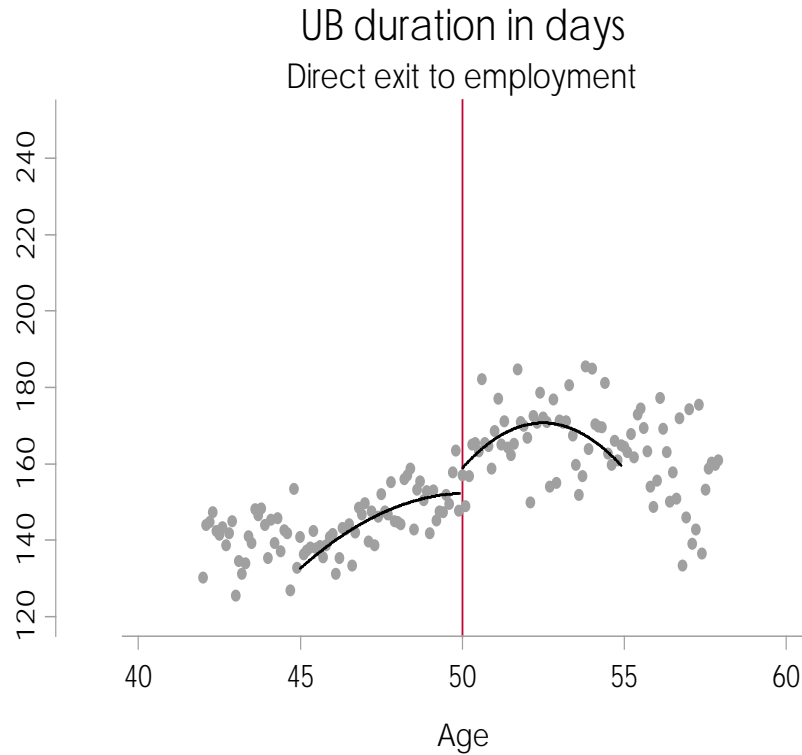
Sensitivity checks done, similar results if censored cases are dropped

## Effect of extending max. UB duration from 39 to 52 weeks on net actual duration of benefit receipt

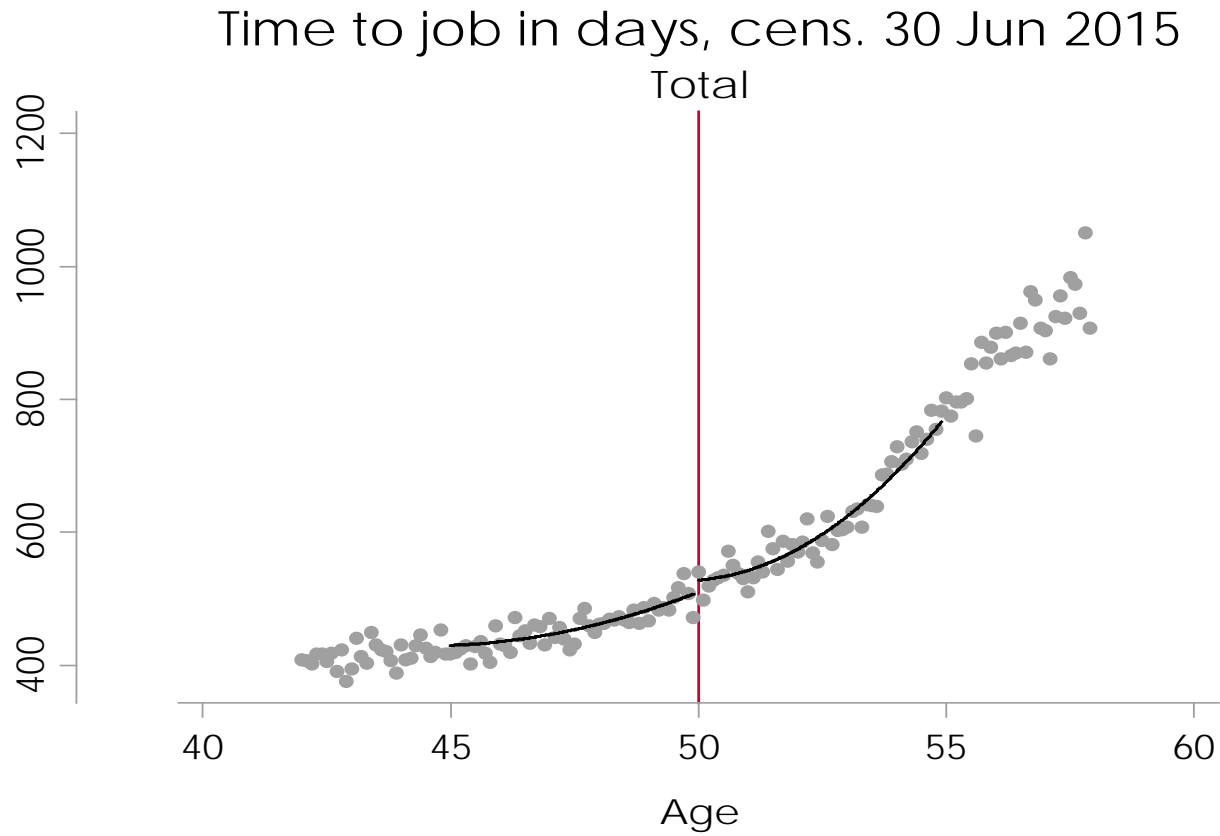




## Effect of extending max. UB duration from 39 to 52 weeks on net actual benefit receipt



## Effect of extending max. UB duration from 39 to 52 weeks on time to next job



Sample	Cov		Case	Benefit receipt		Time to job			Wage
			Duration	Hazard rate	Duration	Hazard rate	Compl. Duration	Duration, cens. at 104 weeks	
Total	N	Con	14.43**	-0.0029***	15.08***	0.0006	-1,33	6,46	23,78
	N	Rob	15.51*	-0.0031***	15.46**	0.0012	-5,04	2,82	22,77
	Y	Con	14.29**	-0.0035***	13.74**	0.0007	-1,52	8,90	30.38*
	Y	Rob	15.26*	-0.0038***	13.50*	0.0014	-5,36	6,43	13,99
Obs.			72.236	69.494	72.236	71.051	53.429	72.236	36.854
Exit to employment	N	Con	2,91	-0.002	3.2101	-	-	-	23,78
	N	Rob	1,48	-0.0011	0.482	-	-	-	22,77
Obs.			46.575	46.575	46.575	-	-	-	36.854
Exit to inactivity	N	Con	23.68**	-0.0065	22.13**	-	-	-	-
	N	Rob	16,49	-0.0027	16,97	-	-	-	-
Obs.			21.325	21.325	21.325	-	-	-	-

## ■ Contribution of the study

- Discontinuity 39/52 weeks UB not yet analyzed
- Exact calculation of benefit duration
- Exit to employment vs. exit to OLF
- Benefit duration vs. unemployment duration vs. time to next job
- Differences in household constellation (which determine income drop after UB exhaustion)

## ■ Effect of extended potential UB duration (52 instead of 39 weeks):

- Moderate extension of actual UB duration and duration UB is claimed (~15 days)
  - Consistent with lower exit hazard rate
- Caused mainly by a significant drop in exits to inactivity
  - Women with partners are particularly affected: Means-testing of UA most likely reason for leaving the labor market
- No significant effect on exits to employment
- No significant effect on time to next job
- Insignificant (slightly positive) effect on re-employment wages

Thank you