



A discussion of

**“Labor supply and the pension system- Evidence
from a Regression Kink Design”**

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by

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Brief Summary

- This paper examines the effect of early retirement benefits on the (early) retirement age. (retirement before the age of 65)
- Administrative data, from Germany.
- Econometric framework: Regression Kink Design
- “The kink”: a reform in 1992 gradually reduced early retirement benefits. The reduction depends on the month and year of birth.
- Challenge: conditional on eligibility.
- Main finding: a 0.3% reduction in ER benefits increases the retirement age with about 3 days. The maximum cut of 18%, increases the retirement age with about 6.5 months.



Unemployment (early) retirement scheme

Main ingredients

- Early retirement window: 60-65
- The full-benefits early retirement pension, if eligible, shifted from 60 to 65 for the 1937-1941 cohorts (the 1992 reform). For every month born later, full-benefits could be received one month later.
- If retired earlier, the benefits are cut with 0.3% (points) for each month. The maximum cut is 18% when retiring at age 60 for people born in or after december 1941.



Women's early retirement scheme

Main ingredients

- Early retirement window: 60-65
- The full-benefits early retirement pension, if eligible, shifted from 60 to 65 for the 1940-1944 cohorts (the 1992 reform). For every month born later, full-benefits can be received one month later.
- If retired earlier the benefits are cut with 0.3% (points) for each month. The maximum cut is 18% when retiring at the age 60 for women born in or after december 1944.



The data

Administrative data, series of cross sections (individuals cannot be followed over time).

Data-years are selected in which individuals are about 67 years of age. (the years 2002-2012), cohorts 1935-1945.

Questions:

- A panel is constructed, I suppose that is what “biographical information is used to expand the sample over the years 1995-2010” means?
- This is/seems a retrospective panel, hence only people are included who survived up until the age of 67. Right? How would this influence your results?



Sample selection

- “people who are not retired are excluded”, I suppose not retired at the age of 67. (almost all people are retired at that age)
- Included: People who are eligible for unemployment pensions or women eligible for early retirement.

Questions

- A selected sample, I presume, as eligibility is based on a lot of criteria related to labor-market participation. Could you discuss what the consequences are of this selection?
- Or compare the characteristics of those included with the characteristics of those excluded?
- Especially for women this might be relevant. (Table 2, many not eligible)



Empirical strategy

- The exogenous variation in the pension benefit rules is used. This is, essentially, a variable indicating the percentage of the full-pension a person will receive at each age/month, if decided to retire early.
 - Advantage: does not need to use the entitled benefits that depend on very complex pension-benefits rules, which are also a function of endogenous explanatory variables such as previous earnings.
 - Disadvantage: the level of benefits is out of the window. But then, mentioned later on in the paper, RK-design only requires knowledge about the change in benefits, hence this problem is fixed. Correct?
- Monthly observations.



Empirical model

Starting point: person-months observations (panel)

The model:

$$Y_i = \tau B_i + g(X_i) + U_i$$

Y =retirement age, B =benefits, X =cohort,

I attached the index i (based on a previous equation) but the index “ t ” is nowhere. Y does not vary over time, of course, but B does.

The parameter of interest is $\tau \Rightarrow$ RK-estimator.



Empirical model

Y=early retirement age:

- in the 60-65 range and the model could take this into account.
- no right censoring allowed for, i.e. retiring after age 65 does not occur within the selected sample.

Estimation

- Did you try an IV-estimator? One could include only cohort-year dummies in the main equation, and exploit the gradually increase each months, as an instrument (or so?). In the end there is exogenous variation in B (due to the reform).
- For completeness: present OLS results.
- These perhaps naive approaches may produced results closer to earlier findings and could underline the strength of using a DK estimator.



Question

- Should one not model the probability of being retired in specific year-month?:

$$P(R_{it}) = \tau B_{it} + g(X_i)$$

R=1 retired, 0 otherwise

- Or perhaps better, model the probability of retiring conditional on not yet being retired?

$$P(R_{it} | R_{it-1} = 0) = \tau B_{it} + g(X_i)$$

- In this way one takes into account that the entitled benefits vary over time (B increases when keep on working, I suppose), and perhaps one does not need to exclude those who retire after age 65



That's it

In summary a very nice paper, skillfully executed, with interesting (preliminary) findings, but the model specification troubles me and perhaps some improvements are possible.