

Linking Administrative Data for Research

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Switzerland

Administrative data is great, because it

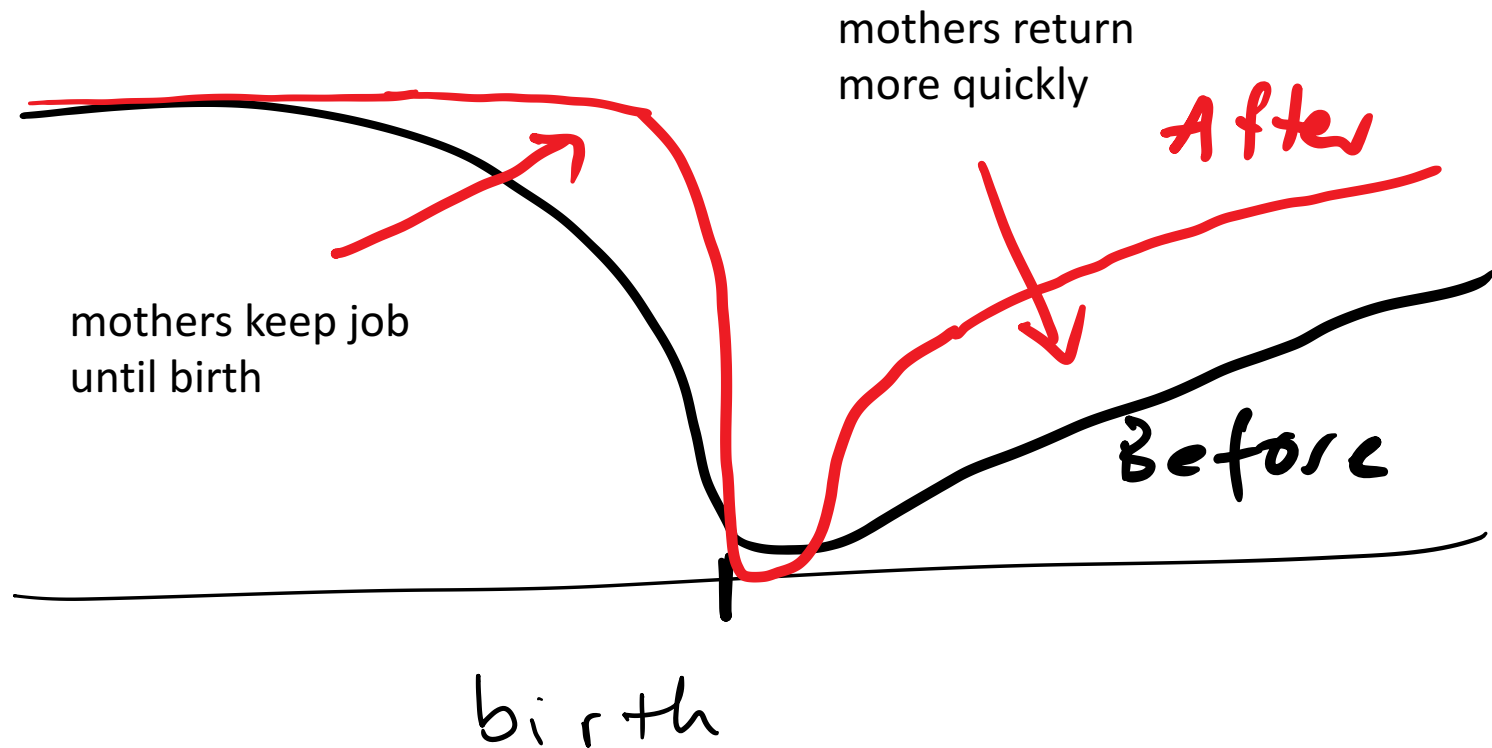
- Measures things we care about
 - Employment, earnings
 - Health, criminal behavior, etc.
- Is precise, and cheap
 - “How much did you earn during the last 12 months?”
 - It’s there
- Can be linked
 - Several domains
 - Program substitution
- Is administrative
 - Same information as those who run the program

Maternity Leave in Switzerland

Why Study Maternity Leave?

- Birth of child
 - mother and child need rest and care
 - employer not willing to provide this
- Maternity leave aims to
 - provide time to care for child
 - guarantee to return to job
- Swiss reform
 - ML of 14 paid weeks introduced in 2005
- Economic effects
 - Does ML affect earnings around birth?
 - (Note earnings = 0 if do not work)

Possible Effects on Earnings



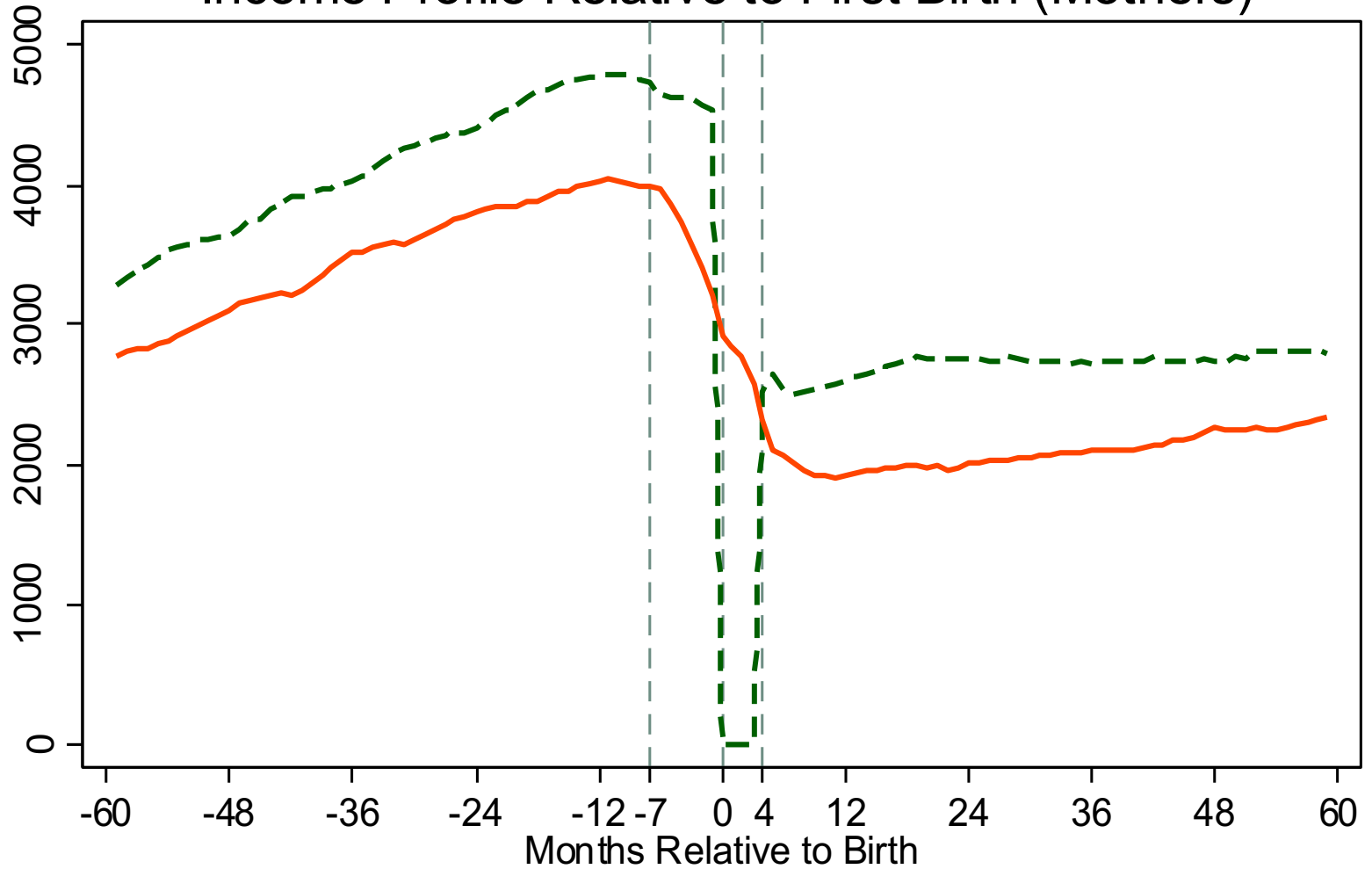
ML Linkage Project

- People
 - Lena Hassani Nezhad, PhD Royal Holloway
 - Esther Mirjam Girsberger Seelaus, Post Doc LIVES
- Data
 - Social security data (ZAS)
 - Families in 2010 (STATPOP)
 - Marriage, Divorce, etc. (BEVNAT)
- Federal Office of Statistics
 - Supported us in understanding the data
 - Set up a data protection agreement
 - Provided data in a linkable form

Data

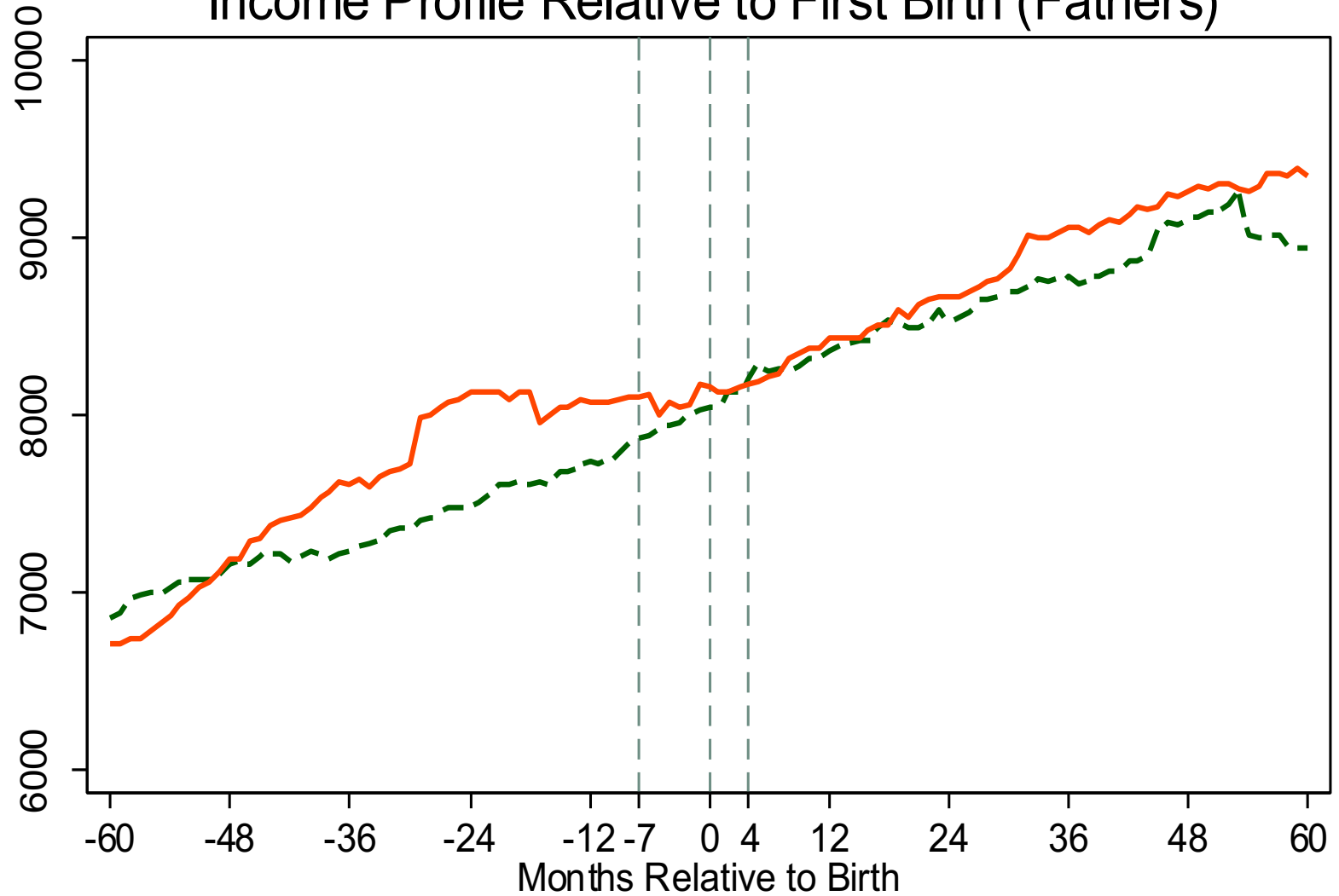
- STATPOP
 - Children born between 2003 and 2007, their siblings and parents who lived in Switzerland on December 31, 2010.
 - Social security number (AHV Number)
- ZAS
 - Social security number
- BEVNAT
 - After 2010: social security numbers
 - Before 2010: construct identifiers, match about 80%

Income Profile Relative to First Birth (Mothers)



--- After Reform — Before Reform

Income Profile Relative to First Birth (Fathers)

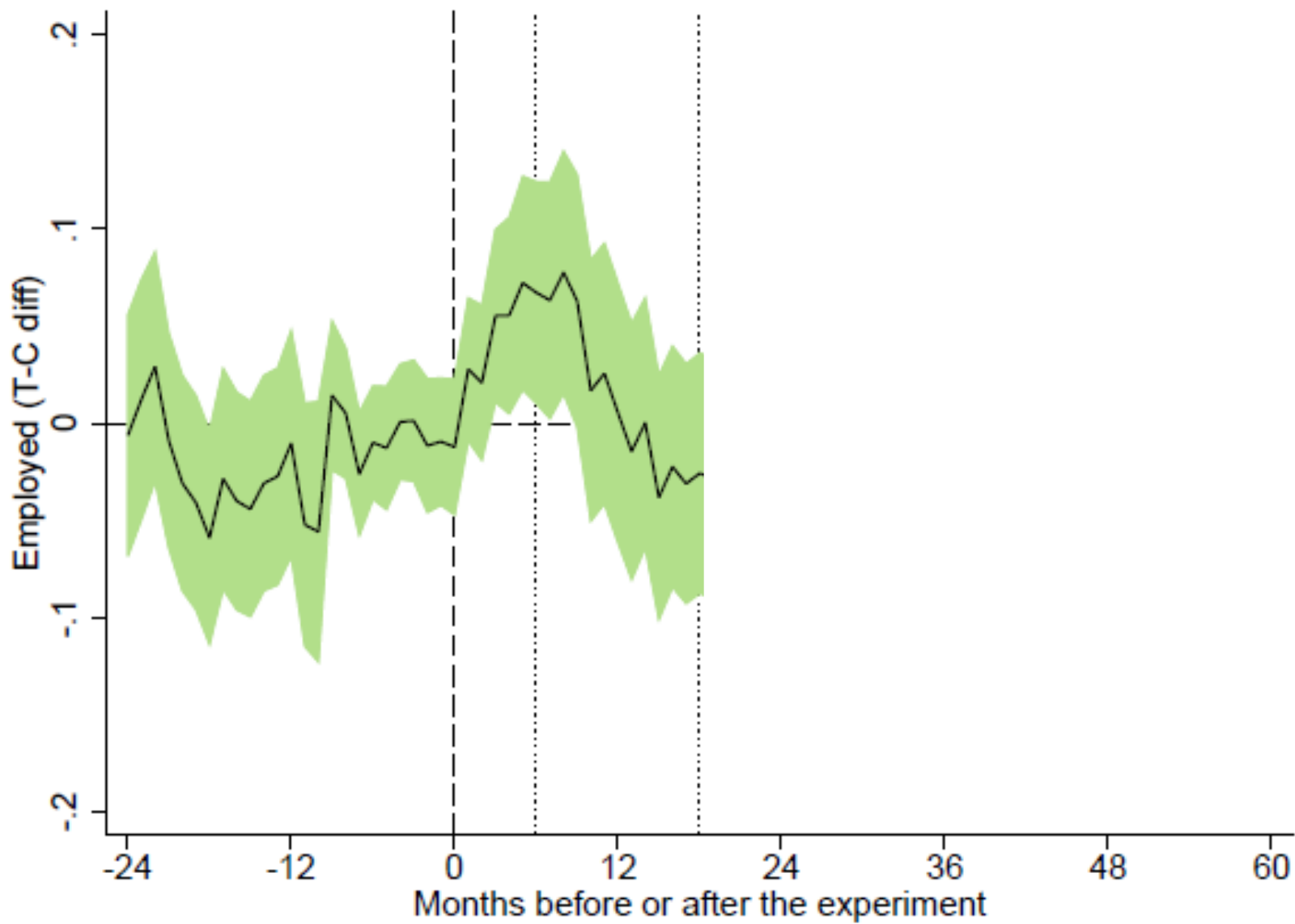


--- After Reform (real) — Before Reform (real)

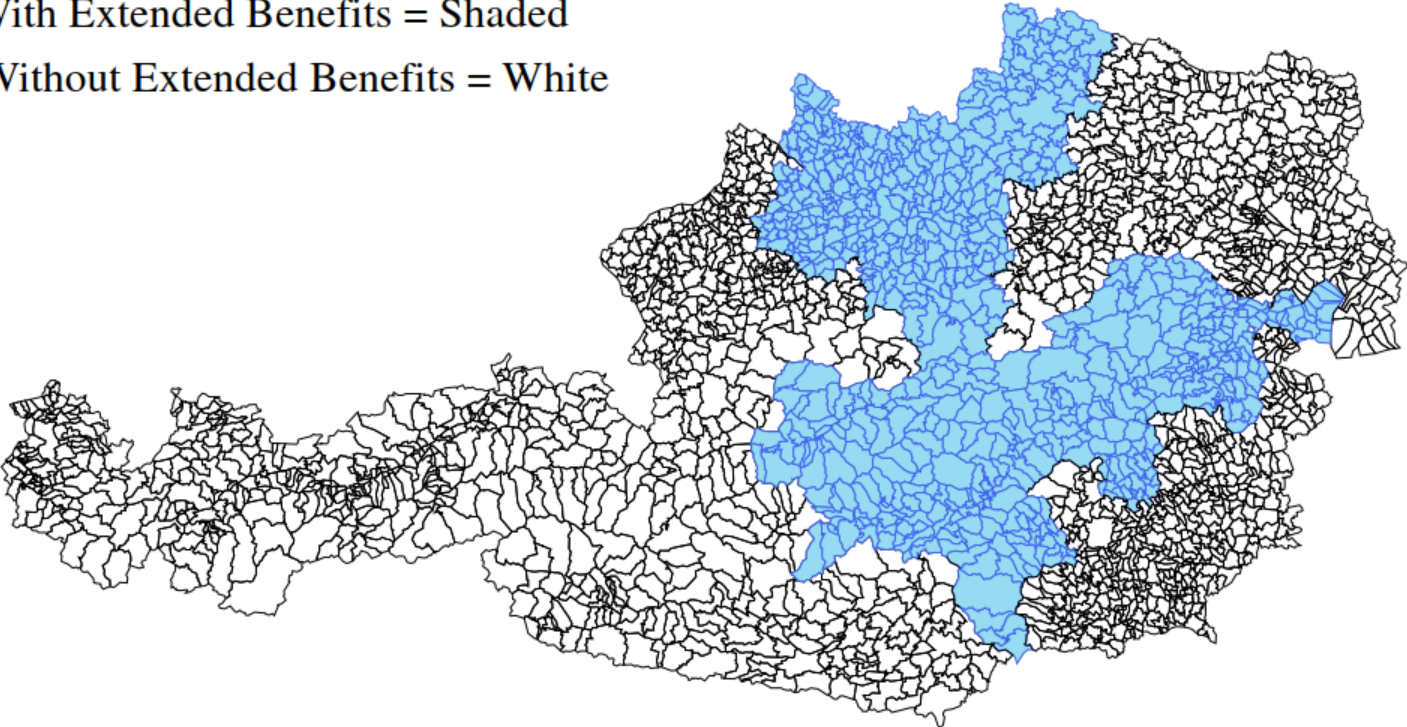
Main challenges

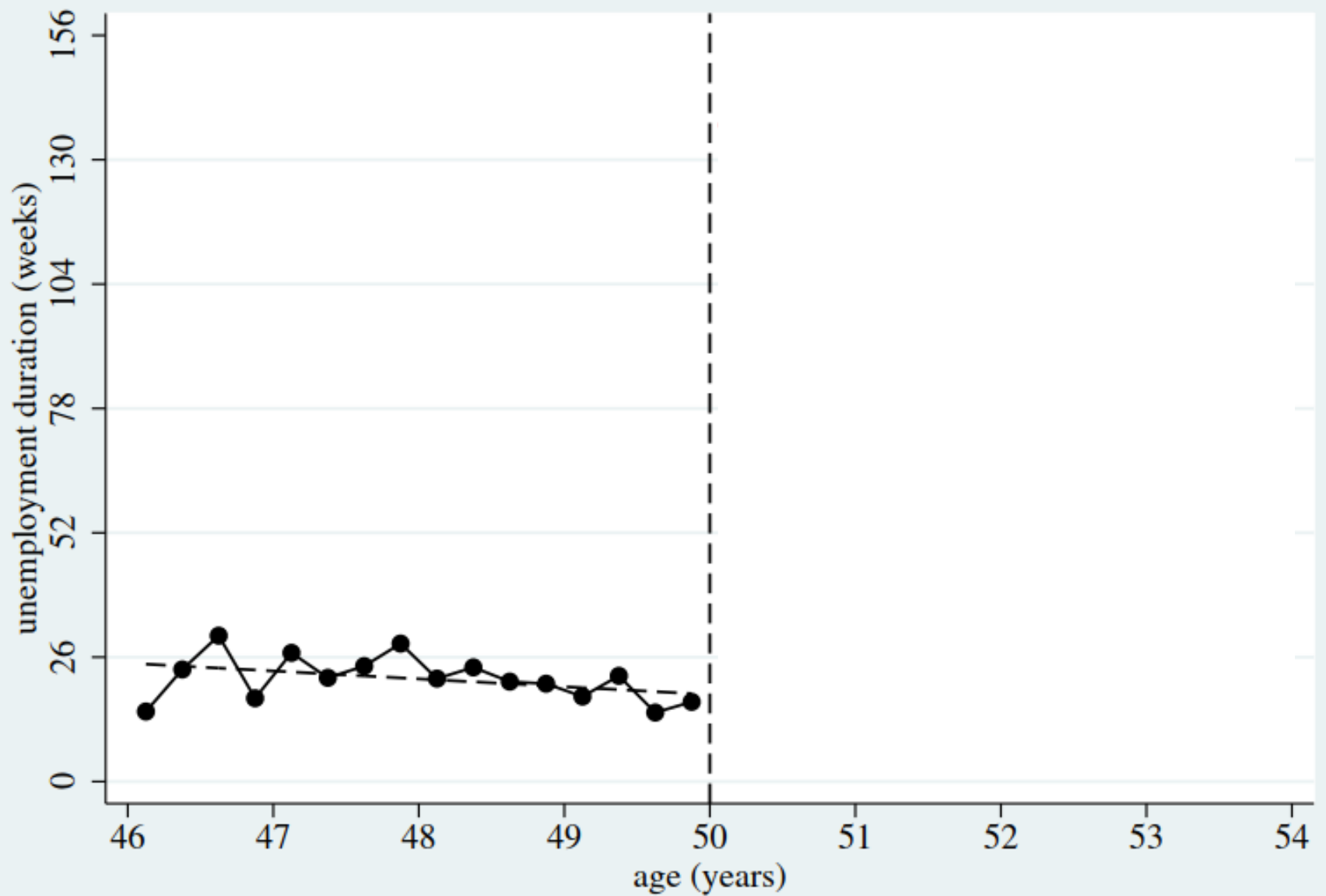
- Tower of Babel
 - Different government agencies maintain data
 - Common data protection agreement: essential but challenging
 - Since 2014, Swiss FSO provides service, slow initially, but very faster now
- Information
 - Linking data requires that people know about other people's data
 - Description and documentation of data
- Providing access is not free
 - Handle data
 - Data protection
 - Follow up
- “Better Research for Better Societies”
 - Network of Swiss Scientists, funding agencies, research programs
 - Support FSO in setting up data access platform

Thank you



With Extended Benefits = Shaded
Without Extended Benefits = White





Discontinuity at threshold = 109.645; with std. err. = 4.927.

Linkage - Identifiers

- Bevnat – Live Births: Match children (in Statpop) with their Live birth information (in Bevnat)

Identifier: dateofbirthmom + dateofbirthchild (in statpop and bevnat)

- Bevnat – marriage: Match married fathers and mothers (in Statpop) with their corresponding marriage event (in Bevnat)

Identifier: dateofbirthMother + dateofbirthfather + dateofmarriage (in statpop)

dateofbirthWife + dateofbirthHusband + dateofmarriage (in bevnat-marriage)

- Bevnat – divorce: Match divorced fathers/mothers (in Statpop) with their corresponding divorce events (in Bevnat)

Identifier: dateofbirthFather + dateofdivorce (in statpop)

dateofbirthhusband + dateofdivorce (in bevnat-divorce)

Overview, linkage (Marriage)

Marital Status in Statpop in 2010			
Mother/Father	Marital Status	No.	%
Fathers	Married	231,361	88.4%
	Widowed	342	0.1%
	Divorced	11,331	4.3%
	Single	18,755	7.2%
	unmarried	6	0.0%
	in a registered partnership	12	0.0%
	no indication	1	0.0%
	Total	261,808	100.0%
Mothers	Married	232,364	86.5%
	Widowed	1,042	0.4%
	Divorced	12,945	4.8%
	Single	22,317	8.3%
	unmarried	19	0.0%
	in a registered partnership	27	0.0%
	no indication	3	0.0%
	Total	268,717	100.0%

Linking Statpop with Bevnat-marriage			
No. of matched couples in Statpop whose marriage date is between 1987-2010	No. of uniques matches with Bevnat marriage using dateofbirthmom + dateofbirthfather + dateofmarriage	Share of unique matches in total matched couples	share of unique matches in total married women in statpop
225,024	179,708	80%	77%

Overview Linkage (Divorce)

Linking divorced in Statpop with Bevnat - divorce events					
Father/ Mother	No. of divorcees in 2010	No. of linked marriage events who had a divorce in their history	Total	No. of unique matches with Bevnat - divorce using (dateofbirth + dateofdivorce)	Proportion of unique matches to total
Fathers	11,331	18,502	29,833	24,051	81%
Mothers	12,945	14,660	27,605	21,277	77%