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FÜR DEMOGRAFISCHE  
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RESEARCH





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## **Fertility Development in the Aftermath of German Unification**

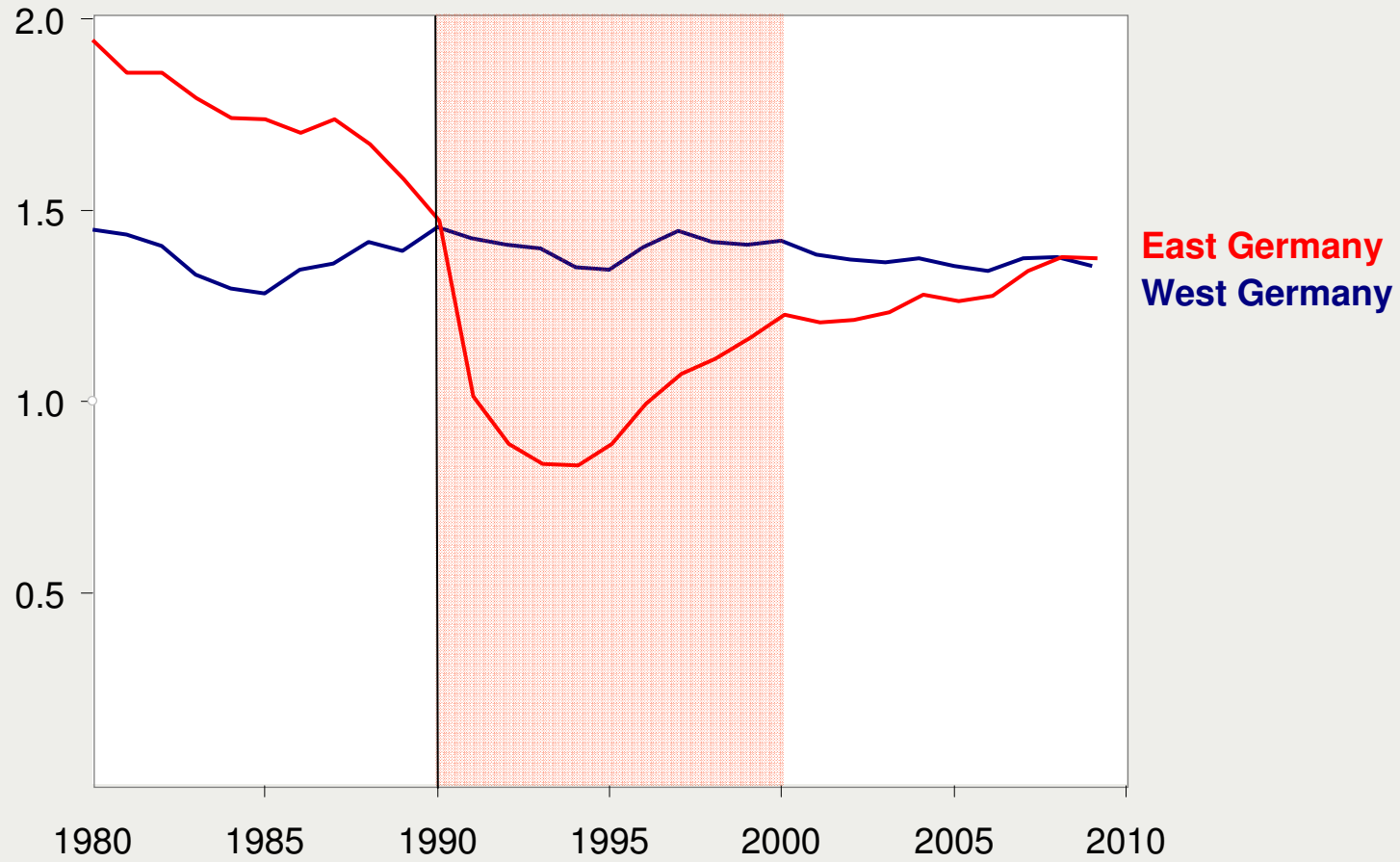
Michaela Kreyenfeld und Anja Vatterrott





# Background

## Total Fertility Rate





# Background

## HFD-Data for East Germany

Year	Non-Order Specific Data	Order Specific Data	Area Code
1956-1989	HFD	HFD	with East Berlin
1990-2000	HFD	--	without East Berlin
2001-2008	HFD	HFC	without East Berlin
2009-2010	HFD	HFD	without East Berlin

Notes: Human Fertility Database (HFD), Human Fertility Collection (HFC)



## Background

### First Birth in East Germany

- Low age at first birth before unification
- Increase towards high West German ages after unification

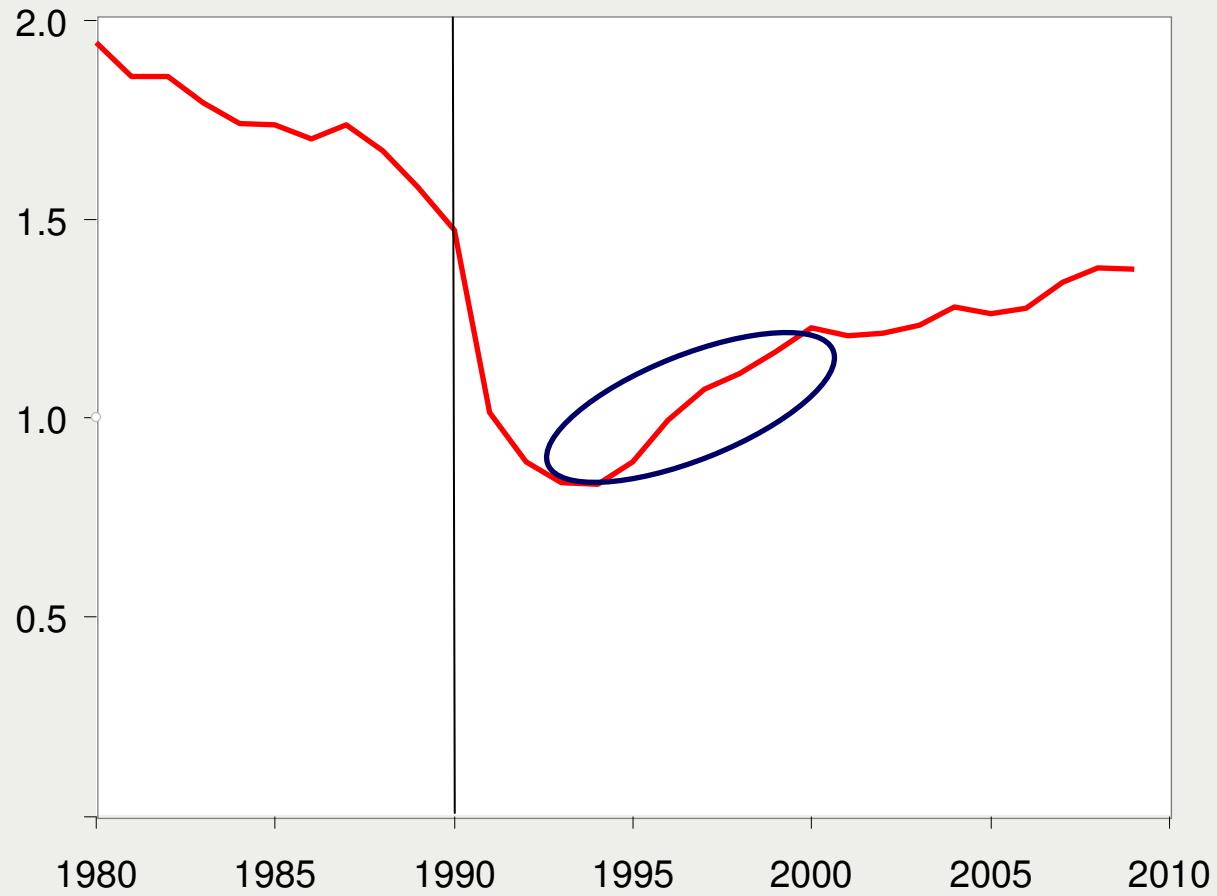
### Second Births in East Germany

- „Second Birth Crisis“ in the aftermath of unification (Sackmann 1999; Huinink 2005)



# Background

## Total Fertility Rate



East Germany



## Background

**What happened to the **Second Births** in  
the aftermath of German Unification?**



## Background

- In order to understand East German fertility after unification, we need **order specific data.**
- In order to *fully* understand East German fertility after unification, we need **exposure data.**





# Data: German Pension Registers





## Data

### German Pension Data

**Data Extract:**                    **Versichertenkontenstichprobe 2008**

**Sample:**                                **Females of the cohorts 1935-1977**

**Sample Size:**                        **About 140,000 women**



## Data

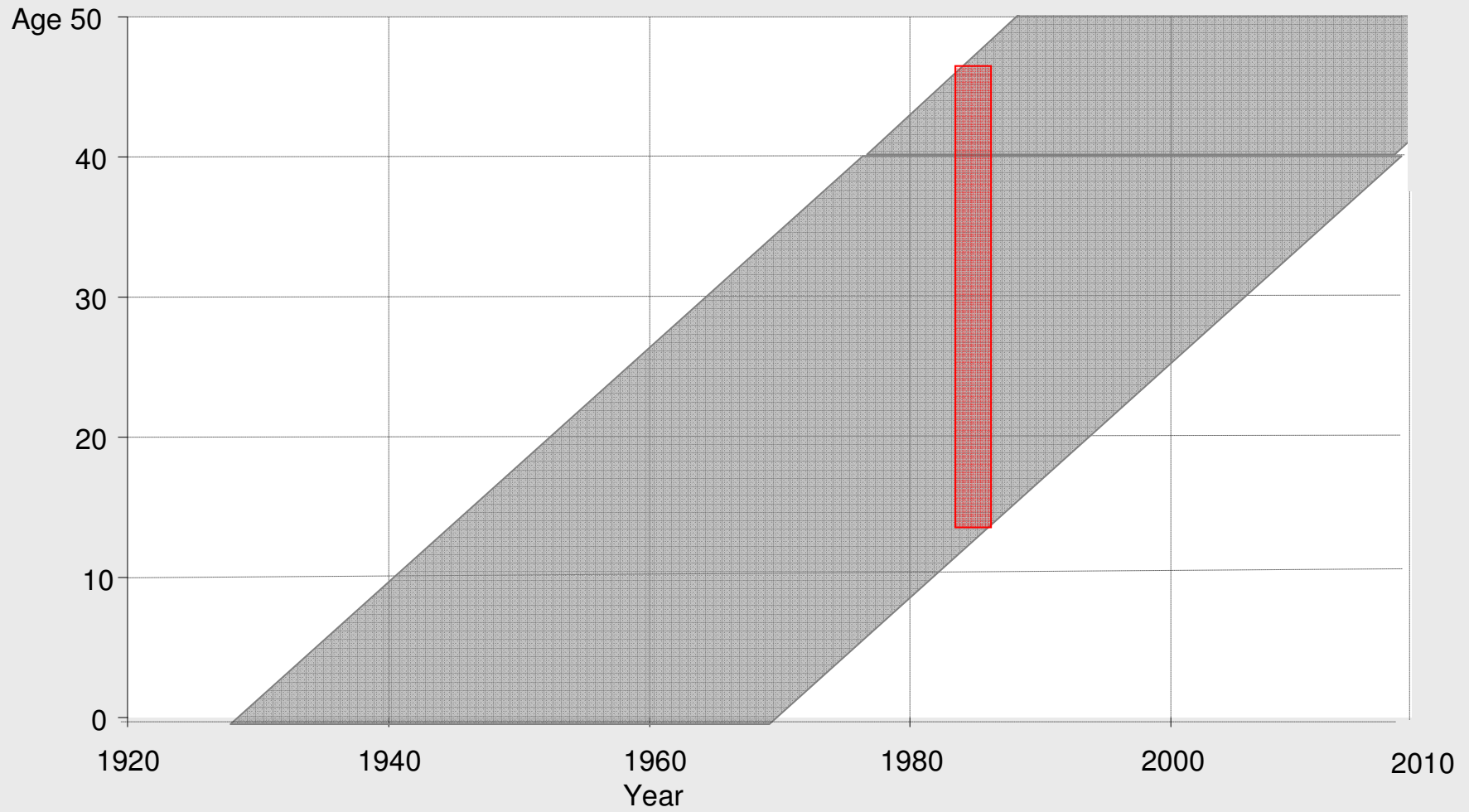
### **Advantages of German Pension Data**

- **Register data with fertility information**
- **Exposure data**
- Identification of East-to-West-migrants possible



# Data

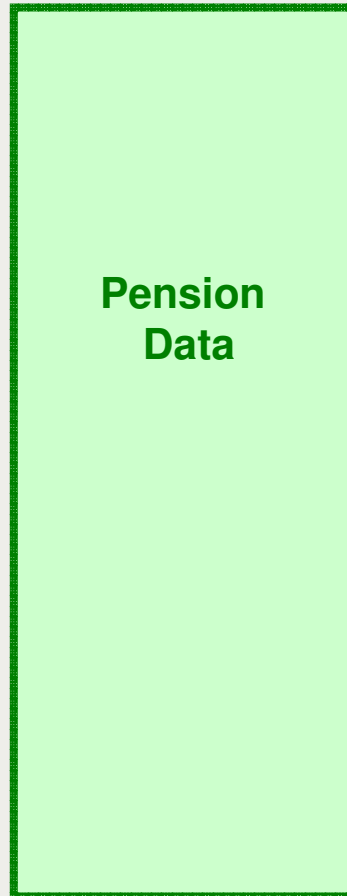
## Pension Data in the Lexis-Diagramme





# Data

## Coverage of the German Pension Data



### Not included

- Life-time farmers
- Life-time civil servants
- Life-time self employed



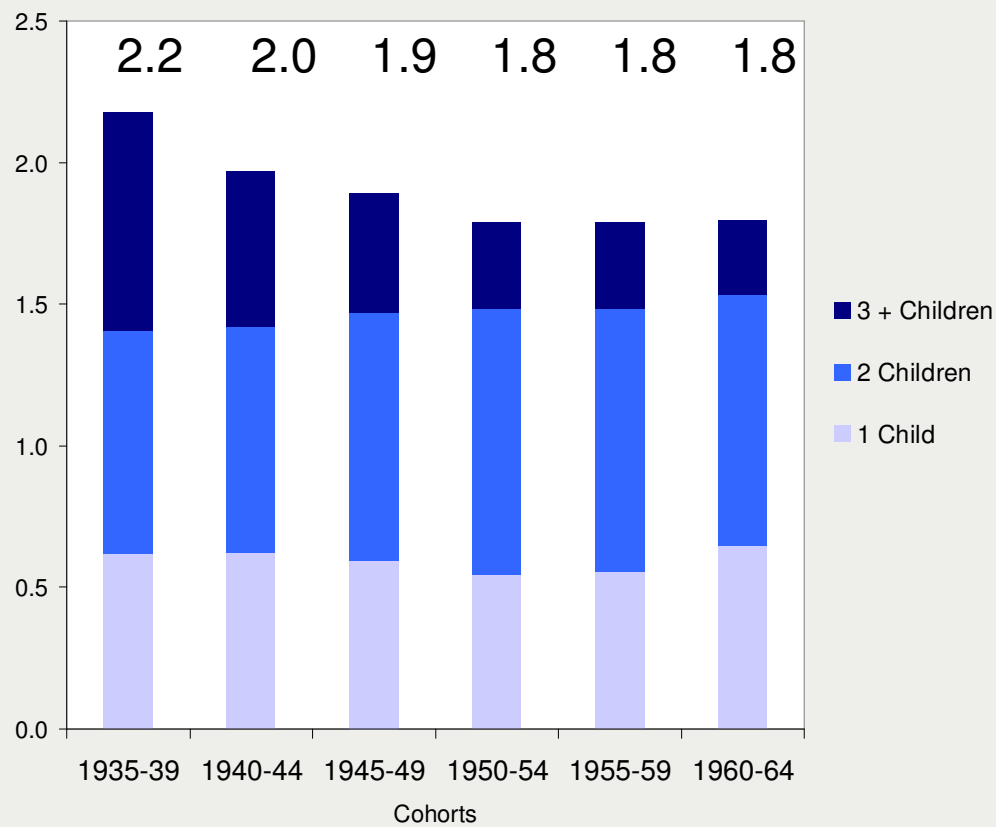
Persons who collected pension points in Germany, but who do no longer live in the country



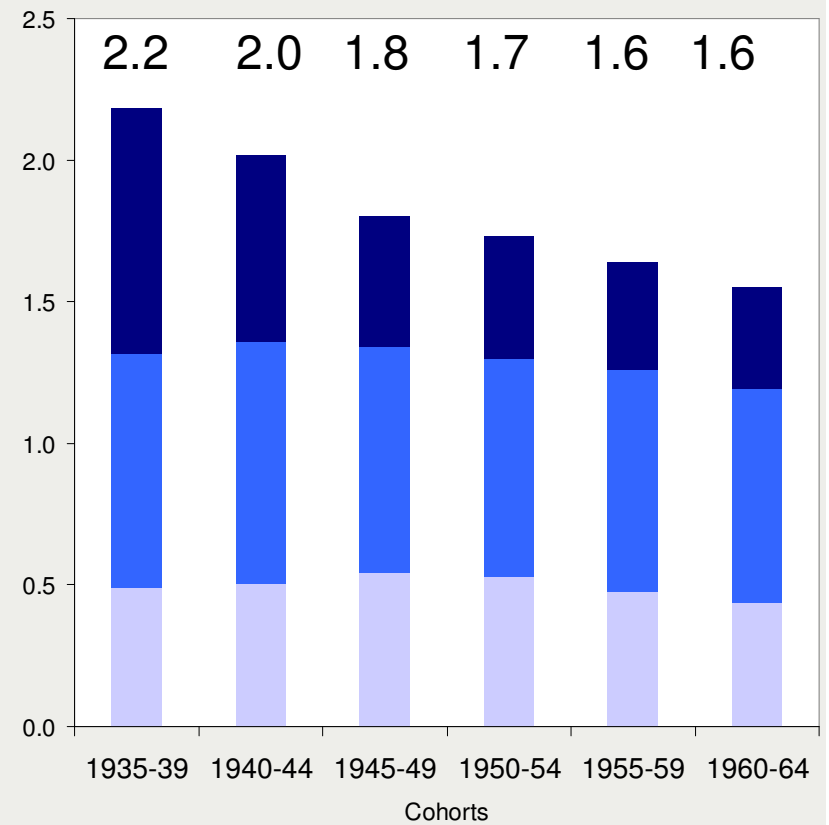
# Data

## Validity of the Data?

### CTFR East Germany



### CTFR West Germany





## Data

**Pre-Unification (Cohorts 1960-64)**

**Unification Cohorts (Cohorts 1965-69)**

**Post-Unification Cohorts (Cohorts 1970-74)**



## **Results: First Birth**



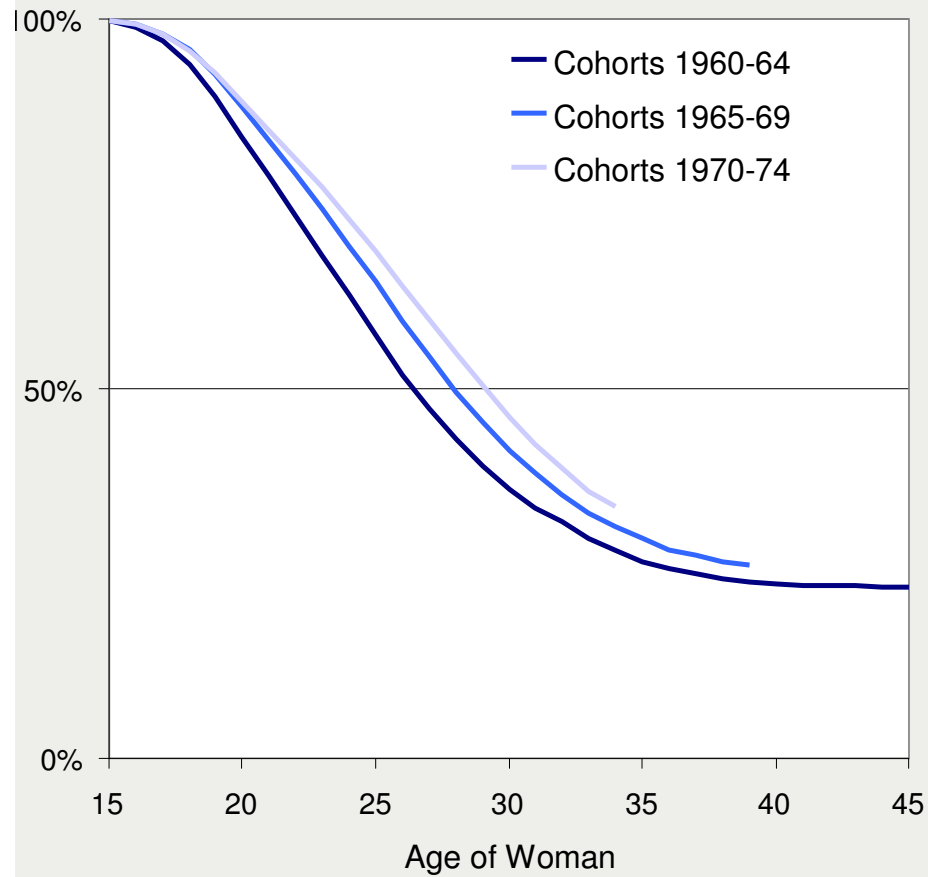




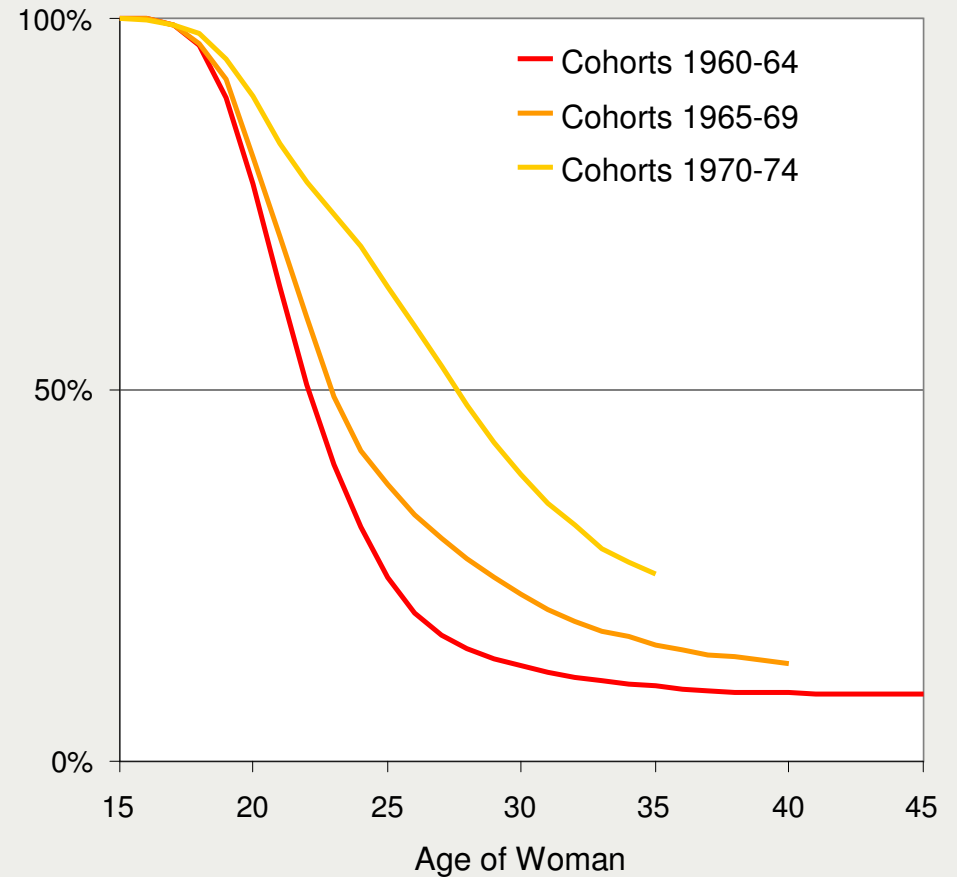
# First Births

## Survival Functions

West Germany



East Germany

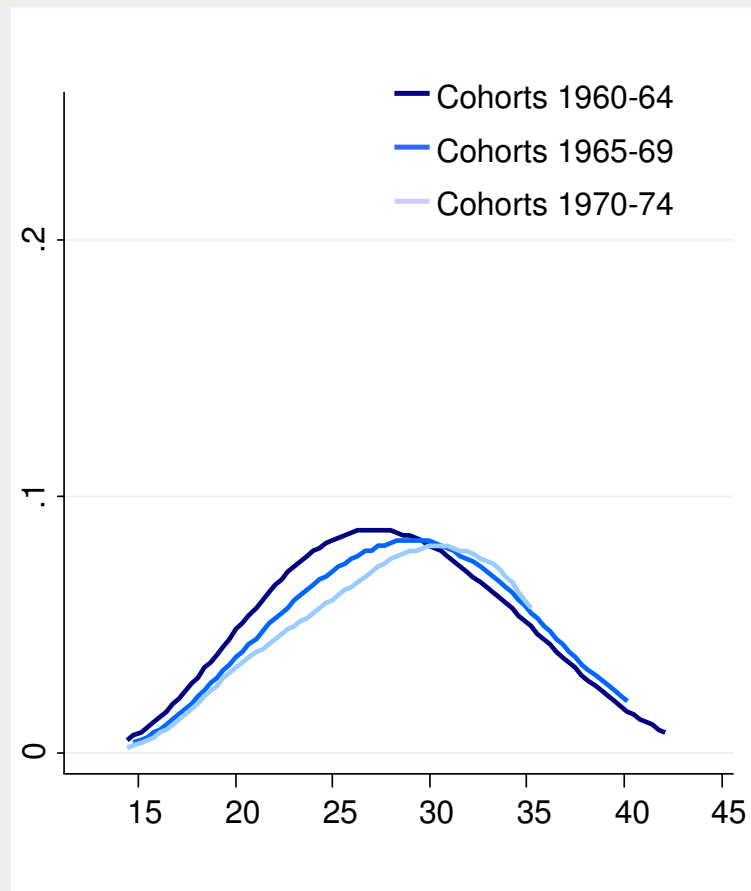




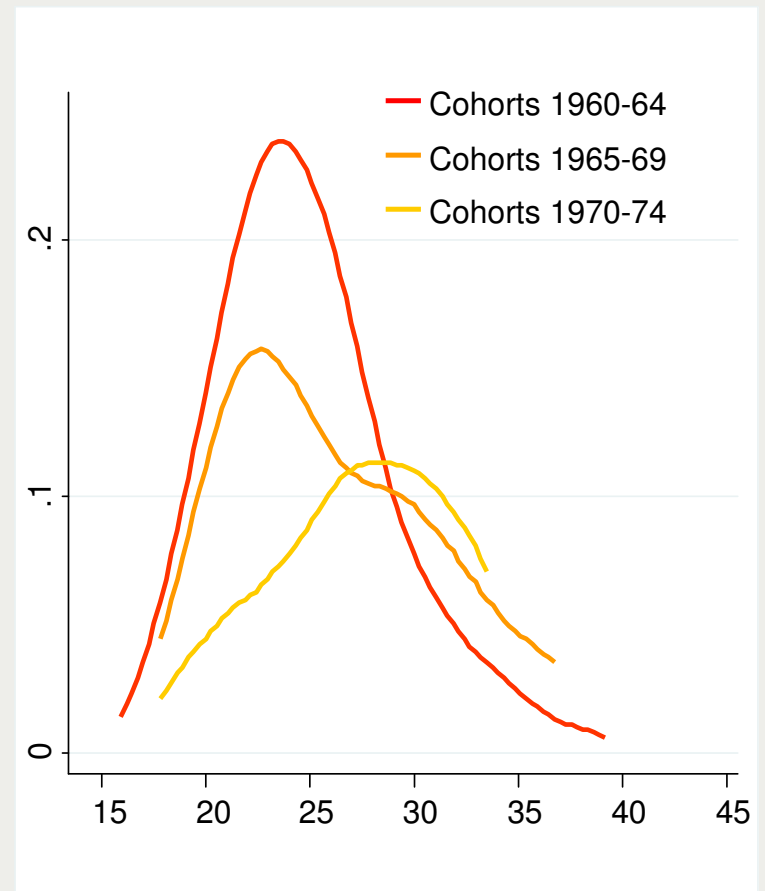
# First Births

## Hazard Rates

West Germany



East Germany





## **Results: Second Births**

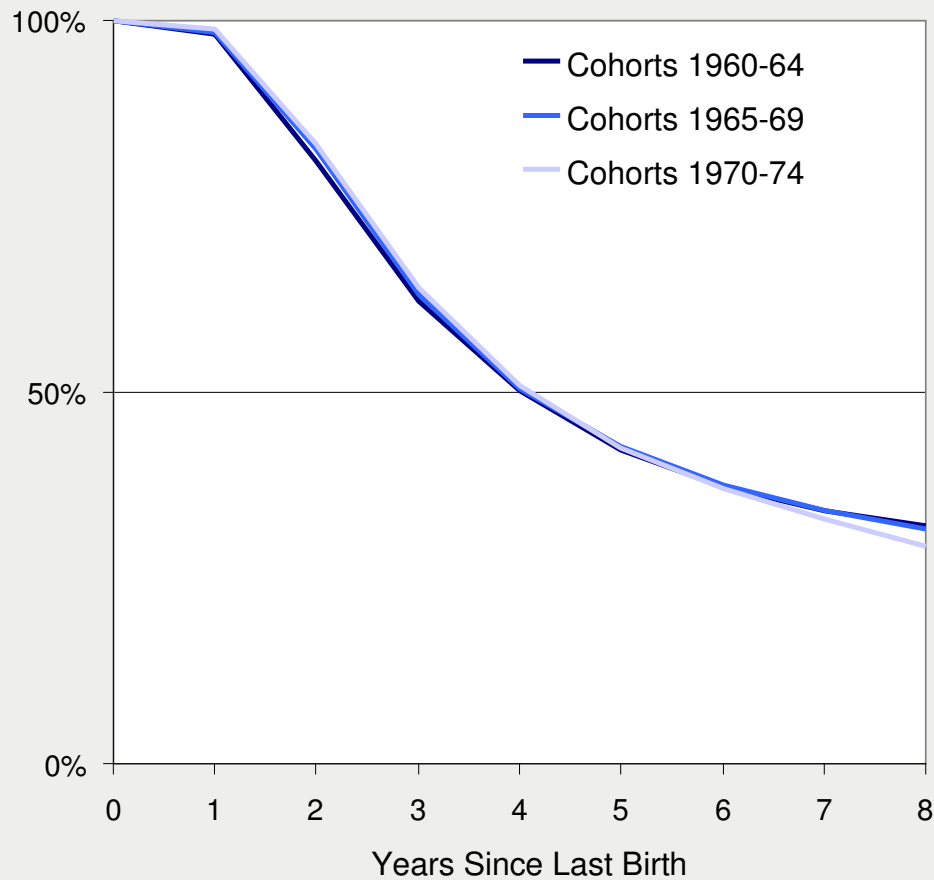




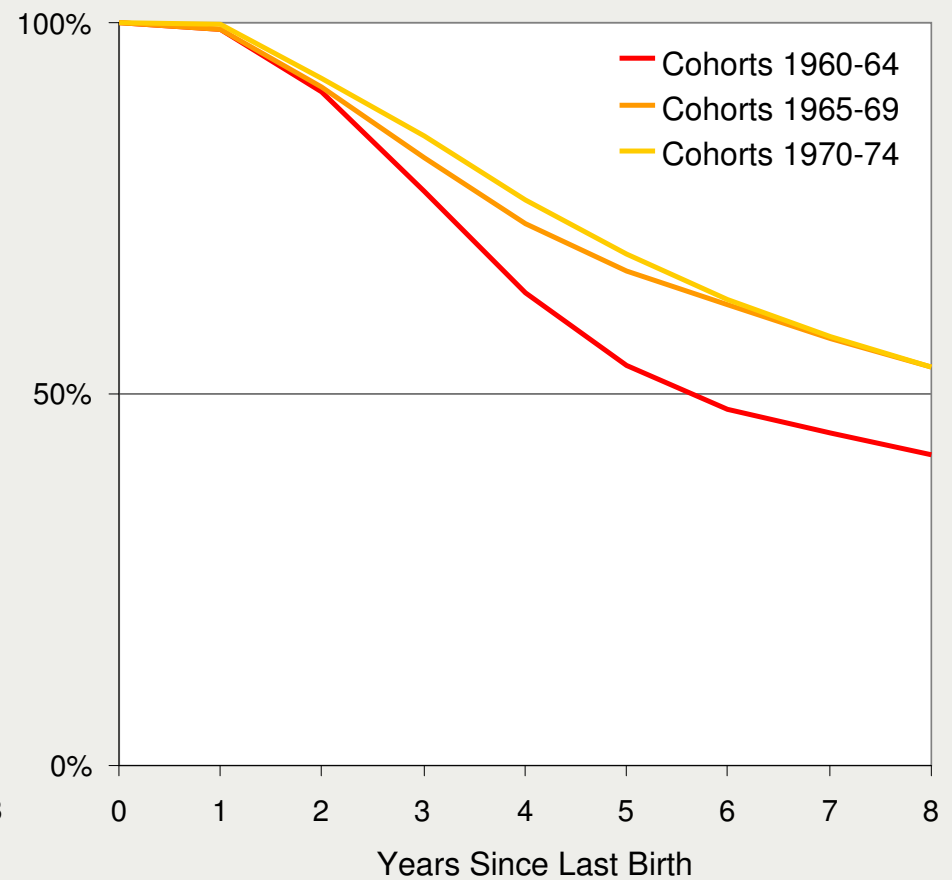
# Second Births

## Survival Functions

West Germany



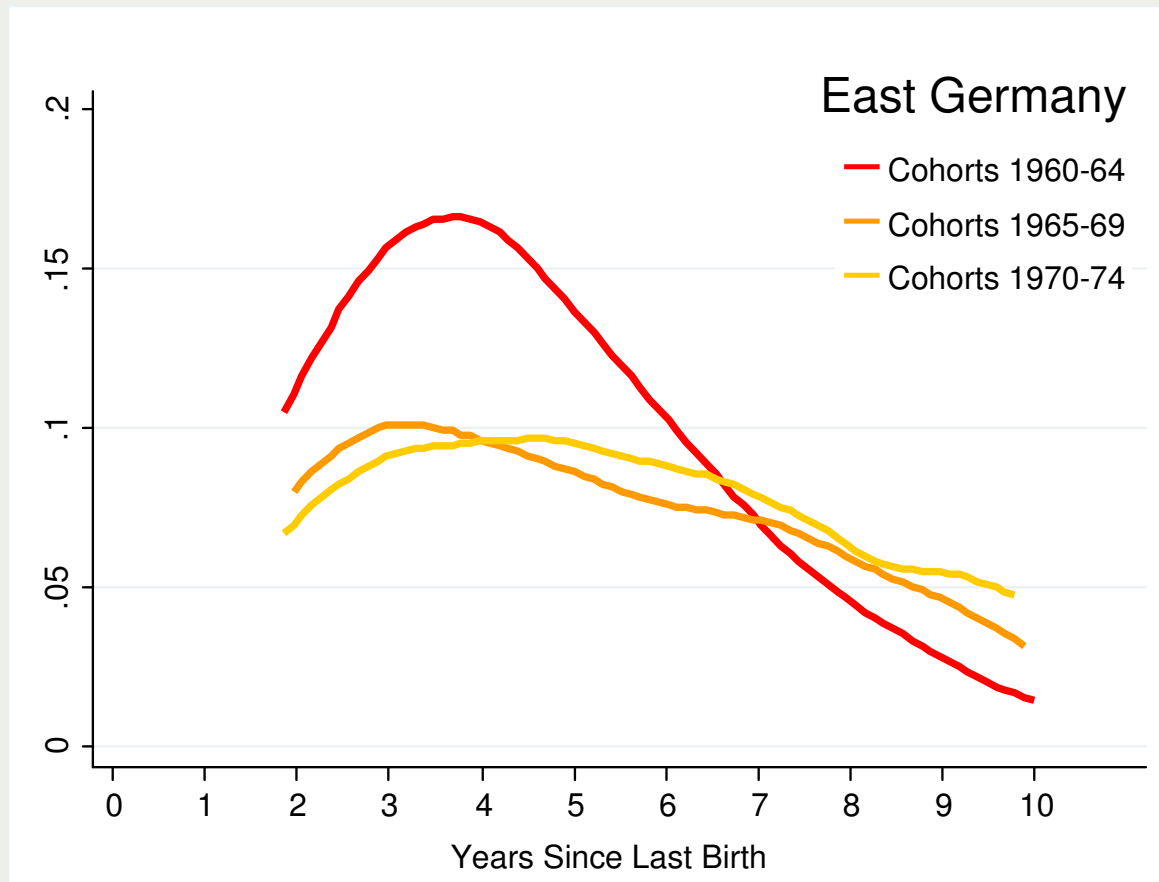
East Germany





# Second Births

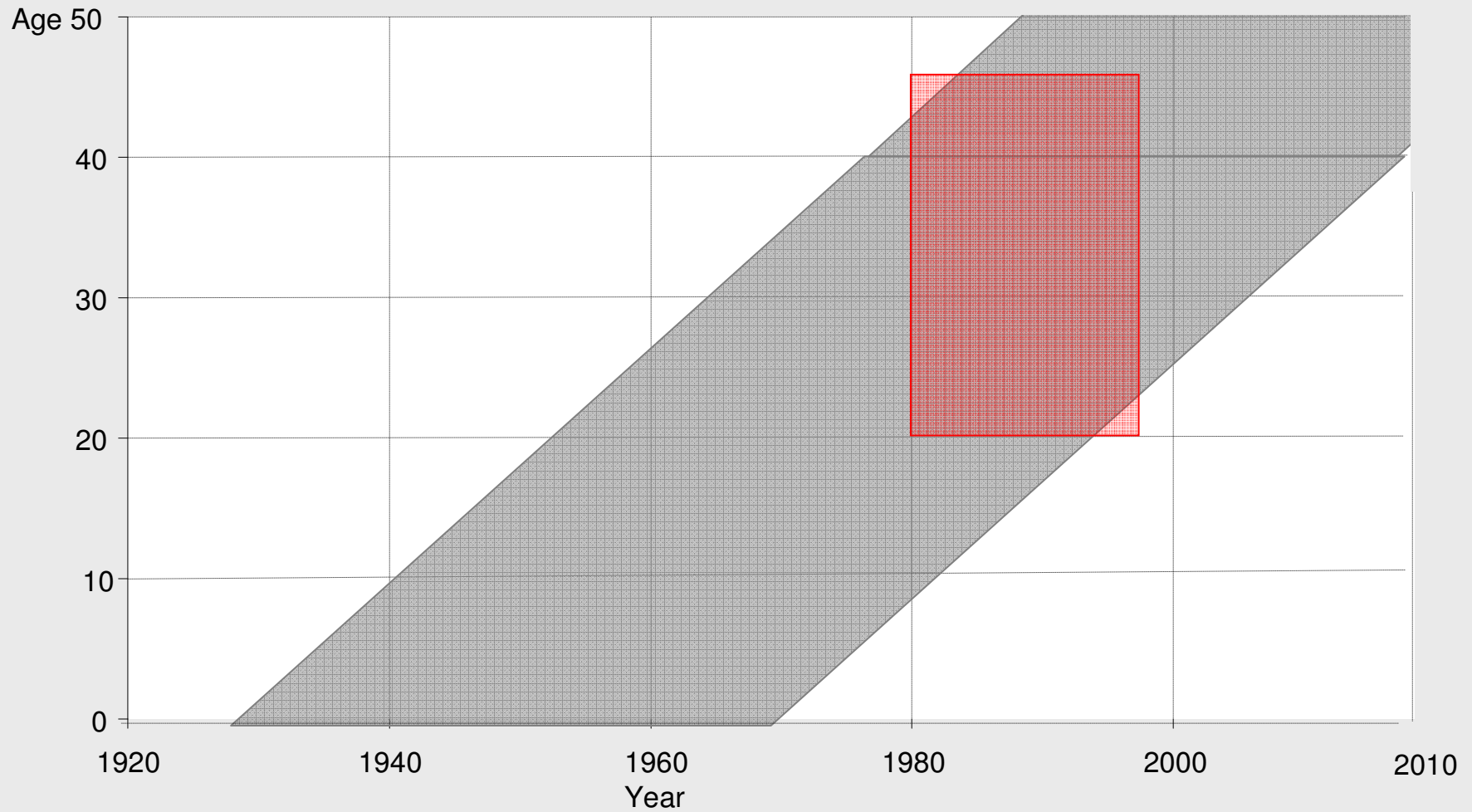
## Hazard Rates





# Second Births

## Pension Data in the Lexis-Diagramme

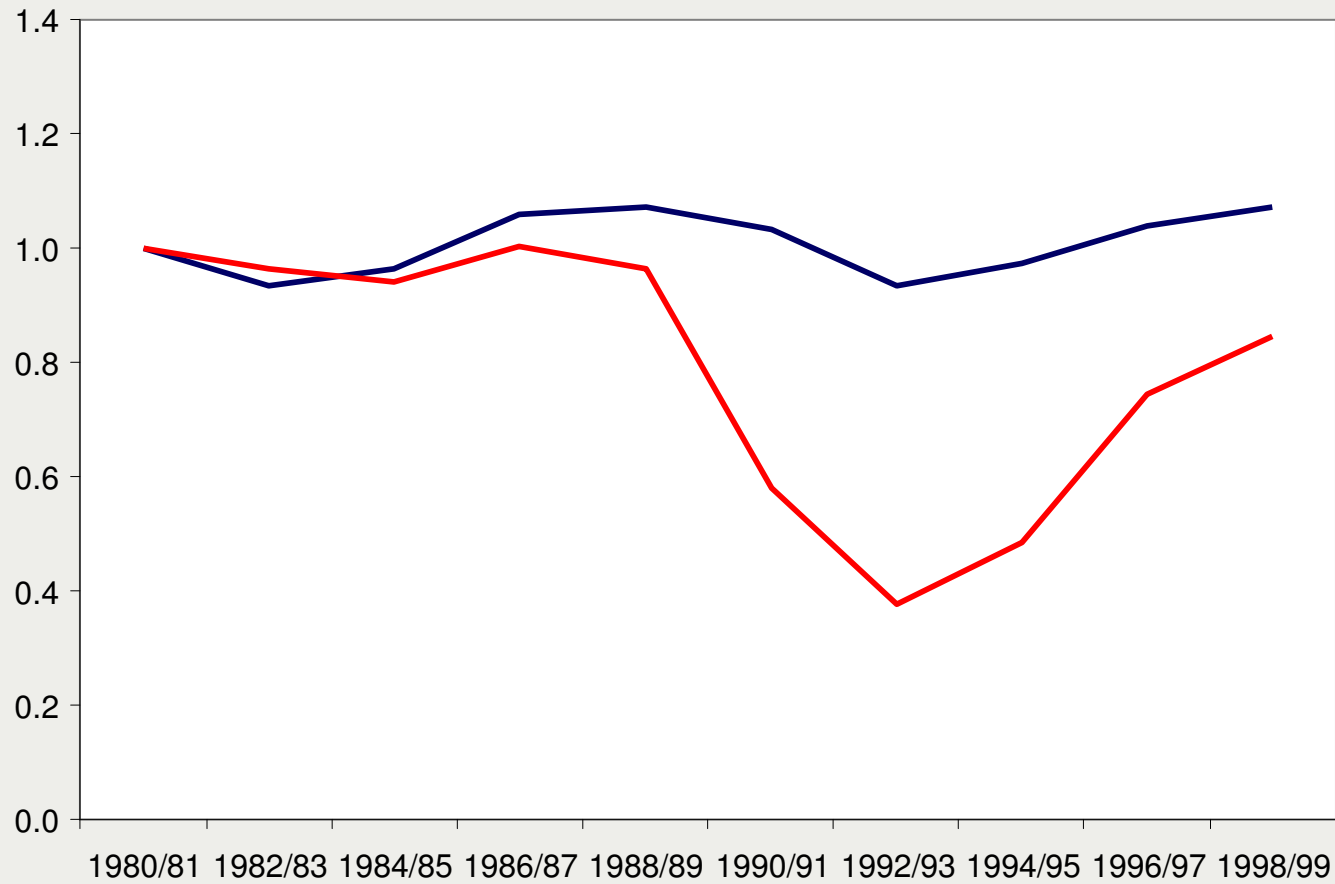




# Second Births

## Second Birth Rates by Year

(Results from Proportional Hazard Model, Controlled for Age)



**West Germany**

**East Germany**

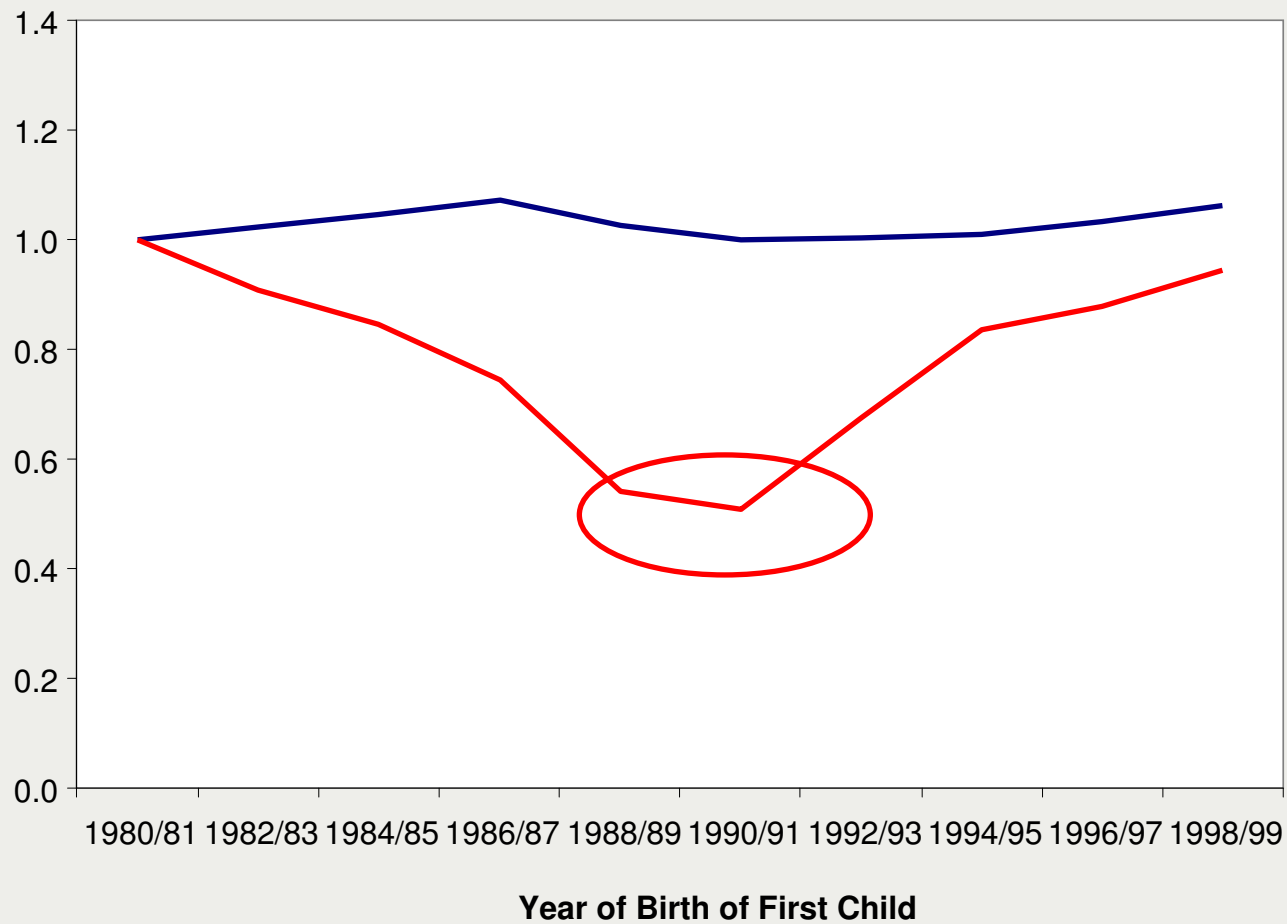
Calendar Year



## Second Births

### Second Birth Rates by Year of First Birth

(Results from Proportional Hazard Model, Controlled for Age)



**West Germany**

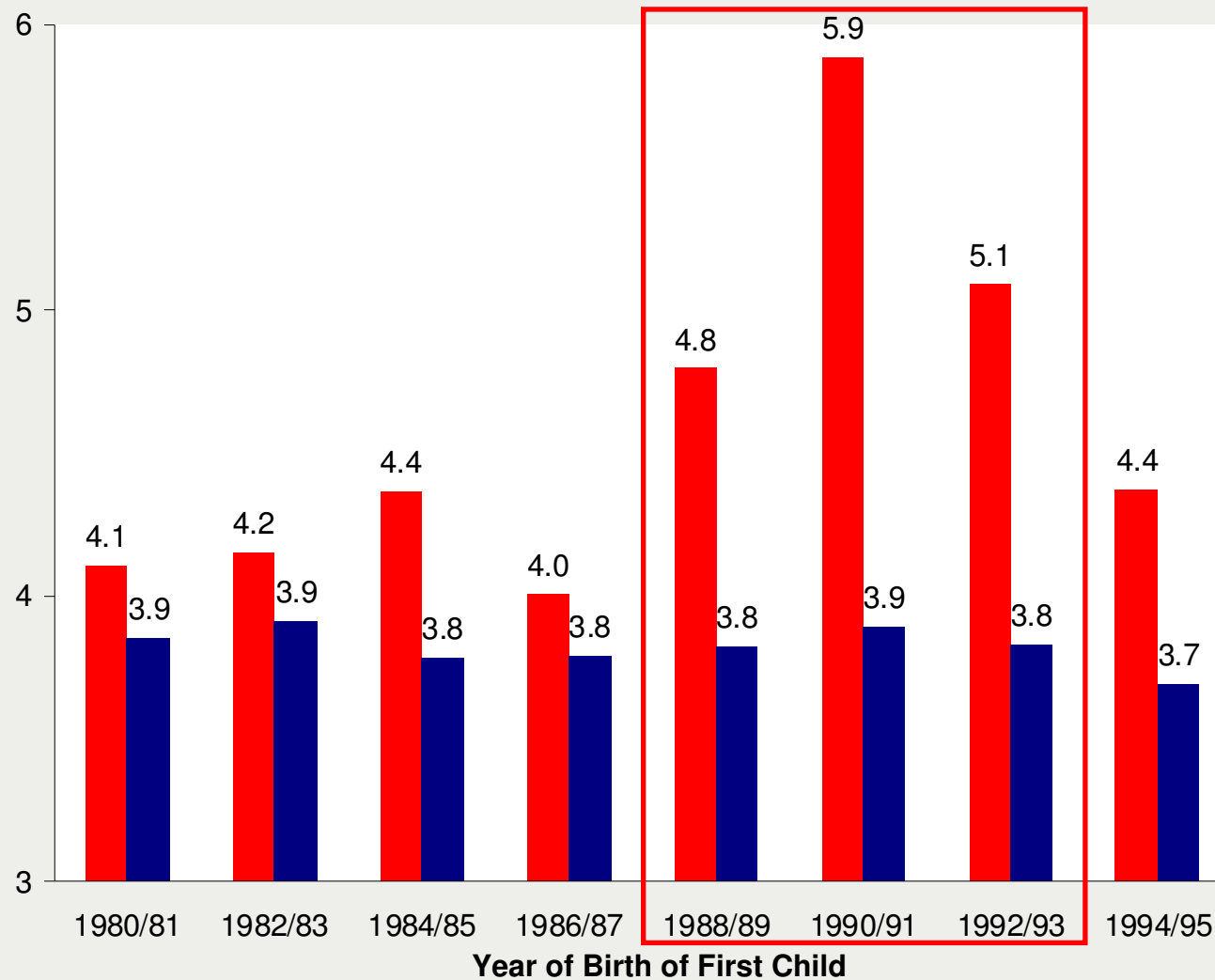
**East Germany**





## Second Births

### Mean Duration between First and Second Birth



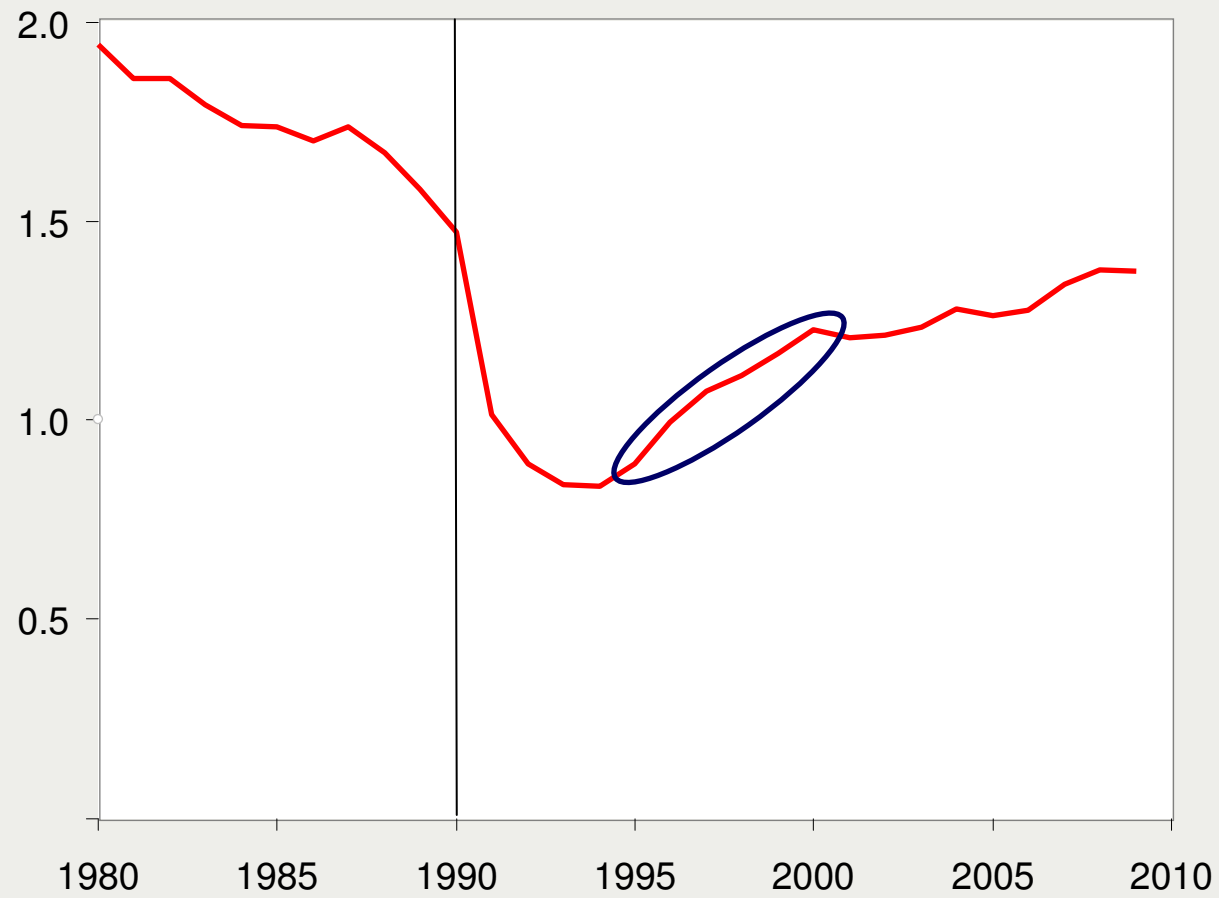
East Germany

West Germany



## Conclusion

### Total Fertility Rate



East Germany



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**Comments Welcome!**

