



Programa de  
Población

# Fertility postponement and regional patterns of dispersion in age at first birth Evidence from HFD and HFC

Mathias Nathan  
Ignacio Pardo

Programa de Población / Universidad de la República / Uruguay

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# Fertility postponement

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- Central focus on tempo studies in fertility research (Balbo, Billari & Mills 2013)
- Large body of research has concentrated on understanding its driving forces and consequences
- Little attention has been given to the evolution of heterogeneity of age at first birth at the macro-level

# Towards convergence of age at first birth within countries?

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- *Rectangularization of fertility patterns*

Kohler, Billari & Ortega (2002) predicted a concentration of childbearing within and increasingly narrow age interval

- *Timing polarisation*

Sobotka (2004, 2010) found a growing heterogeneity in age at first birth, particularly in UK and USA

- *Diversification of life courses*

Philipov (*unpublished*) showed that heterogeneity in the timing of first births increased after the onset of fertility postponement and remain at high levels towards the end of postponement

# Aim

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To describe the evolution of dispersion in age at first birth in several countries going through the fertility postponement, in order to identify regional trends and patterns

# **Fertility data from HFD & HFC**

21 countries - 8 regions

1975-2014

## List of regions and countries included in our study, and source and time-span of available data

Region	Country		Source	Time-span
Northern Europe	Finland	FIN	HFD	1982-2009
	Norway	NOR	HFD	1975-2012
	Sweden	SWE	HFD	1975-2011
Western Europe	Austria	AUT	HFD	1984-2014
	The Netherlands	NLD	HFD	1975-2012
	England and Wales	GBRTENW	HFC	1975-2007
Southern Europe	Greece	GRC	HFC	1975-2008
	Portugal	PRT	HFD	1975-2012
	Spain	ESP	HFC	1975-2008
Central & Eastern Europe	Bulgaria	BGR	HFD	1975-2009
	Czech Republic	CZE	HFD	1975-2014
	Hungary	HUN	HFD	1975-2009
Post-soviet countries	Belarus	BLR	HFD	1975-2012
	Russia	RUS	HFD	1975-2010
	Ukraine	UKR	HFD	1975-2013
East Asia	Japan	JPN	HFD	1975-2012
	Taiwan	TWN	HFD	1976-2010
North America	Canada	CAN	HFD	1975-2009
	United States of America	USA	HFD	1975-2013
South America	Chile	CHL	HFD	1992-2005
	Uruguay	URY	HFC	1978-2011

# Measures

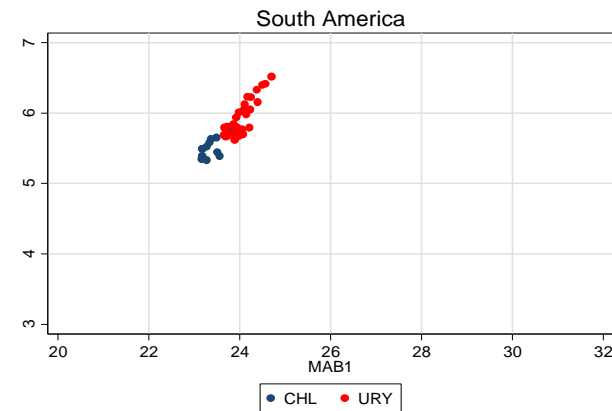
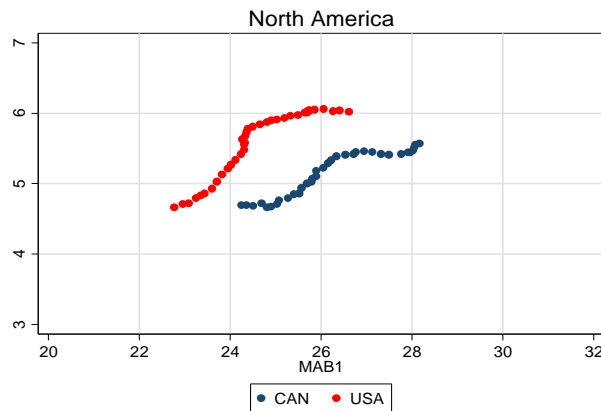
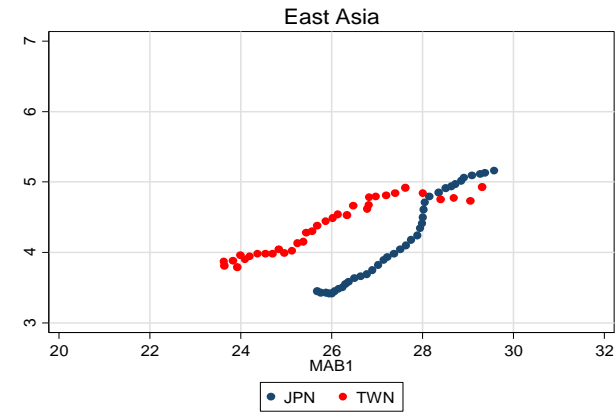
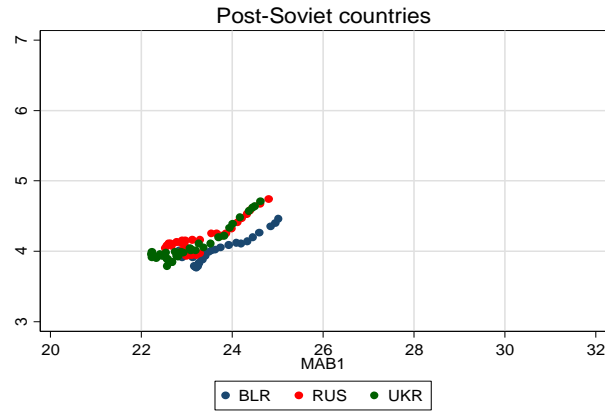
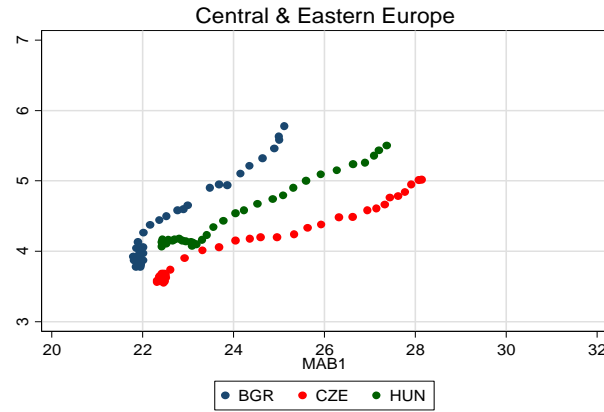
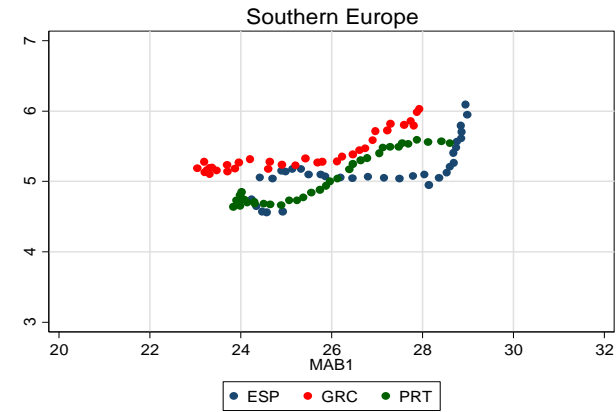
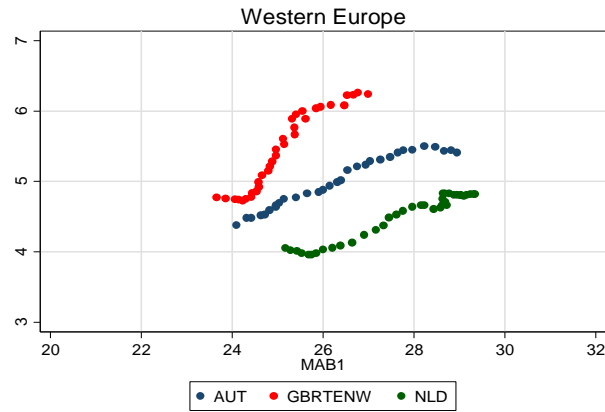
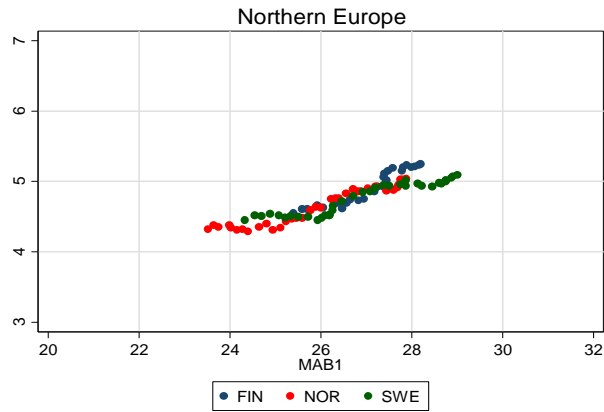
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- Mean Age at First Birth (MAB1)
- Standard Deviation of the MAB1 (sdMAB1)
- Coefficient of Variation for First Births (cv1)
- Other measures (not shown):
  - Quartiles and interquartile range
  - Share of first births before age 20 and after age 29

# Results

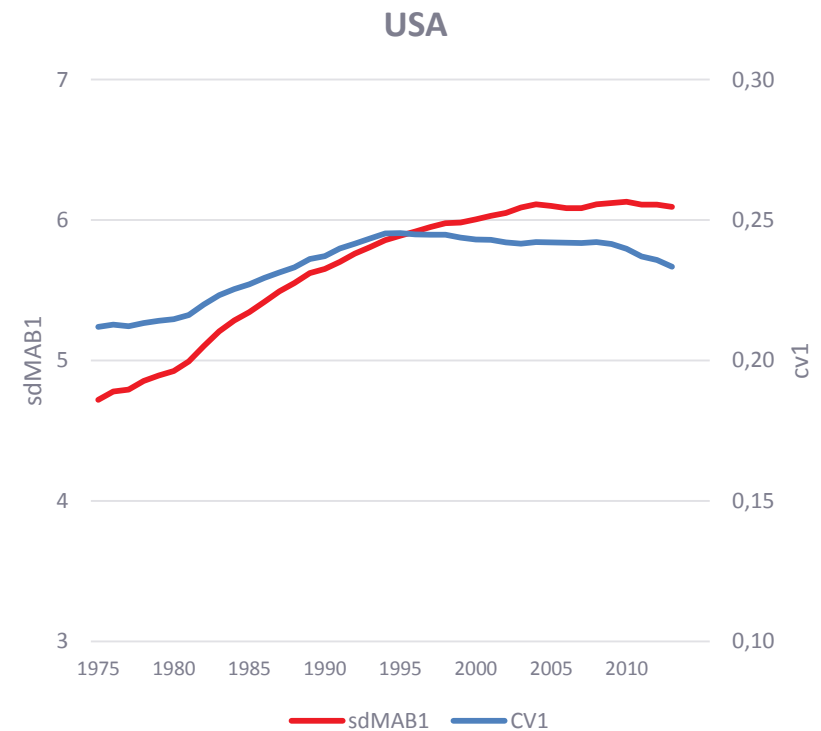
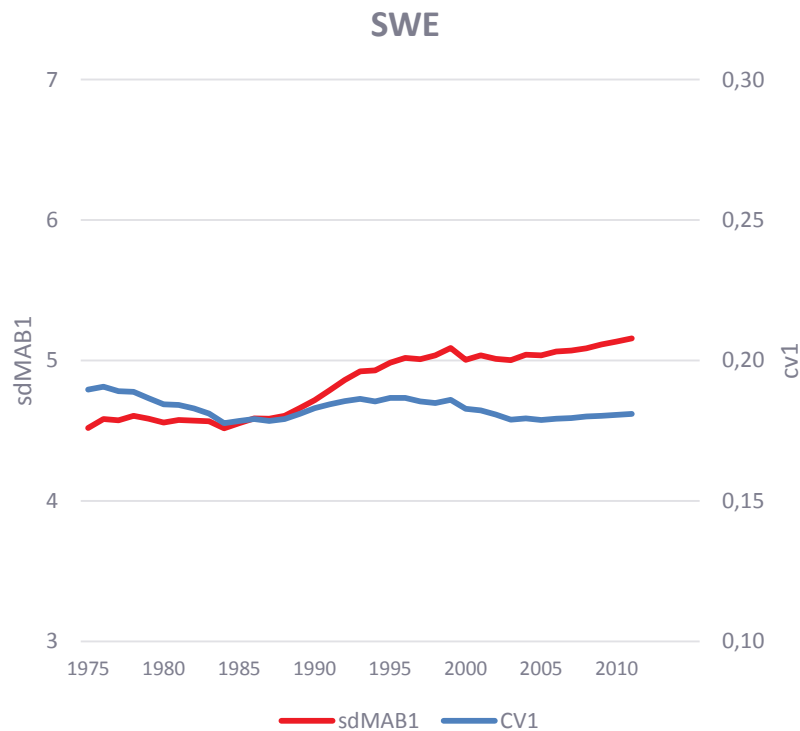


# Evolution of Mean Age at First Birth (MAB1) and its standard deviation (sdMAB1) by region and country, 1975-2014



# The coefficient of variation tells quite a different story

## Evolution of sdMAB1 in Sweden and United States, 2000-2014

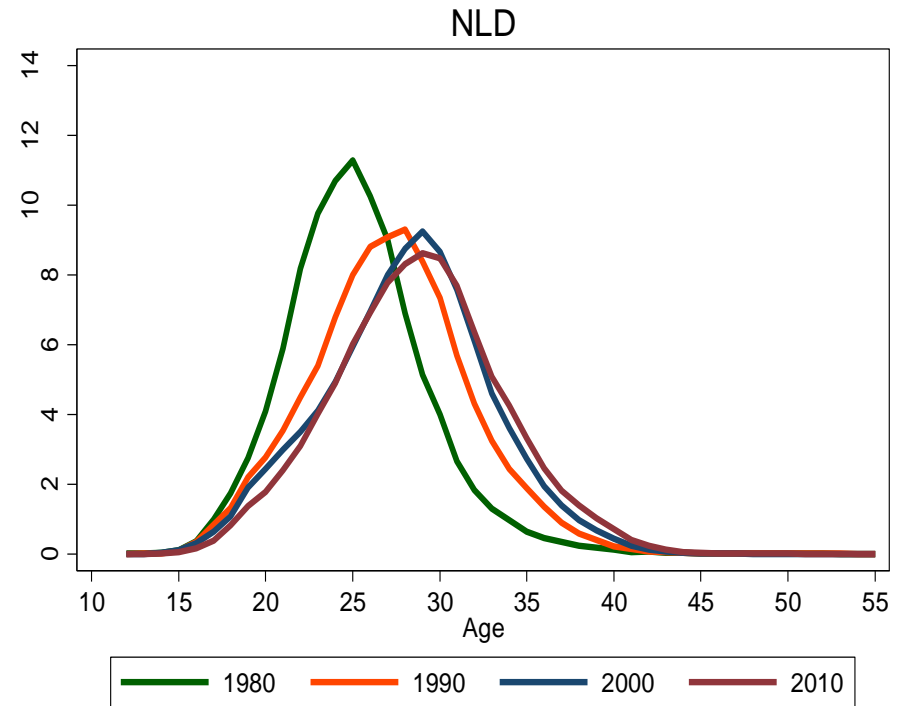
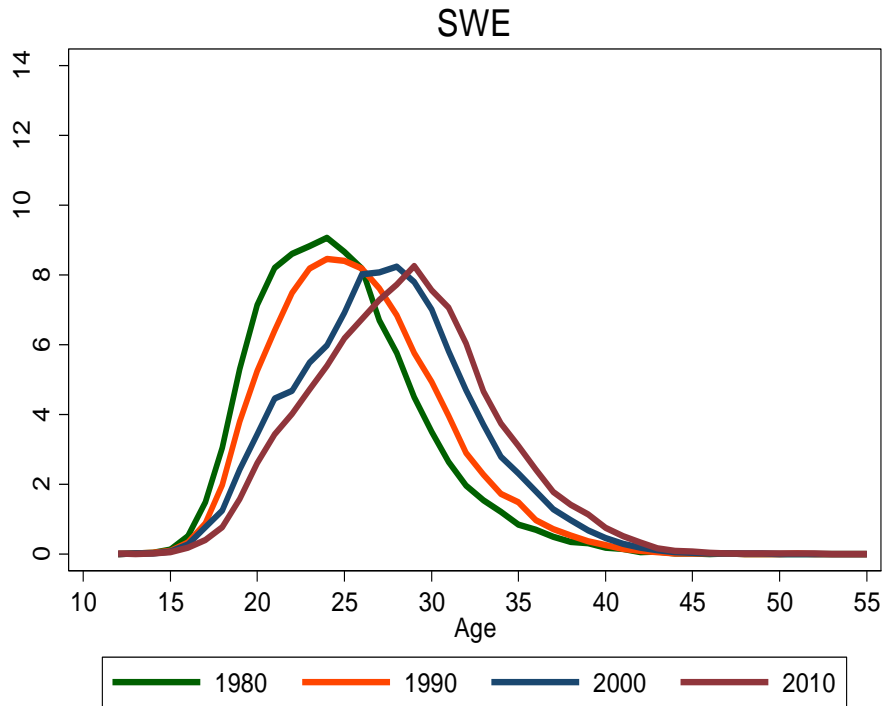


# Four different patterns of age-schedule for first birth rates

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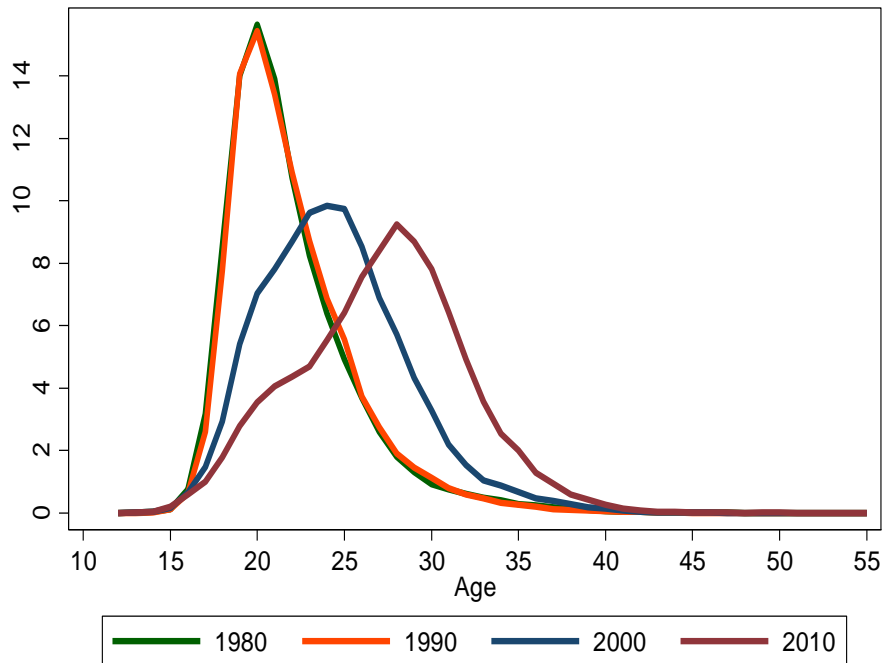
1. Countries with low dispersion both at the onset and current phase of fertility postponement (mainly Northern Europe)
2. Countries with very low dispersion at the onset and high increase of  $sdMAB1$  (Central Europe and, to a lesser extent, East Asia)
3. Countries with high dispersion at the onset and low increase of  $sdMAB1$  (Southern Europe)
4. Countries that reached the highest dispersion (U.K., U.S. and South America)

# 1. Countries with low dispersion both at the onset and current phase of fertility postponement

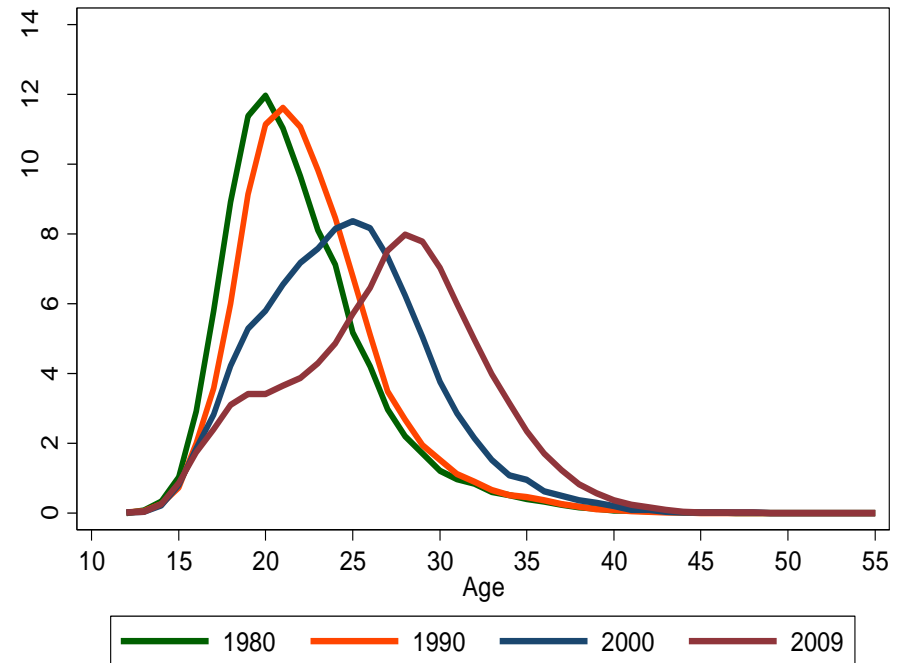


## 2. Countries with very low dispersion at the onset and high increase of sdMAB1

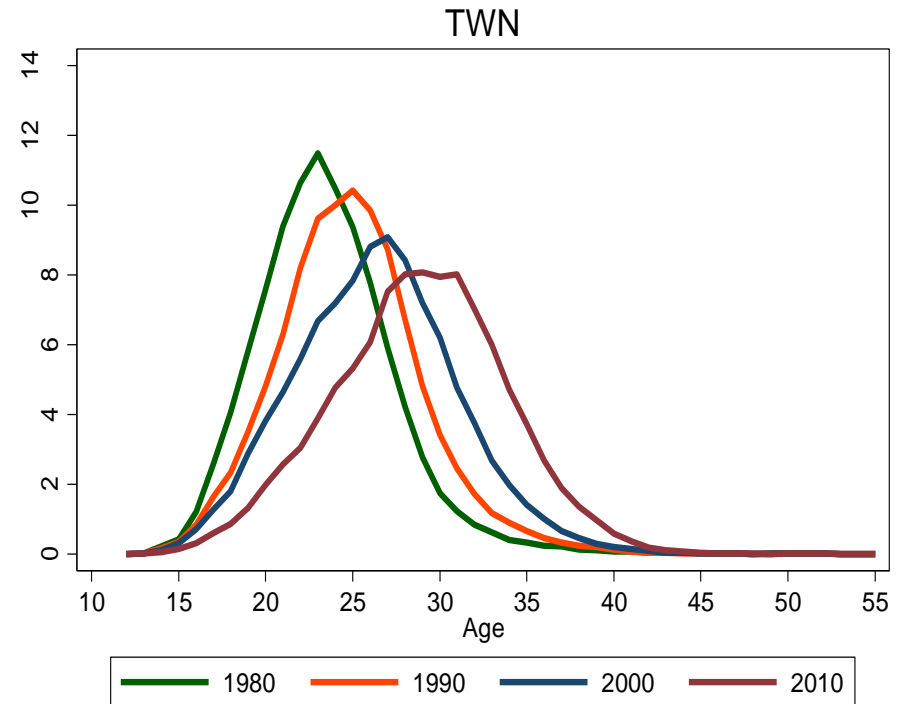
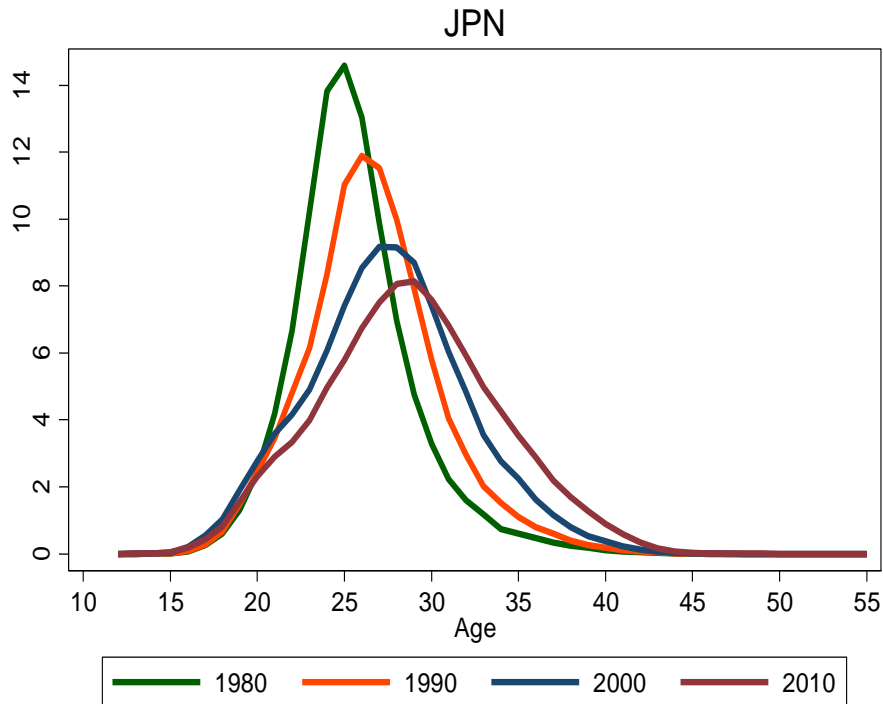
CZE



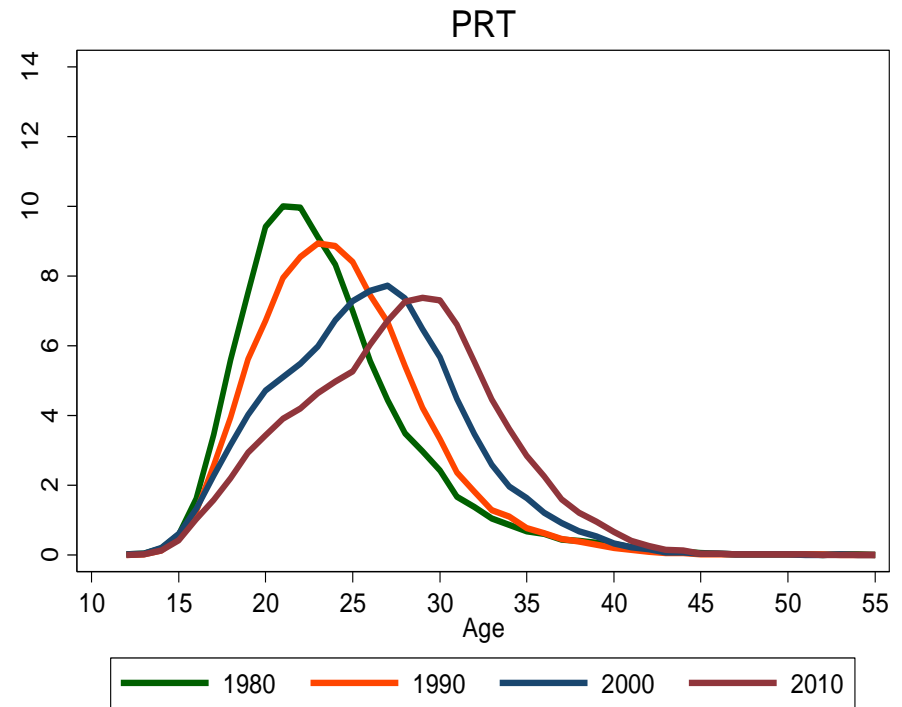
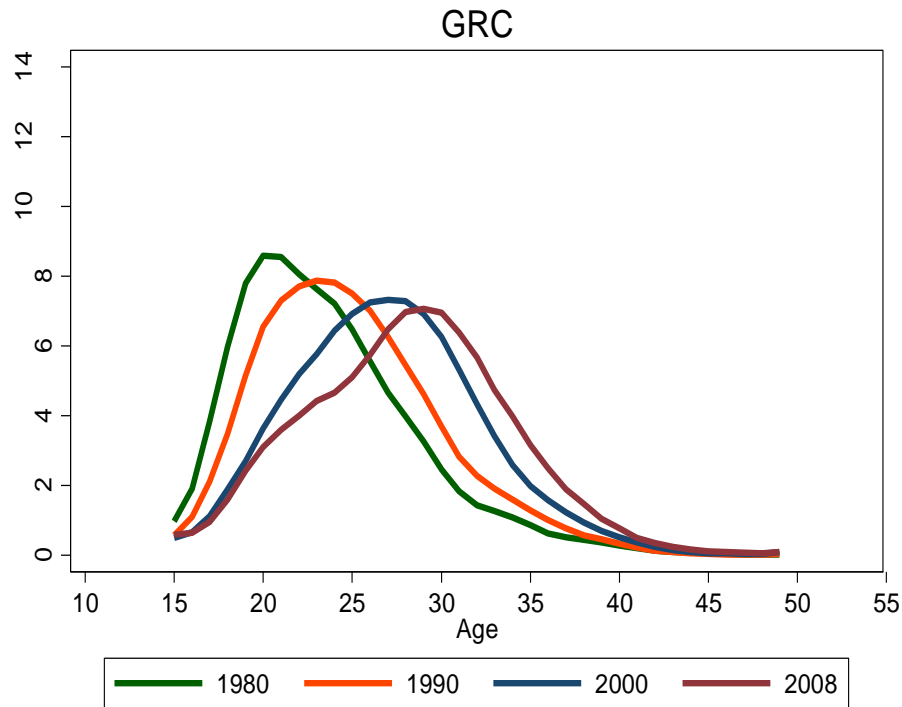
HUN



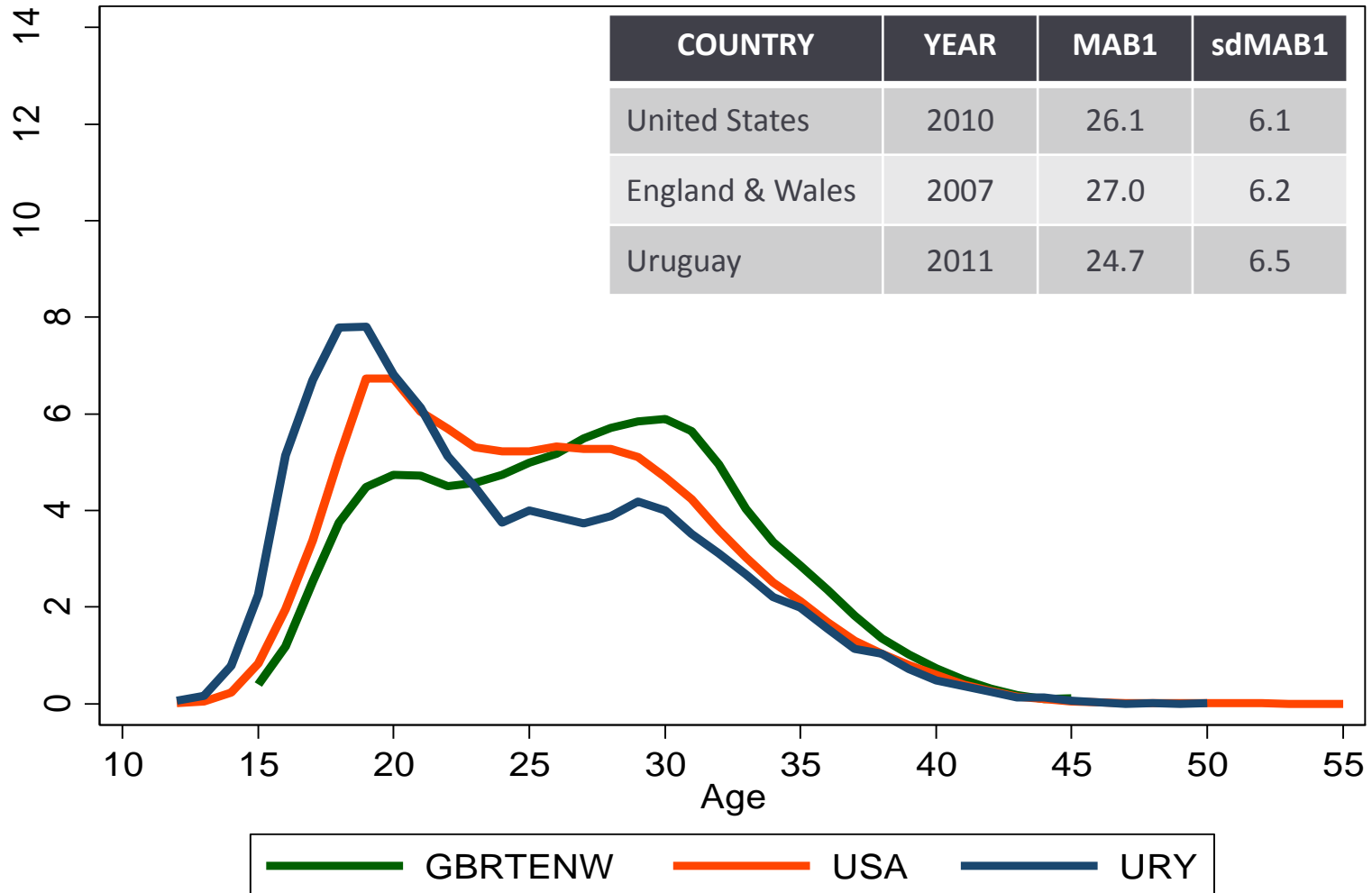
## 2. Countries with very low dispersion at the onset and high increase of sdMAB1



### 3. Countries with high dispersion at the onset and low increase of sdMABI



## 4. Countries that reached the highest dispersion (sdMAB1>6)





# Conclusions

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- Our results tends to support the **increasing heterogeneity** hypothesis in several countries and regions
- South America shows the highest level of dispersion at the onset of fertility postponement
- Different dispersion patterns of first birth by age arise during the postponement transition
- It is yet not possible to determine how dispersion of first births might evolve as postponement comes to an end
  - However, a decrease in the pace of postponement seems to go along with a stalling sdMAB1

# Discussion

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- On measures:
  - How should be interpreted a rising sdMAB1 when CV1 does not change?
  - Should we discard sdMAB1 as a dispersion measure when dealing with non gaussian-shaped curves?
  - Which dispersion indicators may be more useful in those cases? Can we manage to capture heterogeneity and also different age-schedules?
- On the prospective evolution of age at first birth and its heterogeneity:
  - What is to be expected in terms of dispersion when MAB1 reaches its (physiological) “limit”?
  - Will countries and regions converge in terms of age-schedule?

# Thank you!

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[mathias.nathan@cienciassociales.edu.uy](mailto:mathias.nathan@cienciassociales.edu.uy)

[ignacio.pardo@cienciassociales.edu.uy](mailto:ignacio.pardo@cienciassociales.edu.uy)



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