Wittgenstein Centre

FOR DEMOGRAPHY AND GLOBAL HUMAN CAPITAL

A COLLABORATION OF IIASA, VID/ÖAW, WU

Underlying causes of the fertility increase in Egypt

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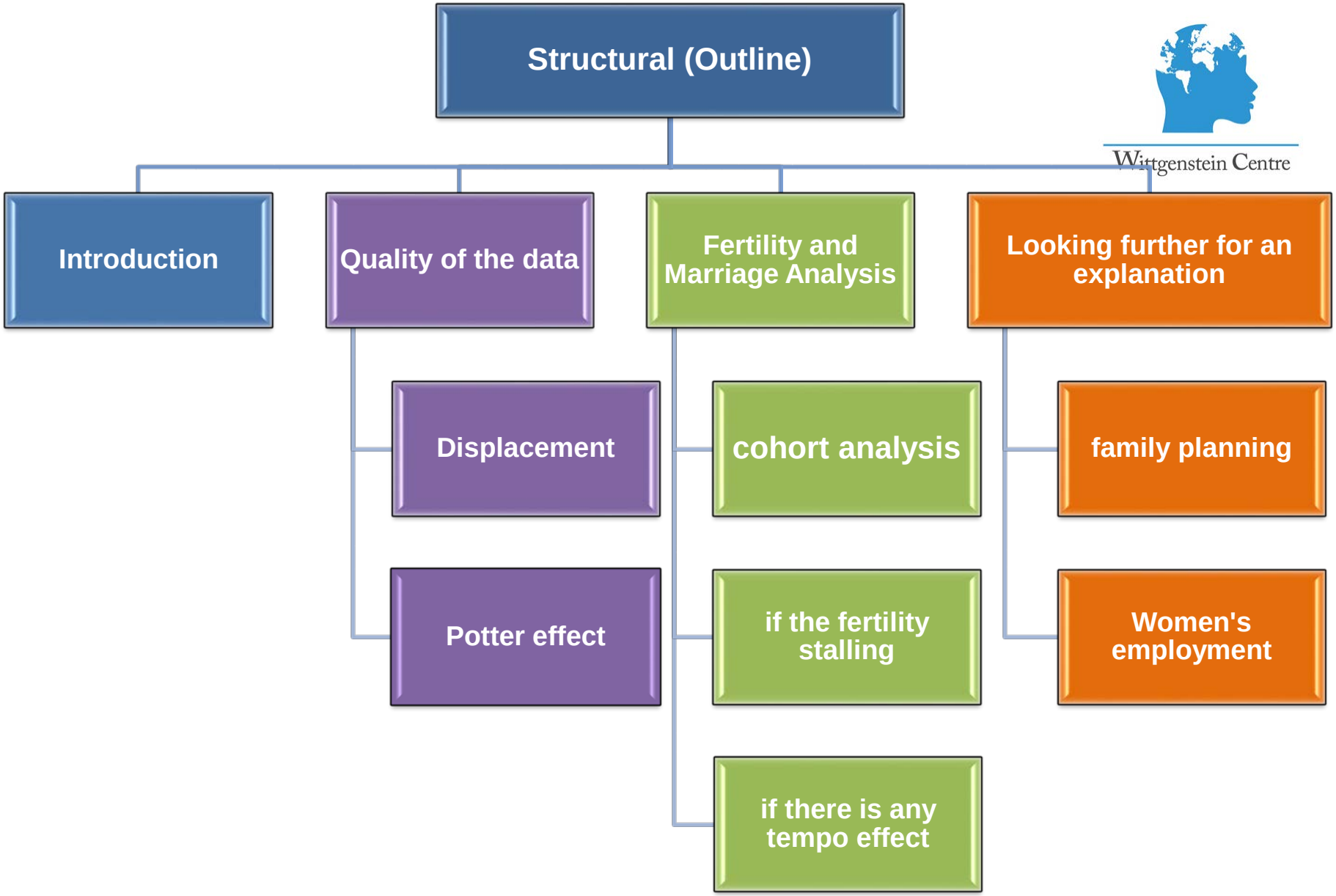
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if there is any tempo effect
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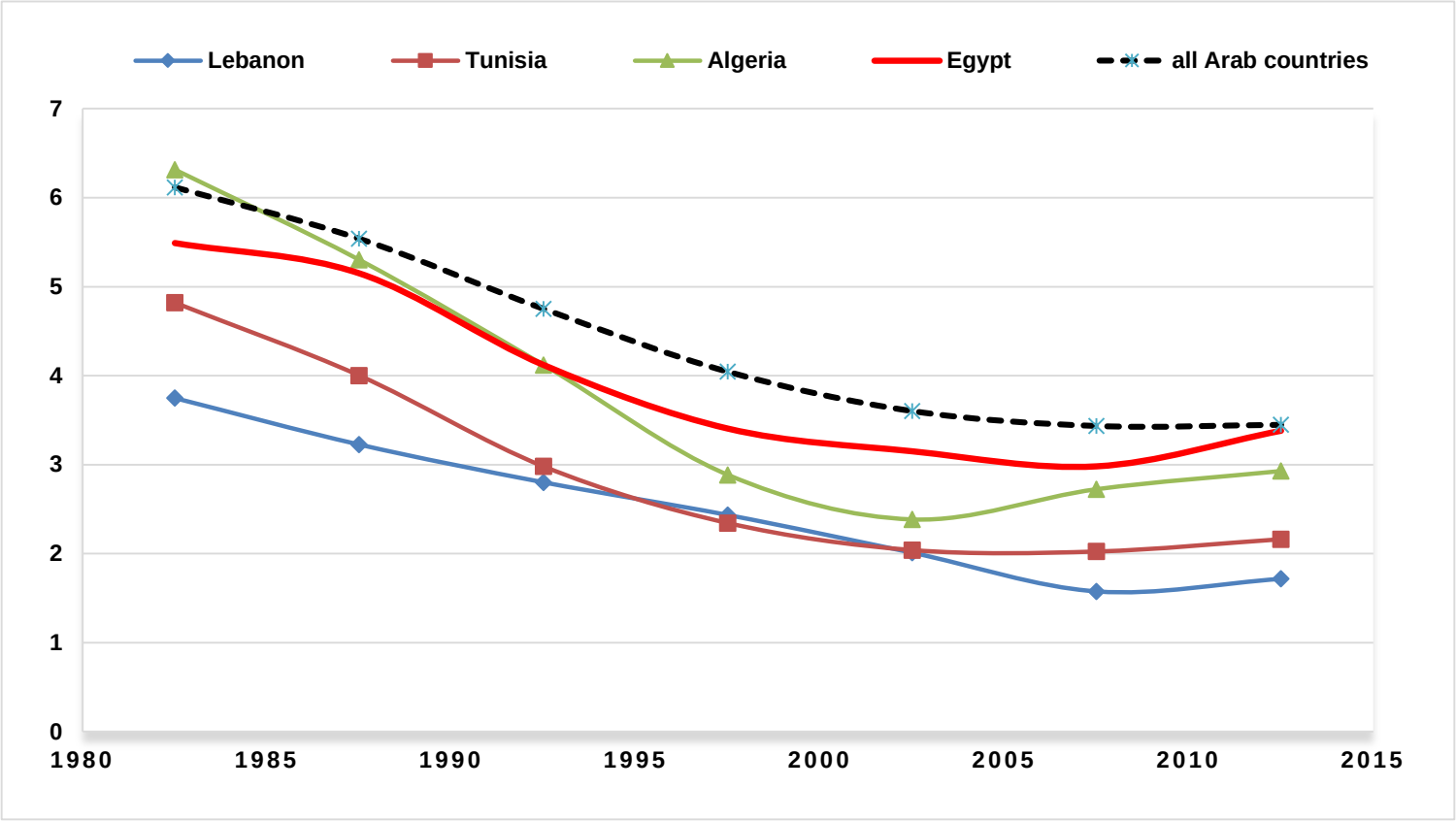
Introduction

Total fertility rate in all Arab countries from 1980 to 2015 in Lebanon, Tunisia, Algeria, and Egypt



Source: Authors' calculations based on United Nations (2015).

Introduction

Fertility patterns in Egypt

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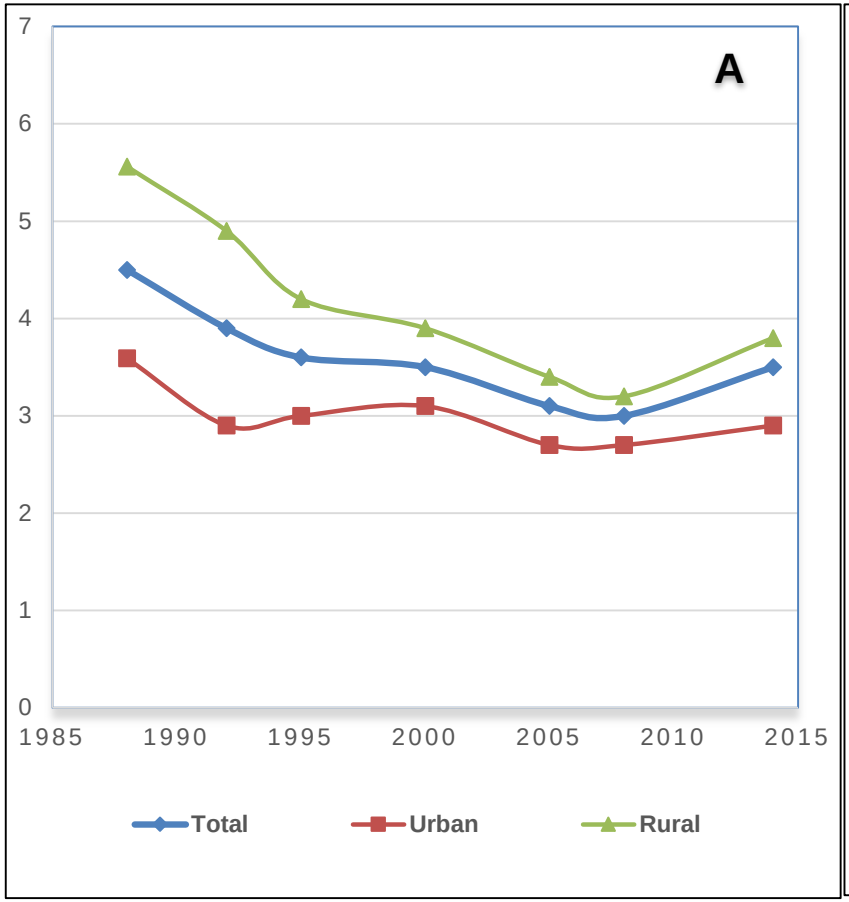
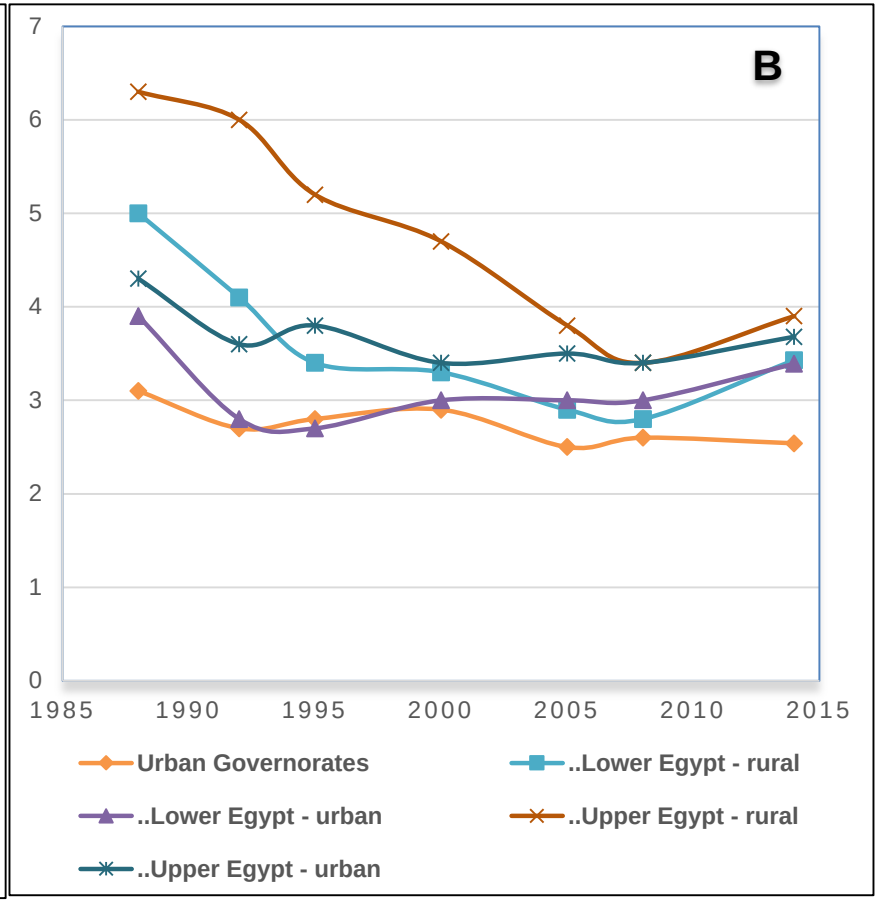
Total Fertility Rates by residence of place in Egypt





Source: All EDHS, 1988 to 2014

Introduction

Fertility patterns in Egypt

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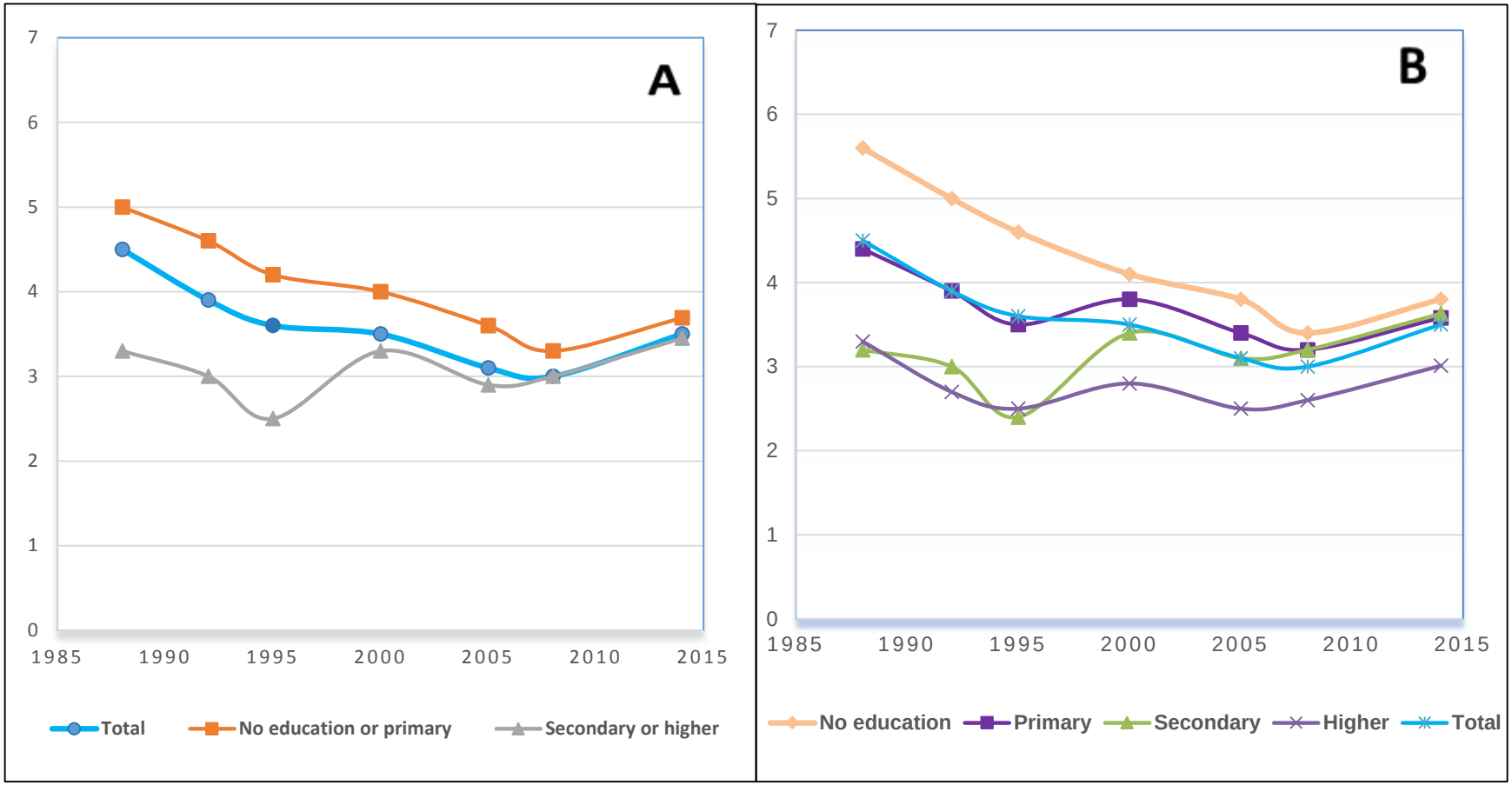
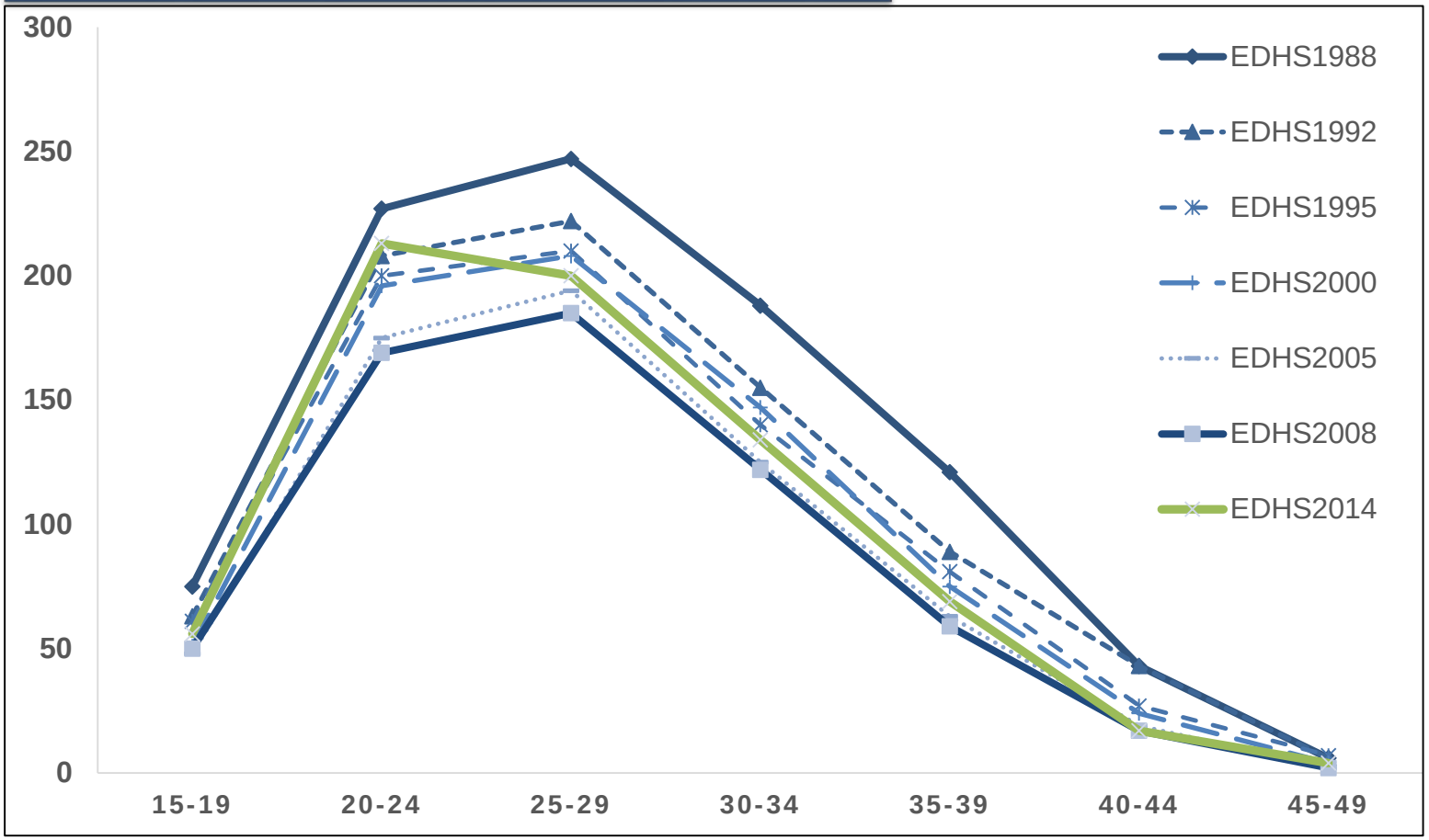
Total Fertility Rates by levels of education in Egypt



Source: All EDHS, 1988 to 2014

Fertility and Marriage Analysis

Age specific Fertility patterns in Egypt



Source: All EDHS, 1988 to 2014

Fertility and Marriage Analysis

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Share	EDHS	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Total
Never-married women	1988	84.5	40.3	15.6	5.1	2.2	1.5	1.8	29.5
	1992	86.1	43.4	13.4	4.9	2.5	2.3	0.9	29.6
	1995	85.7	41.9	13.4	5.1	2.6	1.9	1.2	29.8
	2000	88.1	45.6	16.2	6.1	3	1.8	1.5	31.9
	2005	87.5	48.9	18.7	6	3.6	2.5	1.7	33.5
	2008	86.6	46.2	17.7	6.9	3.6	2.1	1.9	30.7
	2014	85.3	38.9	12.9	6.8	3.1	2	1.7	25.9
Married women using contraception	1988	5.5	24.3	37.1	46.8	52.8	47.5	23.4	37.8
	1992	13.3	29.7	46	58.8	59.6	55.5	34.5	47.1
	1995	16.1	33.2	47.6	58.1	60.7	58.8	33.3	47.9
	2000	23.4	42.7	57	67.2	68	63.4	42	56.1
	2005	26.3	44.7	57.4	69	73.3	70.1	47.8	59.2
	2008	23.4	44.6	59.8	67.6	74.3	72.5	51.9	60.3
	2014	20.5	42.3	55.2	64.6	72.6	71	54	58.5
Married women working since last 12 months	1995	3	8	16.5	25.9	24.4	23.6	17.8	**18.9**
	2000	2.6	5.7	15	19.6	24.9	21.4	16.3	16.8
	2005	6.9	9	16.2	23.3	26.7	31.6	28.3	21.5
	2008	2.7	5	13.3	16.6	20.2	24	24.8	16.4
	2014	3.1	5.1	12.5	17.1	20	20.3	22.8	**15.5**

Source: All EDHS, 1988 to 2014; weighted by sample weight.

Underlying causes of the fertility increase in Egypt

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1. Is there a problem with data quality (EDHS)?
2. If fertility really increasing since 2008?
   - ✓ **Cohort analysis of fertility**
   - ✓ **Is the fertility stalling? YES**
   - ✓ **Is there a tempo effect ? NO**
3. Looking further for an explanation in the socio-economic and political context:
   - ➢ **Changes in the levels of contraceptive use**
   - ➢ **In the employment level of men and women**
   - ➢ **Religiosity of the population?**

Quality of the data

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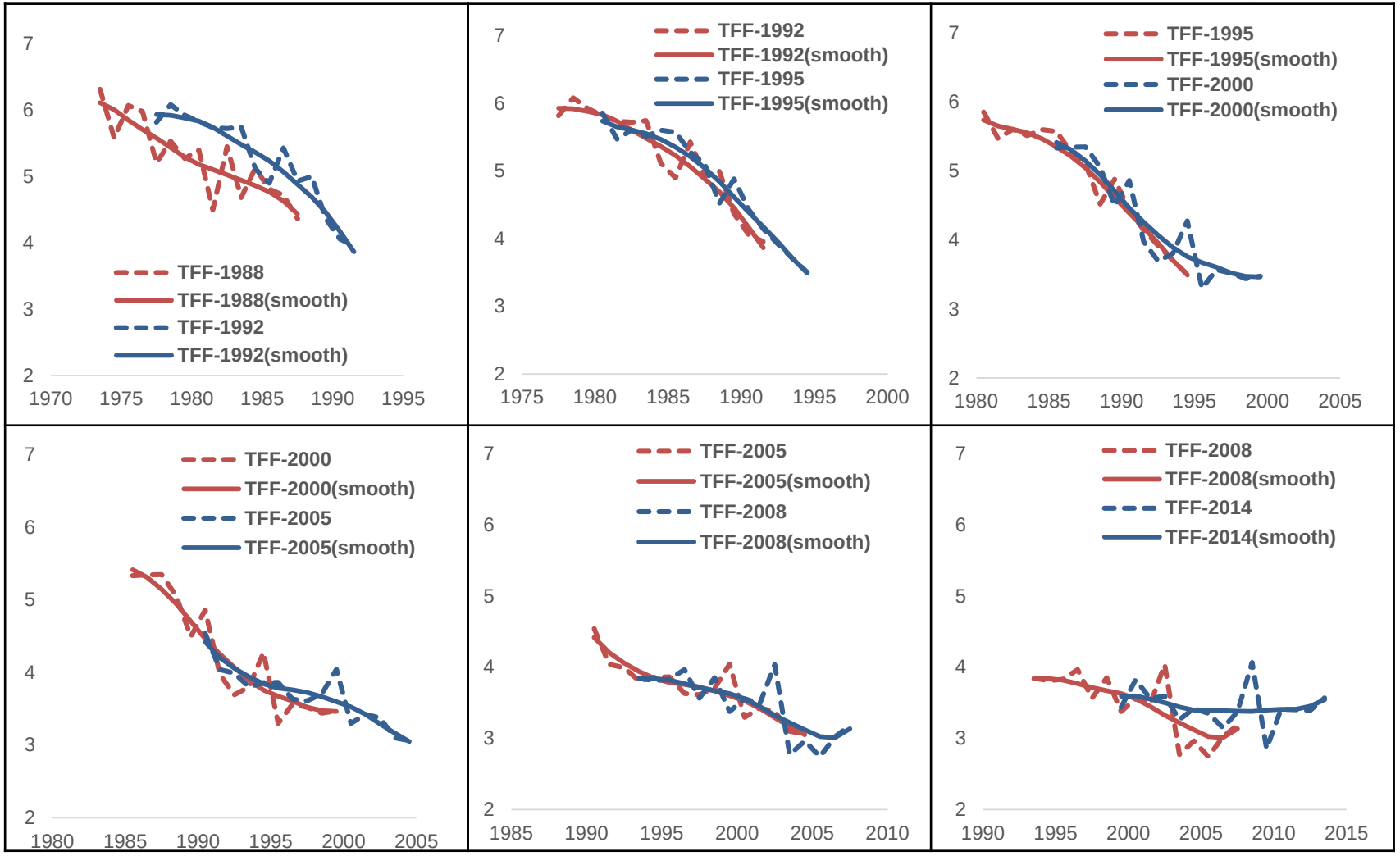
1. Heaping of year of birth
2. Omission of recent births
3. Sample implementation (over or under sampling of some groups)
4. Misreporting of women's age.
5. Displacement of births to avoid additional questions
6. Potter effect affecting reporting of distant births

Source: Schoumaker (2014)

Displacement of births

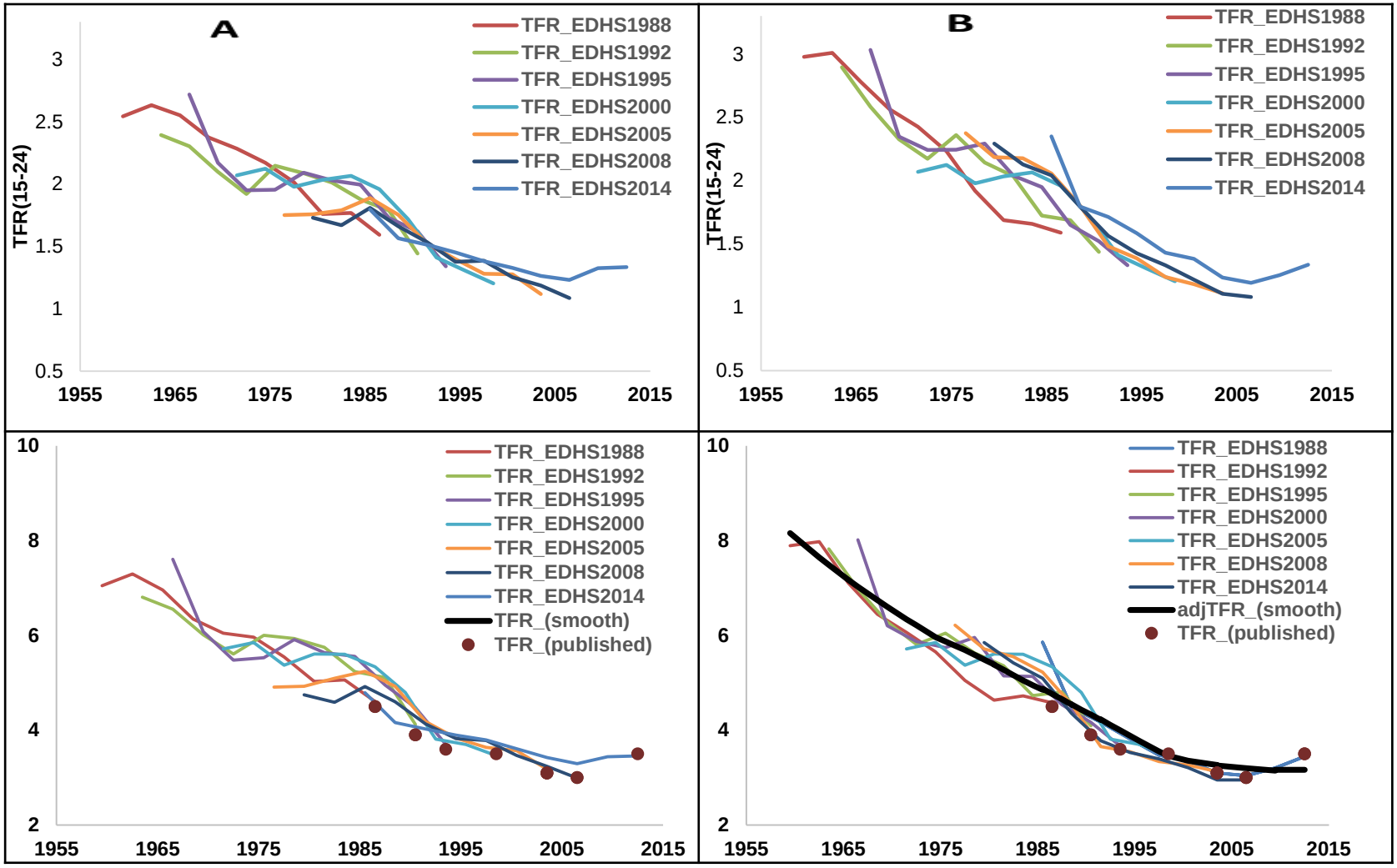
Comparisons across surveys of retrospective fertility trends for 15 single years before the surveys in the EDHS from 1988 to 2014 after corrected



Source: Authors' calculation based on all EDHS

Potter effect

Estimation fertility rate at young ages groups from (15-24) by three year producing 30 years, with and without correcting for possible Potter effect



Source: Authors' calculation based on all EDHS

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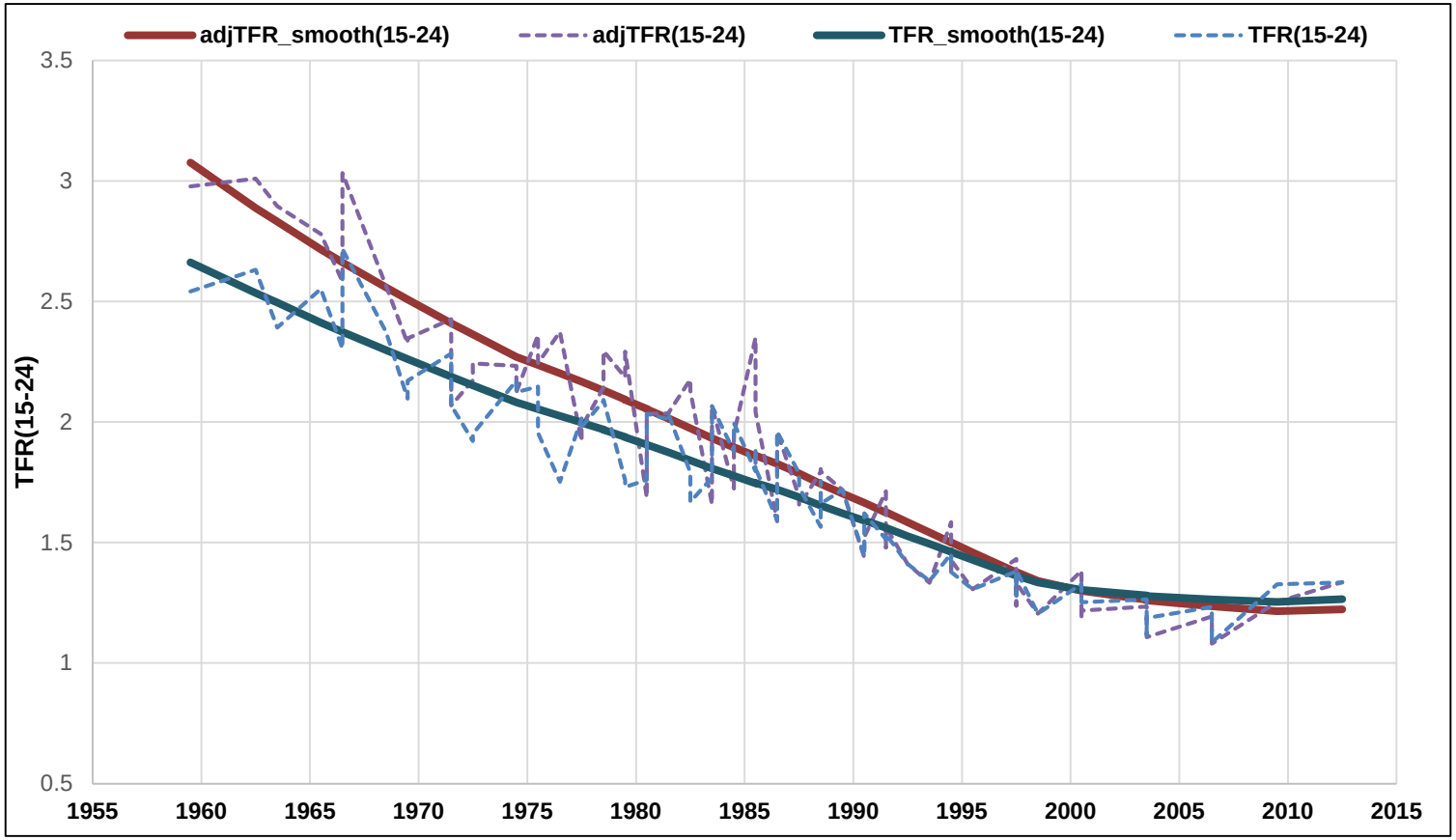

Source: Authors' calculation based on all EDHS

Fertility and Marriage Analysis

cohort analysis

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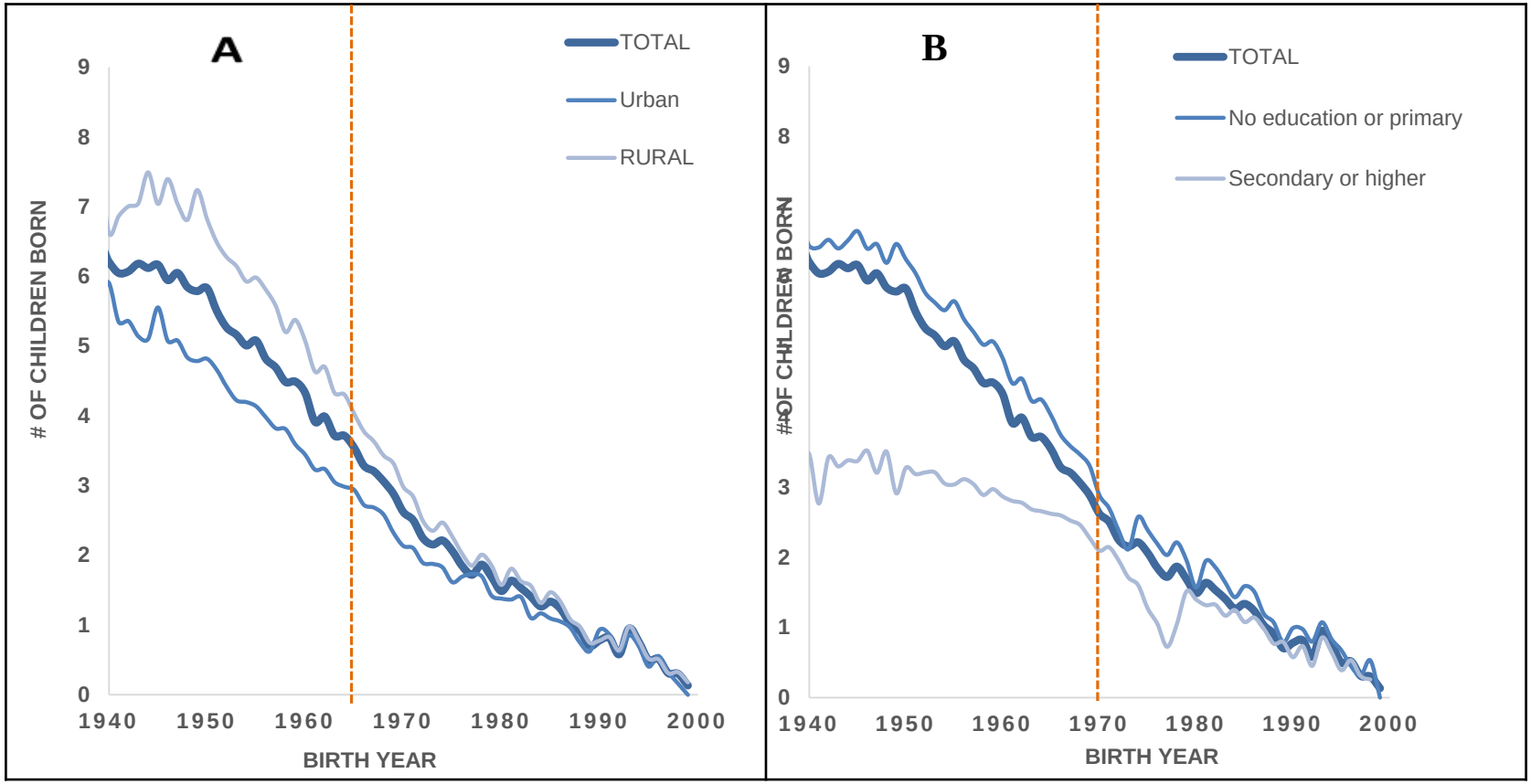
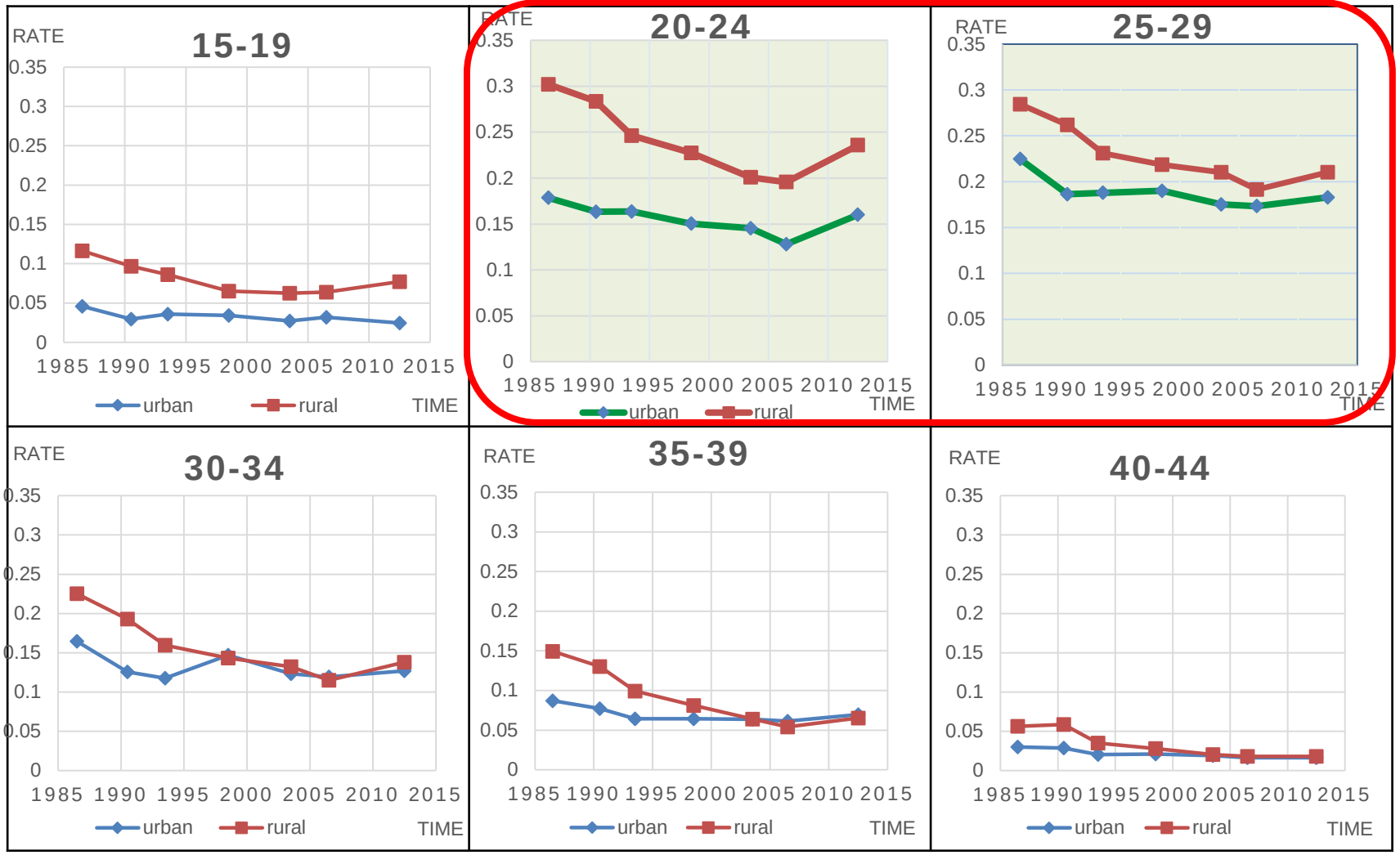
Estimates of Cumulative Fertility Rates per women in Egypt by residence of place and education



Source: Authors' calculation based on all EDHS

Fertility and Marriage Analysis

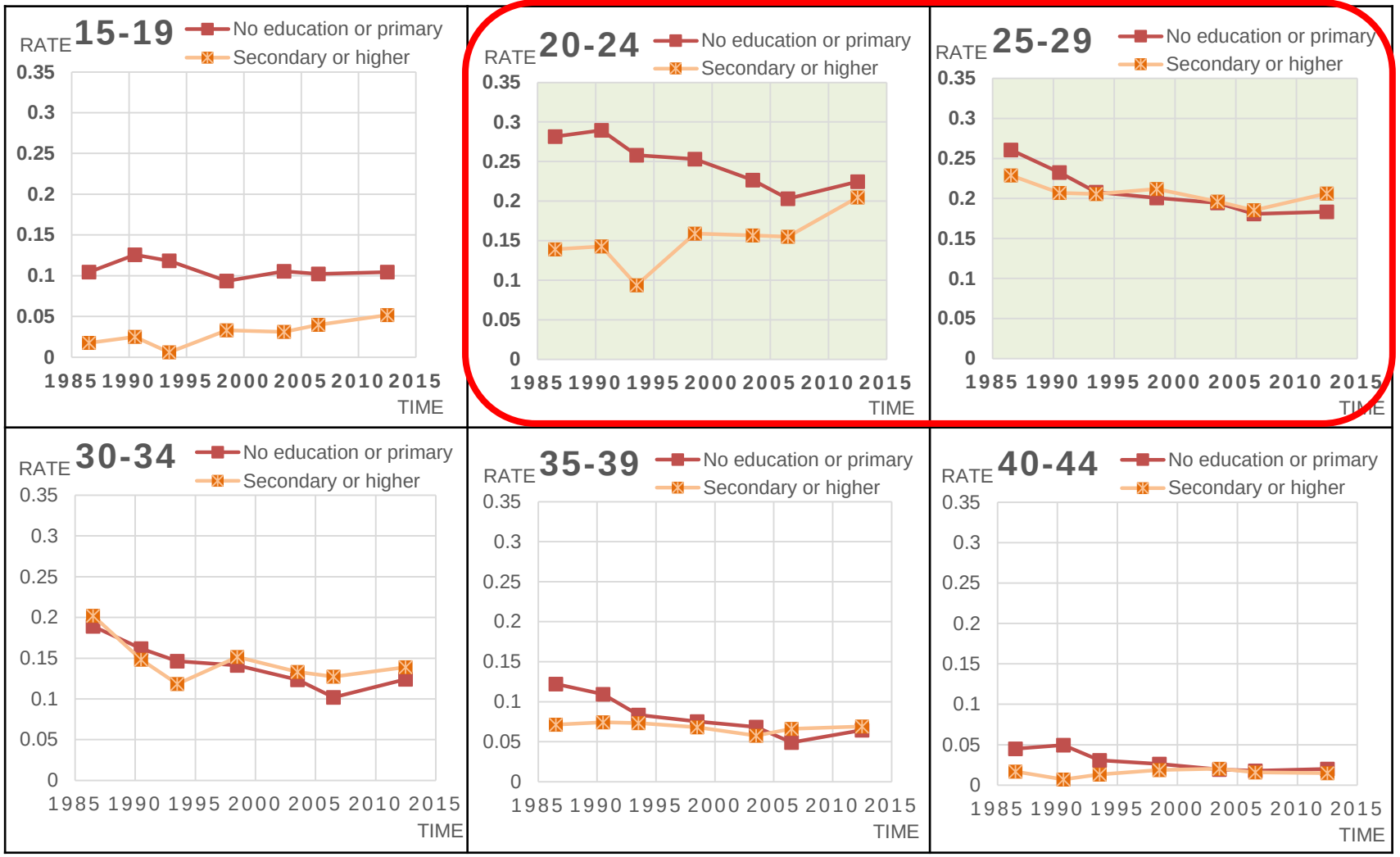
Age- specific Fertility Rates for three years preceding the survey per women in Egypt, by residence of place.



Source: (EDHSs; data weighted by sample weight, and awfacte).

Fertility and Marriage Analysis

Age- specific Fertility Rates for three years preceding the survey per women in Egypt, by education



Source: (EDHSs; data weighted by sample weight, and awfacte).

Fertility and Marriage Analysis

Reconstructed fertility trend, 1973-2014

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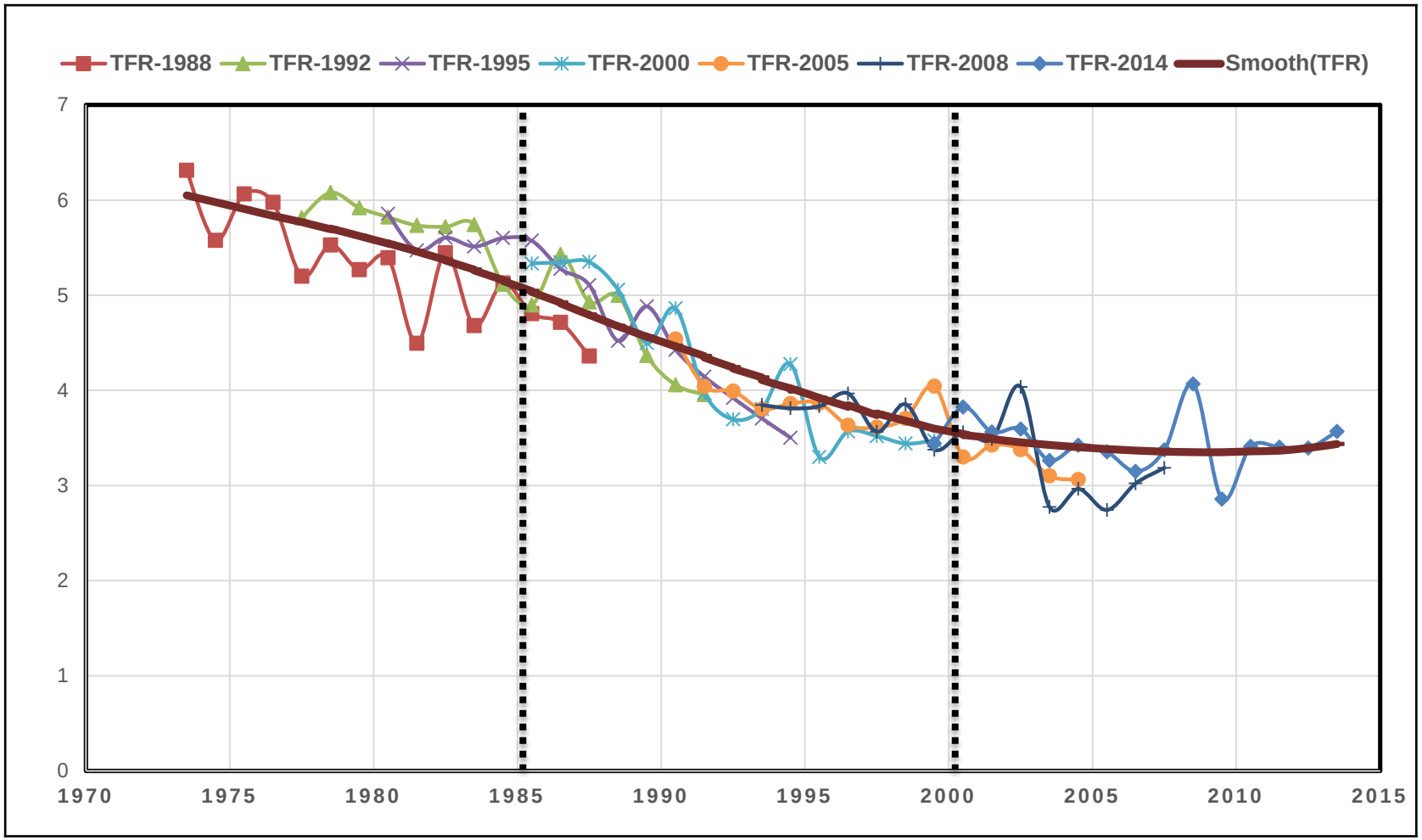

Source: Authors' calculation based on all EDHS, 1988 to 2014, using Stata package tfr2; smoothed with LOWESS.

Fertility and Marriage Analysis

Why is fertility stalling?

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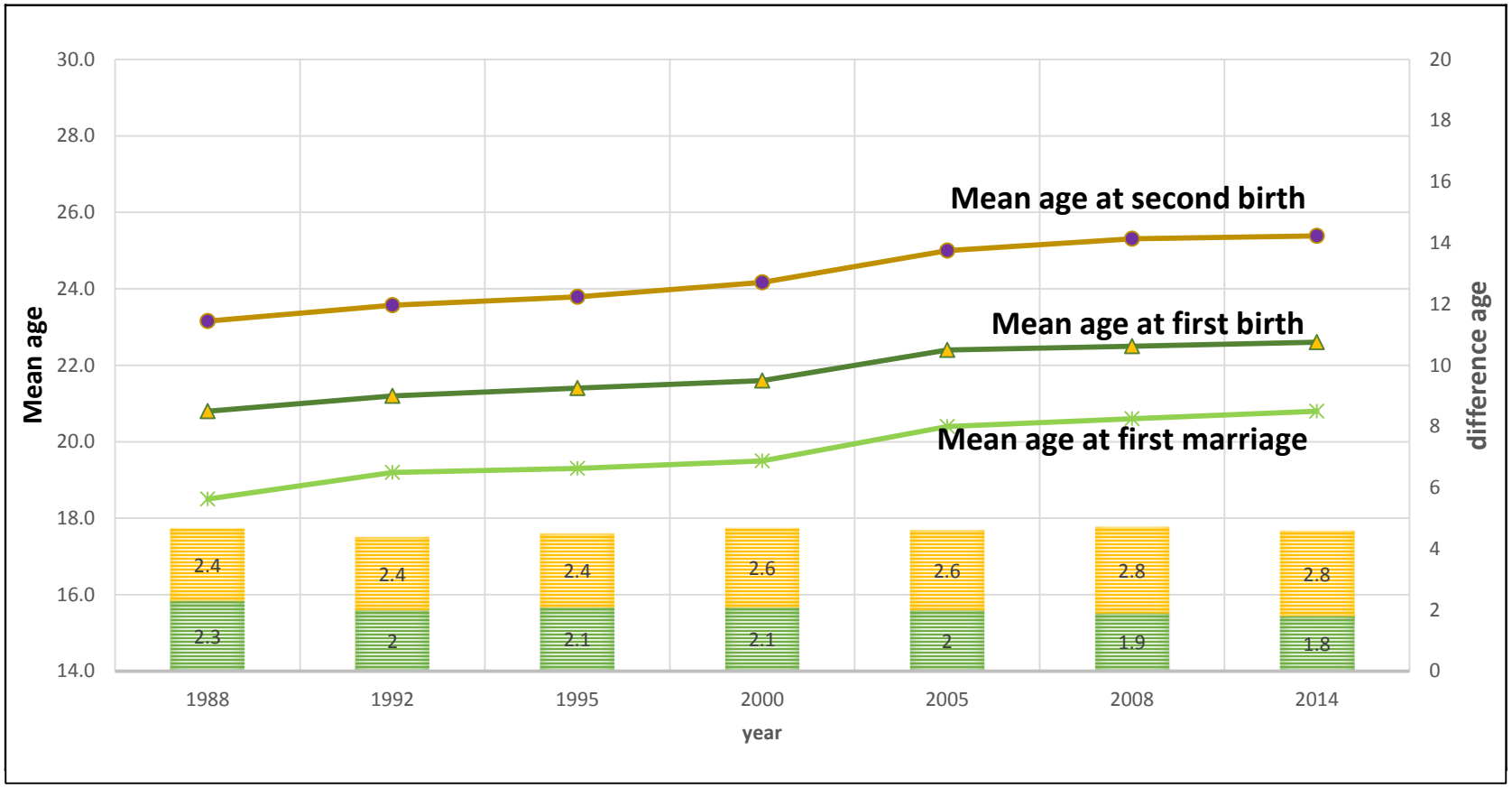
Comparing Mean age at (marriage, first, and second) birth for three years preceding the survey per women in Egypt, for age group 25-49.



Source: (EDHSs; data weighted by sample weight, and awfacte).

Fertility and Marriage Analysis

Is fertility stalling in Egypt?

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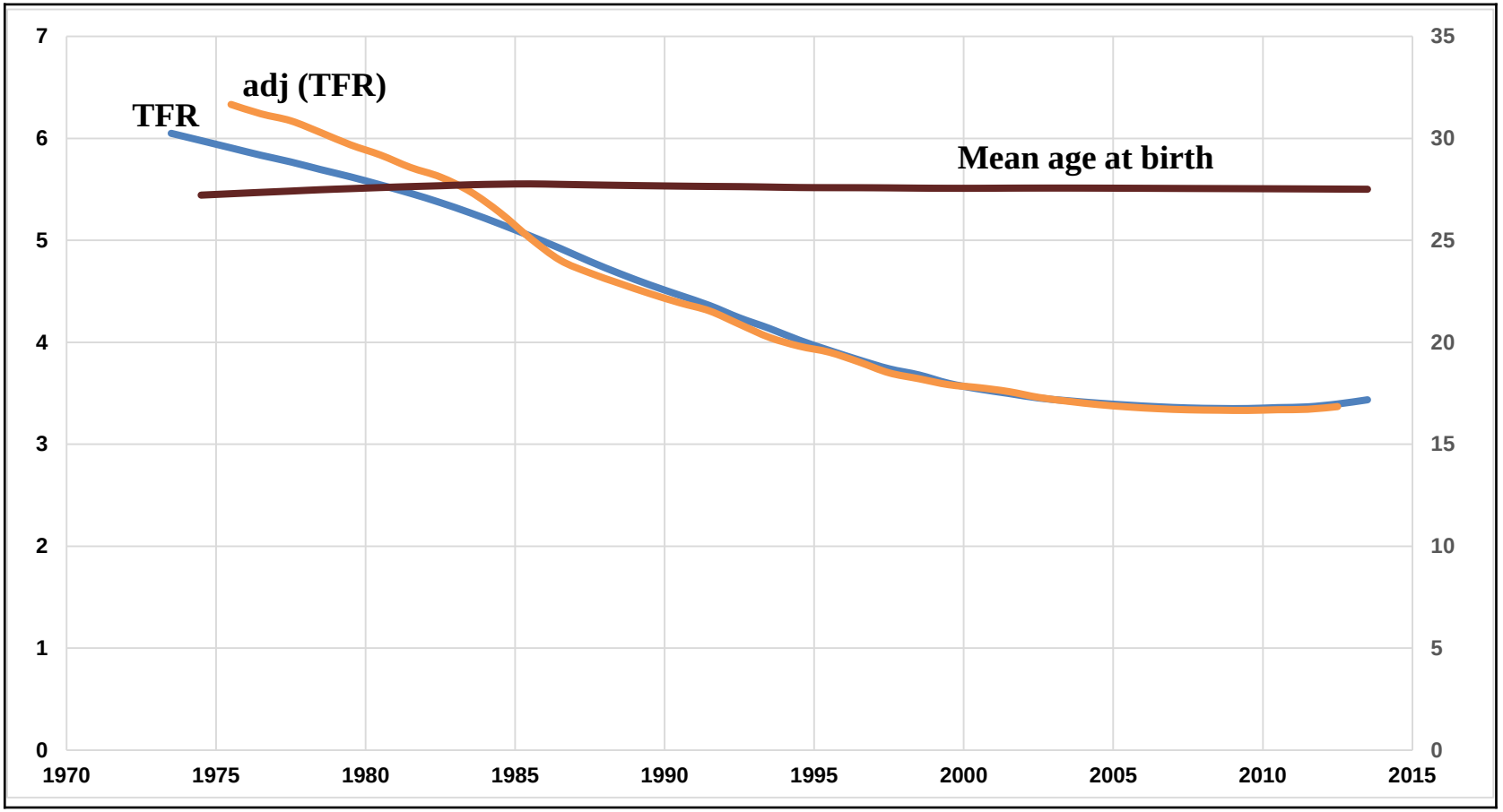
Trend in TFR, tempo-adjusted TFR, and mean age at birth, 1974-2014, Egypt



Source: Authors' calculation based on all EDHS, 1988 to 2014 (data weighted by sample weight, and awfactt); smoothed with LOWESS.

Fertility and Marriage Analysis

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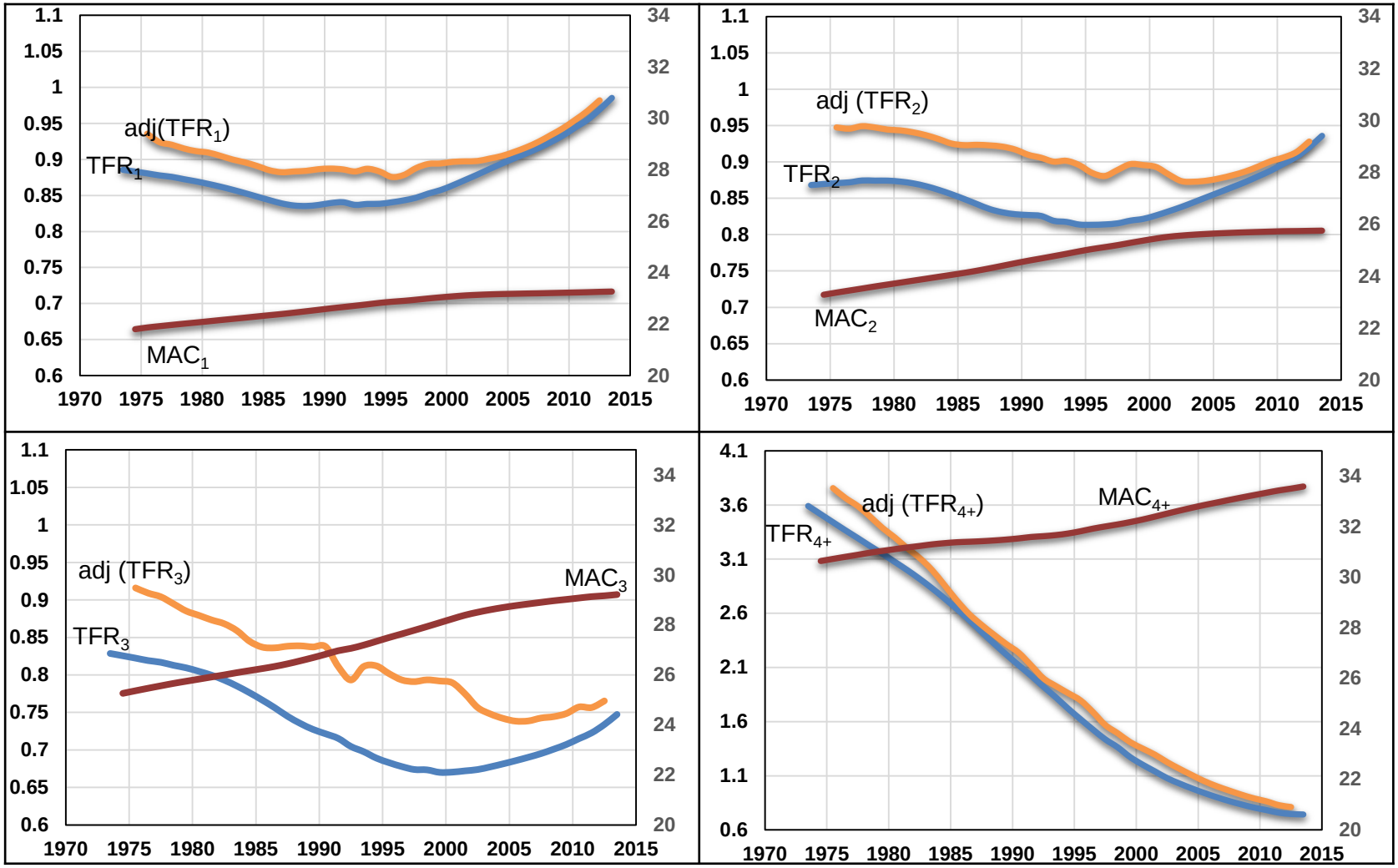
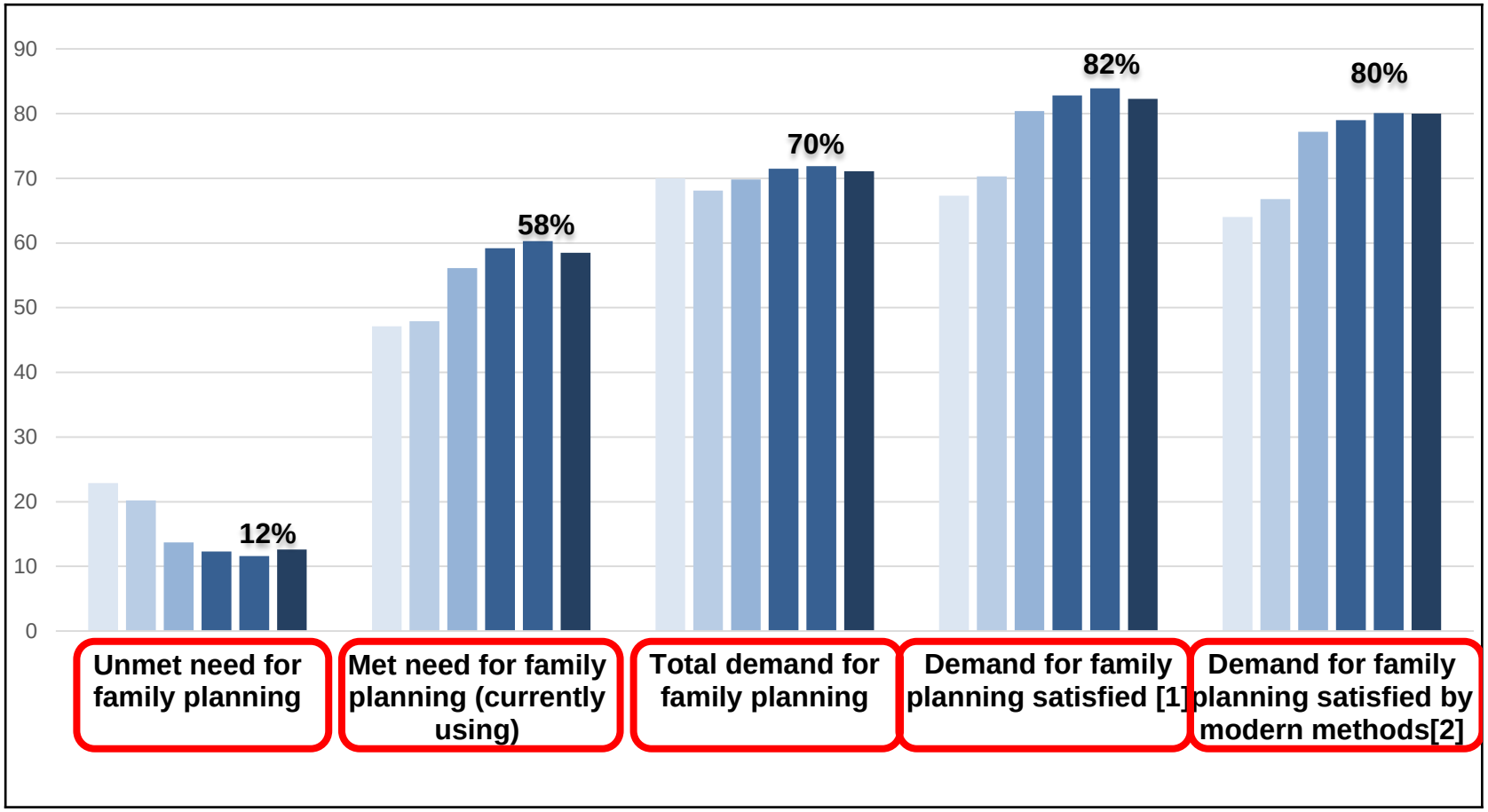
Trend in TFR, tempo-adjusted TFR, and mean age at birth, 1974-2014, by birth order



Source: own (EDHSs; data weighted by sample weight, and awfactt); smoothed with LOWESS.

family planning

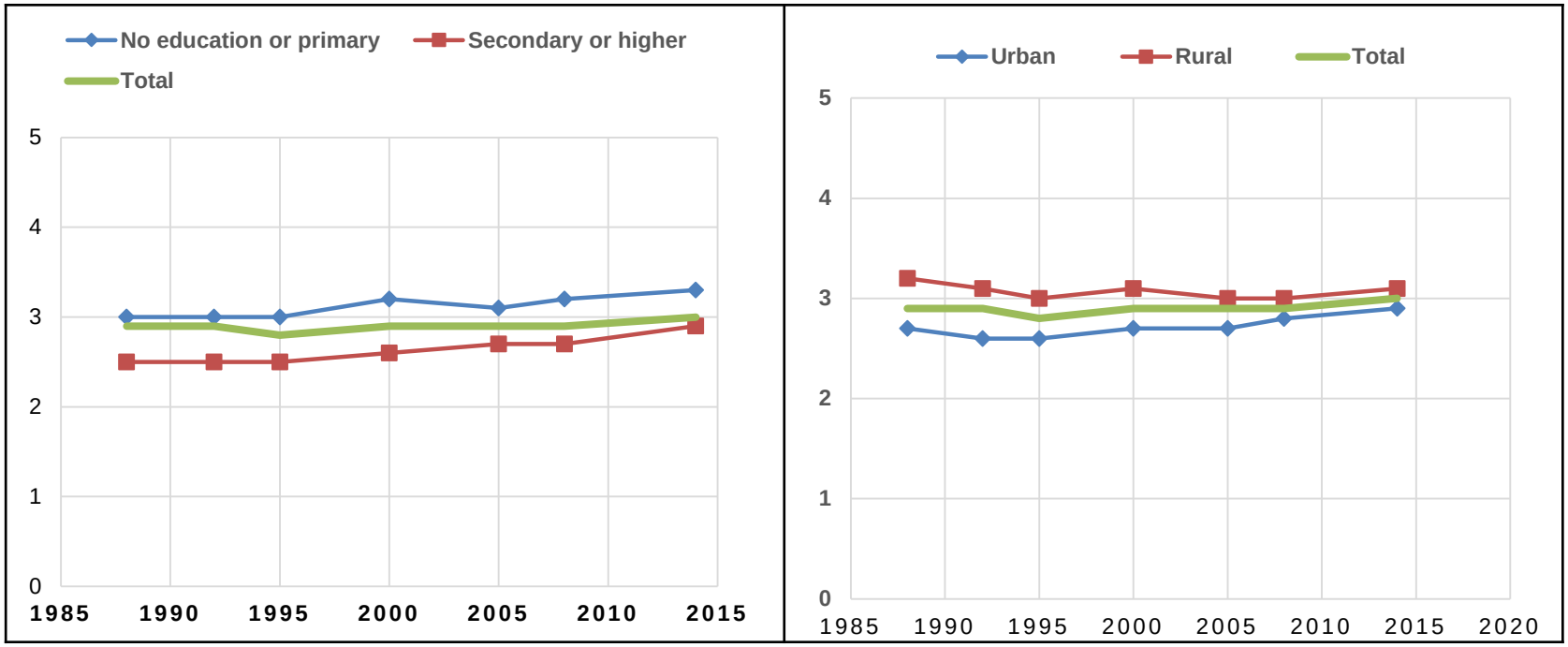
Trend need and demand for family planning among currently married women



Source: (EDHSs; data weighted by sample weight, and awfacte).

family planning

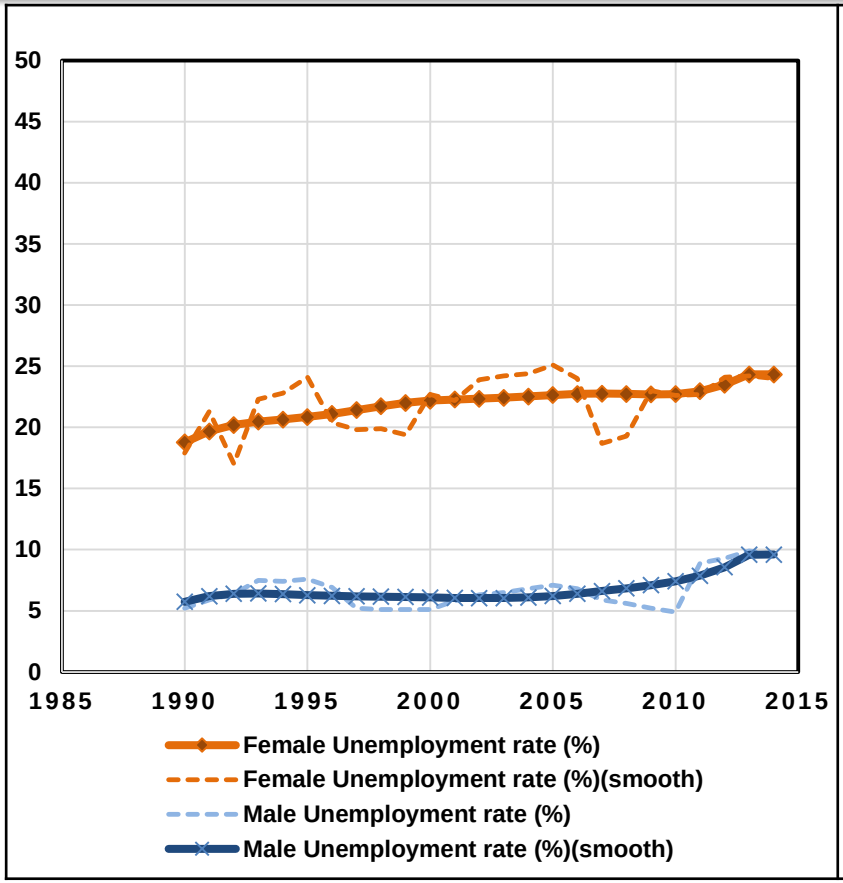
Mean ideal number of children for all women, by Edukation (A) and residence of place(B), 1988-2014, Egypt

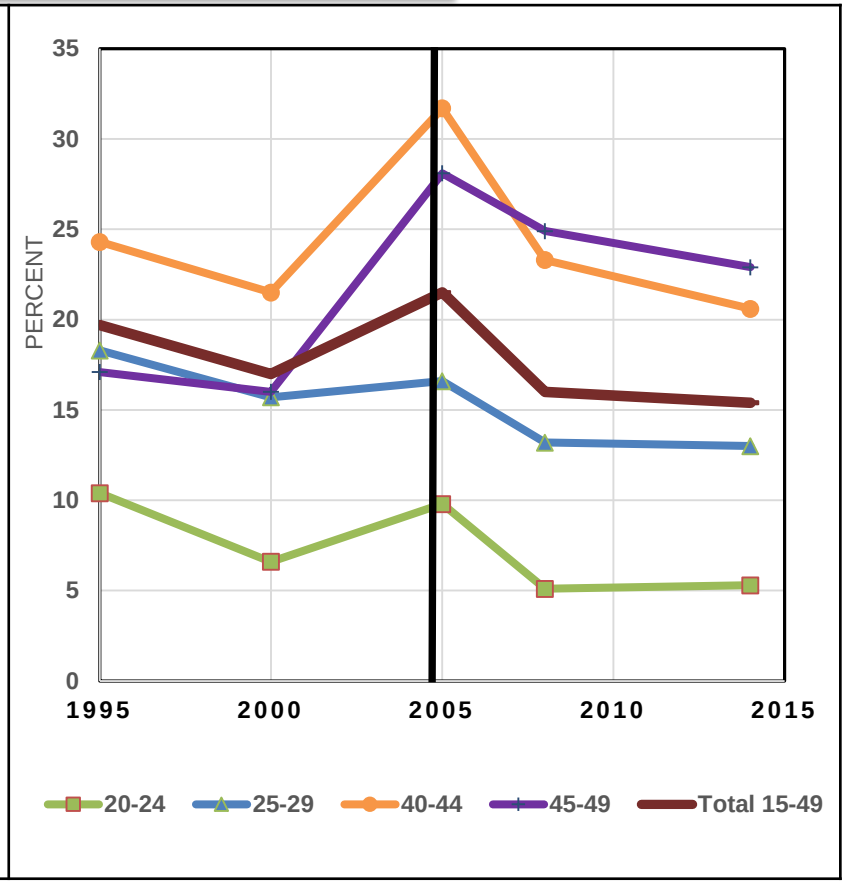


Source: (EDHSs; data weighted by sample weight, and awfacte).

Employment

unemployment rate (Kilm 2016) and Married women employed (EDHS)





Trend of unemployment rate for age +15 by sex from 1990 to 2014.

Married women employed in the last 12 months from 1995-2014.

Employment

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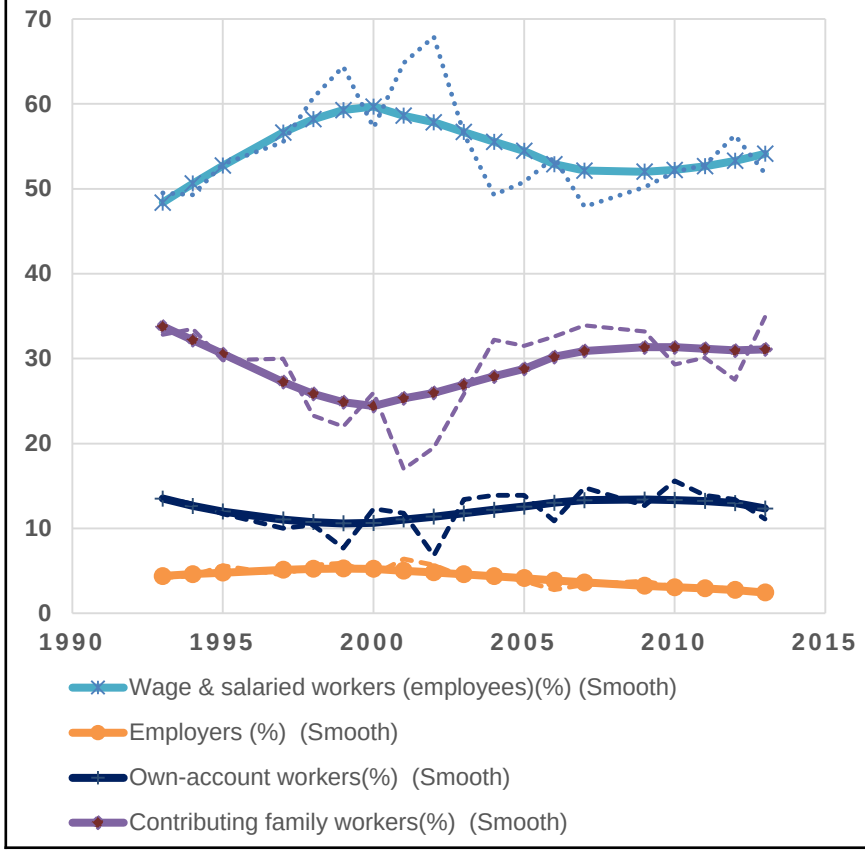
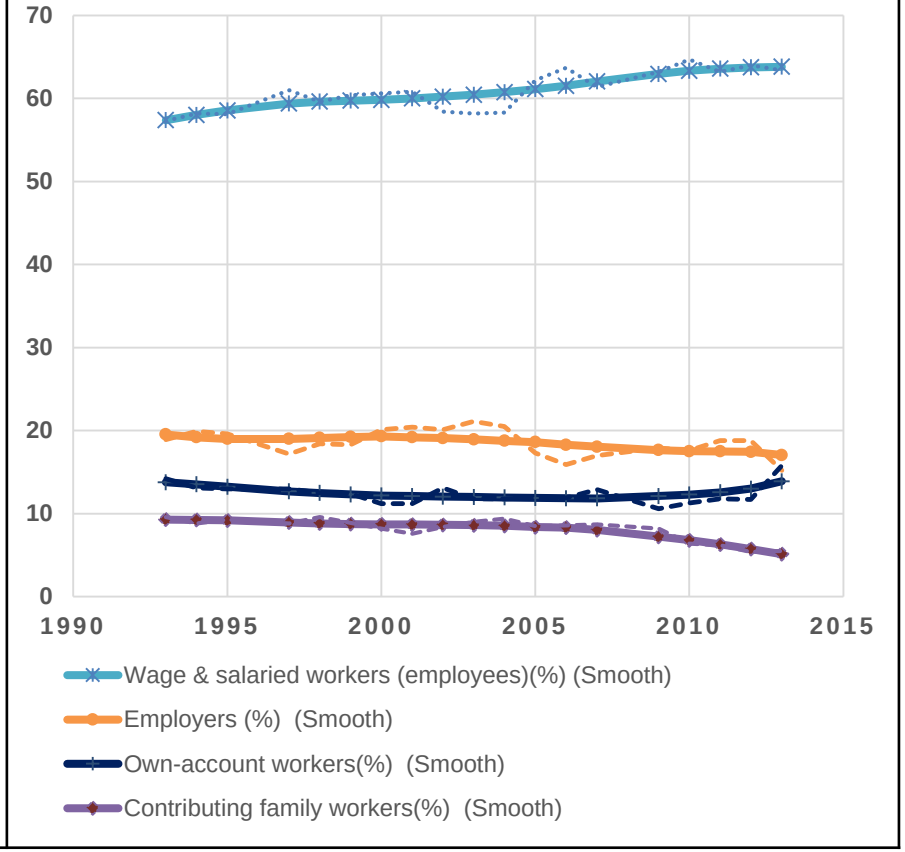
Female



Male



Trend of status in employment distinguishes ratio for age +15 by sex from 1993 to 2013 after smooth.

Employment

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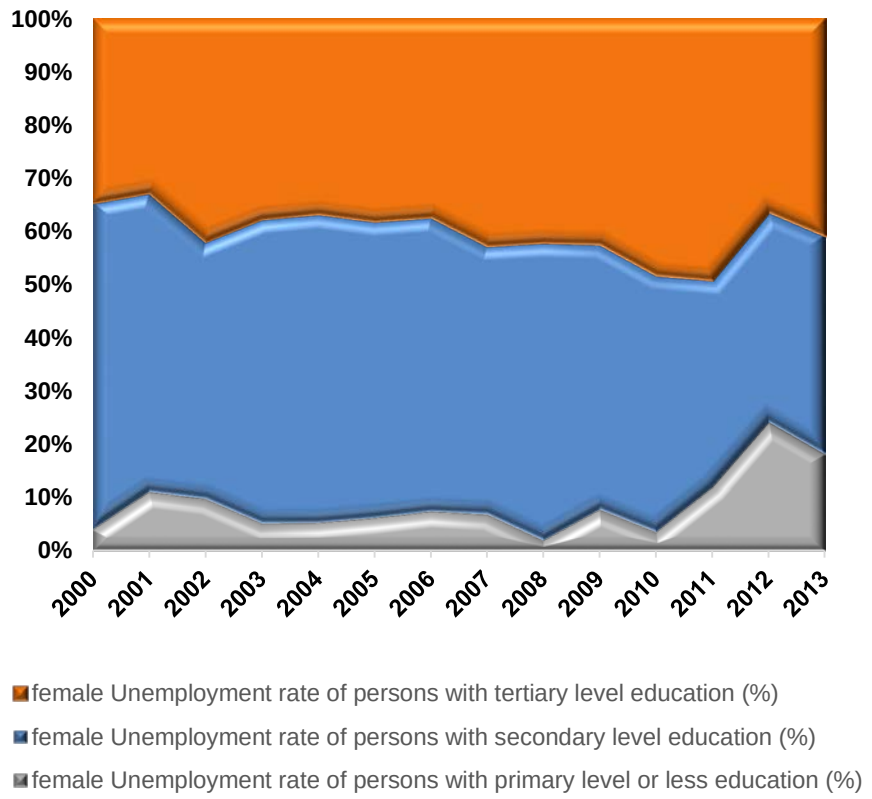
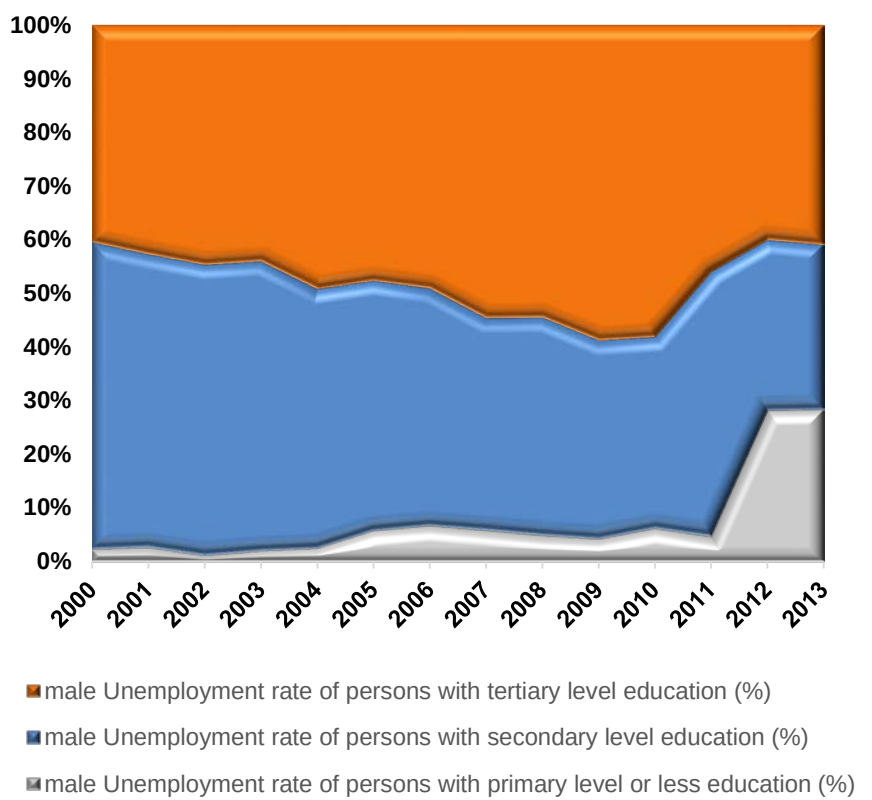
Female



Male



The unemployment rate in Egypt has been persistently high in the last decade, with the problem being most acute among the better educated youth.

conclusions

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- The fertility increase observed in from 2008 to 2014 in Egypt is rather an enduring **stall in fertility,** lasting since 2000;
- However the stall is the consequence of an increase in parity 1, 2, and 3 and a decline in parity 4+
- Possible explanatory factors:
  - Cultural: large family ideals
  - Economic crisis
  - Political: family planning programs**?**
  - Religiosity**?**…….
- Further research (multivariate) is needed to explore the causes and mechanisms
- Large impact of future fertility trends on the country‘s future

Quality of the data

Summary of the extent of the main data quality problems affecting fertility estimates (women's and children) in all EDHSs (1988 to 2014), standardized scores[1]

DHS EGYPT	WOMEN				CHILDREN			
	Incompleteness of dates of birth	Age heaping measured by Whipple's index for women aged 18-47	Age heaping measured by Myers' Blended index for women aged 15-44	Sample implementation	Incompleteness of dates of births	Age heaping measured by Myers' Blended index for children aged 0-29	Displacement	Potter effect
1988	1	2	1	2	2	5	5	5
1992	2	2	1	5	4	5	5	5
1995	2	2	1	5	3	5	5	5
2000	2	2	2	5	4	5	3	4
2005	3	2	3	4	4	5	4	4
2008	4	3	4	4	5	5	1	4
2014	5	4	4	4	5	5	2	5

[1] 1= very rough data; 2 = rough data; 3 = approximate data; 4 = fairly accurate data; and 5= highly accurate data.
[2] Standardized scores based on the percentage of women who did not provide information about their dates of birth.
[3] Standardized scores based on the Whipple's index which shows the excess or deficit of people in age ending in any of the 10 digits (0 to 9)
[4] Standardized scores based on the Myers' Blended index which shows the excess or deficit of people in age ending in any of the 10 digits (0 to 9) assuming equal distribution of the population among the different ages.
[5] Standardized scores based on the comparison of the percentage of ever-married women at all ages for weighted and unweighted samples in all DHS.
[6] Standardized index based on the percentage of women who did not provide information about the dates of birth of their children.
[7] Standardized scores based on the Whipple's index which shows the excess or deficit of people in age ending in any of the 10 digits (0 to 9)
[8] Standardized scores based on comparison of retrospective fertility trends for 15 years before the survey for all individual EDHS (more information provided in section 1).
[9] Standardized scores based on the reconstruction of fertility rates over a time period of 30 years (more information provided in section 1).