

Mediterranean fertility: towards a South-North convergence?

*Le dinamiche della fecondità nel quadro del Mediterraneo:
verso una convergenza Sud-Nord?*

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Riassunto:

La fecondità dei paesi della Riva Sud del Mediterraneo negli ultimi anni è molto diminuita, tanto da chiedersi se ciò rappresenti l'inizio di un cammino simile a quello già percorso dai paesi della Riva Nord. L'obiettivo di questo lavoro è quello di descrivere la transizione della fecondità nelle rive del Mediterraneo, ponendoci l'interrogativo circa il ruolo delle modifiche di cadenza e di intensità, attraverso l'analisi dei dati più recenti disponibili. L'ipotesi alla base del nostro lavoro è che il mutamento di fecondità (rinvio e declino) riguardi le coorti più giovani e i sottogruppi "pionieri" della bassa fecondità, ad esempio le donne più istruite. Il confronto avviene con modelli di sopravvivenza secondo la parità e i risultati confermano un parziale avvicinamento dei paesi della Riva Sud attraverso i gruppi "precursori", quali leader del processo di transizione.

Keywords: fertility transition, Mediterranean countries, life-table measures.

1. Introduction: forerunners groups of fertility transition in South Mediterranean

Fertility patterns of lowest-low fertility countries of Northern Mediterranean are very different from those of the South, but recent developments show that fertility decline is rapidly spreading in the region, especially in Maghreb countries. In certain countries period total fertility rate among women with secondary education is less than two children per woman. These recent developments revert the reputation of this area (a part from Turkey) as bastion of family conservatism and high fertility rate. But are these groups of educated women forerunners of a wide and generalised spread of fertility decline or only of a plurality of behaviours in an increasing heterogeneity within such societies, in the balance between tradition and modernisation? And more, are the characteristics of these Arab women similar to those that were notably the determinants of the onset of fertility decline in Northern Mediterranean countries? The aim of our study is to investigate the extent and the value of these recent demographic modifications. We are wondering whether they can be ascribed in a peculiar

Mediterranean fertility pattern and whether South and East Mediterranean women are therefore along the path covered by Mediterranean Europe towards and exceptional low fertility (in a sort of "convergence assumption") or if this "developmental" theory can be proved too simplistic and Eurocentric. We will trace out a Mediterranean fertility picture in the broad background of family formation patterns in these countries.

Table 1: *Evolution of TFR in some Southern Mediterranean countries from 1960 to 1995 and in 1990s by education level.*

	1960	1995	EDUCATION LEVEL		
			None	Primary	Secondary and more
Algeria	8.4	3.6	4.5 ^c	2.9	2.7
Egypt	7.1	3.6	4.6	3.1	3.0
Libya	7.2	3.6	-	-	-
Morocco	7.2	3.0	4.0 ^b	2.4	1.9
Tunisia	7.2	2.6	3.9 ^b	2.7	2.0
Turkey	6.3	2.4	4.1 ^a	2.4	1.7

^a=1992; ^b=1993; ^c=1995. Data from Courbage 1998.

2. Data and Preliminary Analysis

The analyses are based on the most recent retrospective surveys data available for Italy, Spain, southern France, in Mediterranean Europe (and Portugal as well, because of cultural and demographic similarity) and Algeria, Egypt, Morocco, Tunisia, Turkey for South Mediterranean countries¹, from the Fertility and Family Surveys, Demographic and Health Surveys and Arab Maternal and Child Health Surveys of 1990s. The surveys used detailed birth-history data and information on the demographic and socioeconomic background of the respondent women. The surveys designs are quite similar and in order to compare findings we took into consideration only ever-married women (and ever-cohabiting women in the North). Life-table measures are used to describe childbearing patterns and separate life tables are calculated for the transitions from marriage to first birth and then to each birth transition. Fertility summary measures estimated from life-tables are the cumulative proportion of women of a given parity having a subsequent birth within 60 months of the previous birth and the median length of the interval between successive births.

Table 2: *Dates and sample sizes of surveys*

Country	Survey	Year	Sample size ²
Algeria	MCHS - Maternal and Child Health Survey	1992	5.024
Egypt	DHS - Demographic and Health Survey	1995	14.779
Italy	FFS - Fertility and Family Survey	1995	3353*
Morocco	MCHS	1997	5096*
Portugal	FFS	1997	3416*
Spain	FFS	1995	2755*
Tunisia	MCHS	1995	4338*
Turkey	DHS	1998	6152*
France	FFS	1994	2566*

* sub-samples of women ever-married or ever-cohabiting

¹ We will extend the analyses on Greece, Slovenia and Libya fertility as soon as we will obtain data.

² The lowest age at the interview is 15 for all South Mediterranean Countries and Portugal, 18 for Spain, 20 for France and Spain.

Table 3: Median age at the first birth

	<i>TUNISIA</i>		<i>EGYPT</i>		<i>MOROCCO</i>		<i>TURKEY</i>	
Age class	None/low education	Medium/high education	None/low education	Medium/high education	None/low education	Medium/high education	None/low education	Medium/high education
< 30	21.5	23.6	19.9	24.2	20.5	23.5	20.1	22.2
30-39	22.1	23.9	21.7	24.7	21.2	27.3	21.1	23.8
40-49	21.7	23.9	22.1	24.7	20.8	25.8	20.8	23.0
	<i>ITALY</i>		<i>FRANCE</i>		<i>SPAIN</i>		<i>PORTUGAL</i>	
Age class	None/low education	Medium/high education	None/low education	Medium/high education	None/low education	Medium/high education	None/low education	Medium/high education
< 30	22.2	25.8	21.8	26.3	20.8	25.8	21.7	25.7
30-39	21.7	26.4	22.1	25.3	23.1	25.8	22.0	25.8
40-49	23.2	25.6	22.2	24.7	24.7	25.2	23.1	25.8

Table 4: Cumulative proportion of women reaching the next parity within 60 months after preceding birth

		<i>TUNISIA</i>		<i>EGYPT</i>		<i>MOROCCO</i>		<i>TURKEY</i>	
Parity	Age class	None/low education	Medium/high education	None/low education	Medium/high education	None/low education	Medium/high education	None/low education	Medium/high education
M-1	< 30	83.4	76.8	80.4	76.2	77.8	68.9	80.5	74.1
	30-39	89.3	94	68.8	89.1	88.2	86.8	84.6	89.1
	40-49	84.1	93.4	47.6	88.6	88.4	88.7	69.1	90.9
1-2	< 30	93.3	87.8	92.6	93.9	82.9	63.5	82.2	65.9
	30-39	93.8	86.7	92.7	92.0	88.1	72.7	85.2	59.8
	40-49	92.9	91.1	91.4	89.4	89.8	77.3	90.7	58.2
2-3	< 30	83.2	40.9 ⁺	86.1	72.8	79.6	57.9	55.7	37.0 ⁺
	30-39	85.9	56.8	87.8	66.1	83.2	41.8	60.3	25.9 ⁺
	40-49	90.8	69.5	87.6	57.6	90.1	49.9	75.9	-
3-4	< 30	79.4	-	83.7	56.1	74.2	-	63.4	-
	30-39	79.2	52.5 ⁺	80.8	50.4	76.6	50.9	55.8	-
	40-49	84.6	-	80.6	40.9	85.8	55.5	65.6	-
4-5	< 30	72.5	-	77.7	-	-	-	63.4	-
	30-39	73.6	-	72.5	43.8 ⁺	69.9	-	55.8	-
	40-49	79.1	-	68.6	33.8 ⁺	80.3	-	65.6	-
		<i>ITALY</i>		<i>FRANCE</i>		<i>SPAIN</i>		<i>PORTUGAL</i>	
Parity	Age class	None/low education	Medium/high education	None/low education	Medium/high education	None/low education	Medium/high education	None/low education	Medium/high education
M-1	< 30	87.9	57.9	70.1	40.3	83.2	55.2	80.6	58.3
	30-39	91.6	78.1	82.1	65.2	92.2	81.9	90.7	83.0
	40-49	90.6	85.5	85.3	73.8	93.3	87.8	91.4	85.3
1-2	< 30	66.5	55.5	70.0	48.3	56.2	38.6	38.1	24.6
	30-39	69.8	48.3	65.3	54.3	61.2	55.4	46.4	33.9
	40-49	63.8	51.9	61.4	53.0	68.9	67.6	54.9	50.1
2-3	< 30	54.6	13.6	49.8	32.7	36.7	11.2	25.8	9.1
	30-39	21.4	13.9	45.2	30.2	25.6	16.5	25.0	10.8
	40-49	30.2	16.5	44.8	26.8	32.9	23.7	27.9	10.2
3-4	< 30	-	-	37.5	-	50.6	33.3	-	-
	30-39	10.8	10.6	33.6	16.2	27.4	17.1	28.6	25.9
	40-49	25.0	12.2	41.2	15.4	29.9	25.1	29.1	13.5
4-5	< 30	-	-	-	-	-	-	-	-
	30-39	-	-	33.0	22.5	37.4	30.2	42.0	20.0
	40-49	-	-	41.1	28.0	25.9	11.4	29.2	25.0

5. Discussion of results

The first results, based on non-parametric estimates carried out on women classified according to education levels, show that the South and East Mediterranean countries, although the dramatic drop of period fertility indicators and the high variability of fertility levels among different group of women inside each country, present fertility patterns of birth transitions and births intervals still very different from those of the low-lowest fertility Northern Mediterranean countries. Women with a low level of education who go on in the formation of their family up to the fifth child are sizeable, while more educated women are more similar to their counterparts living in North Mediterranean countries (see table 4). These results, looking at the quantum of the phenomenon, are supported by the ones deriving from the analysis of the timing of births. In fact, for instance, median age at first birth for secondary educated Moroccan women, is very high, quite higher than in the countries of North Mediterranean Shore (see table 3). But the evaluation of a general approach poses further problems of quantum and tempo modifications of fertility patterns.

To understand the contribution of the socio-economic covariates we carried out comparative analyses applying proportional hazard models to the samples of the different countries. For instance, in Italy, Spain and Turkey the timing of fertility measured by intervals between births seems to be significantly influenced by the same factors, that are education, female working status, urban residence in the childhood and later. The coefficients have negative effects on the intervals: educated working women living in urban context show shorter intervals, therefore showing a lower fertility but in a shorter and more concentrated period.

Appropriate parametric methods will be used in order to distinguish the tempo and quantum effects in further in depth-study.

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