

Transition to Third Birth in Morocco

Transizione al Terzo Figlio in Marocco

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Riassunto: In questo contributo ci proponiamo di analizzare i fattori che influenzano la propensione ad avere il terzo figlio in Marocco, utilizzando tecniche di event-history su dati provenienti dalla Demographic and Health Survey 2003/04. I risultati evidenziano come, malgrado il Marocco si trovi in una fase di avanzata transizione socio-demografica, persistano marcate differenze tra gruppi sociali: l'area di residenza, il livello di istruzione e l'autonomia decisionale delle donne ne discriminano, infatti, le scelte riproduttive. Tuttavia, il dinamico processo di modernizzazione in atto nel paese, promuovendo l'empowerment femminile, sembra influenzare anche il comportamento fecondo delle donne con scarso potere decisionale.

Keywords: Fertility Transition in Morocco, Event-History Analysis

1. Introduction

Our analysis will focus on Morocco which is nowadays characterised by a decline of fertility levels and by important changes in the intermediate determinants (D'Addato, 2006). In general, if the first phase of fertility transition is marked by an increase of the age at marriage, in the long term the progression from second to third birth represents a critical component of fertility change, since the reduction especially of third and higher-order births maintains fertility decline. For these reasons, this study aims at analyzing the main determinants of third-birth intensities of two-child mothers applying event-history analysis to the most recent retrospective Moroccan survey data.

Section 2 briefly describes the trend of fertility decline in Morocco and states our research hypotheses. Data and methods are presented in section 3. In section 4 results are discussed and conclusions are given.

2. Fertility transition in Morocco and research hypotheses

Morocco is a country which has almost achieved its fertility transition without all the

essential preconditions being present. In the Arab world, Morocco's earlier-onset transition was mainly due to its early exit from the rent-seeking economy. In addition, greater familiarity with Europe through the agency of emigrants created an environment conducive to smaller families (Courbage, 2002).

Nowadays, throughout the country a rather dynamic process of modernization is acting, involving fertility and nuptial behaviors, family planning, contraceptive use, women's role and status in the family as well as in the society, and political orientations.

Morocco was close to natural fertility in the Sixties with 6.96 children per woman. In the early Seventies, the period fertility rate rose, peaking at 7.40 children. Then, fertility has continued an unbroken decline since the mid-1970s. The economic recession (falling phosphate prices) and political/military crisis (tensions in the Sahara) contributed to sharply depress fertility, down to 5.91 in 1979, 5.52 in 1982, 4.46 in 1988, 3.28 in 1994, 2.80 in 1999, and more recently, 2.50 at the last Demographic and Health Survey of 2003/04 (for the 3 years preceding the survey).

Within the frame of the ongoing advanced transitional process involving the country, through the analysis of current individual data we would like to see if there are "pioneer" subgroups with low fertility. Namely, we are interested in verifying the hypotheses that postponement of marriage, an urban background, increased educational levels, and women's decisional autonomy lead to a higher propensity to establish smaller families. We also expect that when previous children die at an early age, mothers will likely attempt to "replace" them as a response to experienced child mortality.

3. Data and method

The research is carried out using data stemming from *l'Enquête sur la Population et la Santé Familiale (EPSF) 2003/04*, conducted in Morocco in the frame of the *Demographic and Health Surveys*. Being marriage almost universal in the country and because practically all births occur within marital unions, our analysis focus on 6117 married women aged 15 to 49 that have already given birth to the second child.

The progression to third birth is investigated with a *piecewise constant intensity regression model*. Risks are assumed constant within each time interval but may vary across such intervals. The *process time* of the model is the number of months elapsed from the second to the third birth (starting eight months after the birth of the second child).

Specifically, the following variables are included in the model: age at first marriage; age at second birth; woman's childhood place of residence; woman's and husband's educational level¹; woman's decisional autonomy² (a variable assuming value 1 if the woman declares to have a say in the matter of the most important family decisions, 0 if not); survival status of the previous two children. We also include in the model a time varying covariate aiming at capturing the influence of changes in the socio-political environment on third-birth

¹ The inclusion of education in the analysis is justified by the assumption that women and men have already concluded their educational career at the time of second birth.

² This variable, which can change over time, is measured at the time of interview. However, we interpret it not in conjunction with the third birth, but as a proxy of a process of emancipation already started in the past, helping to identify the status of the women in Morocco.

intensity, using three time periods categorized as follows: until 1993, from 1994 to 1998 and from 1999 to the date of interview. Our choice is motivated by these reasons: (a) in 1993 the first royal reform of the Personal Status Code (*Mudawwana*, officially issued in 1957) was made, (b) in 1998 the “*Plan national pour l’intégration de la femme au développement*” was developed, and (c) in 1999 Muhammad VI, a liberal and open-minded sovereign was enthroned, with the declared intention to establish a democratic reform, improve women’s status and ensure the human dignity.

4. Discussion

The model parameters, produced as maximum-likelihood estimates, are presented in the form of relative risks (Table 1).

Controlling for the “calendar period” covariate, the first categorization highlights the highest progression risk and then the risk diminishes at each subsequent level. In the last period, the risk is 35% lower than for the period until 1993.

The educational composition of the population and the childhood place of residence are two important predictors of fertility change: women having a lower level of schooling, being married to uneducated men and having spent their childhood in a rural context can be viewed as “laggards” in the fertility transition. Higher women’s decisional autonomy also discriminates significantly the reproductive choices, depressing mothers’ propensity of experiencing the third birth. Thus, for Morocco, it emerges how the diffusion of urban-type norms make crowded and complex household types less feasible to maintain.

As it has been largely postulated in the literature (e.g., Scrimshaw, 1978), infant and child mortality may have a remarkable effect on fertility. Our findings confirm that the death of previous children reduces mothers’ probability of stopping at the second birth and, thereby, raises the number of births.

In order to directly catch the process of emancipation and modernization acting in the country, we added at the previous model an interaction term between the “calendar period” and “woman’s decisional autonomy” (Table 2). The results point out a decline over time of having a third birth both for women with and without an independent decisional role. Therefore, even the most latter group shows a decrease in third-birth intensity during the 1990s.

To sum up, the differences among social groups still persist in Morocco: higher risks of giving birth to the third child characterize women having a lower educational level, married to less educated husbands, experiencing a rural background and being more unlikely to assume a decisional role independently from their roles of wives and mothers. Nevertheless, our analysis has also demonstrated that the dynamic process of modernization which involves the country and that is directly addressed towards a promotion of women’s empowerment, acts also on the fertility behavior of the women still having a low decisional role. This implies that we can expect further declines in the level of fertility in the near future.

Table 1: Determinants of third birth intensity in Morocco

Covariates	Relative Risks	Significance
Calendar period		
≤1993	1.00	
1994-1998	0.72	***
1999-2003/04	0.65	***
Woman's childhood place of residence		
Rural	1.00	
Urban	0.81	***
Woman's educational level		
No education	1.00	
Primary level	0.84	***
Secondary and higher level	0.66	***
Woman's decisional autonomy		
Dependent decisional role	1.00	
Independent decisional role	0.92	*
Husband's educational level		
No education	1.00	
Primary level	0.90	***
Secondary and higher level	0.78	***
Survival status of first child		
Dead < 12 months	1.00	
Dead ≥ 12 months	0.77	***
Alive	0.69	***
Survival status of second child		
Dead < 12 months	1.00	
Dead ≥ 12 months	0.52	***
Alive	0.45	***

Source: own elaborations on DHS 2003/04, Morocco. The model is controlled for the basic time factor, age at first marriage and age at second child. Significance test of factors: * p<0.10 ** p<0.05 *** p<0.01.

Table 2: Relative risks of third birth, by interaction between calendar period (CP) and women's decisional autonomy (WDA) in Morocco

	≤1993	1994-1998	1999-2003/04
Interaction: CP-WDA***			
Dependent decisional role	1.00	0.76	0.71
Independent decisional role	0.98	0.69	0.59

Source: own elaborations on DHS 2003/04, Morocco. The interaction is controlled for all the other factors considered in the model presented in Table 1. Significance test of factors: * p<0.10 ** p<0.05 *** p<0.01.

References

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