

In 2008 a survey of fertility transitions in developing countries highlighted the fact that the average pace of fertility decline slowed significantly in Sub-Saharan Africa between the mid-1990s and the early 2000s (Bongaarts 2008). As many as two thirds of the countries in the region had experienced no significant decline in fertility between the two most recent surveys; and more than half of them were in a 'fertility stall'. A fertility decline is said to 'stall' when the downward trajectory of rates from high 'pre-transitional' levels towards the long-run replacement level comes to a halt well before this level is reached. In 2008 there were a handful of countries in Sub-Saharan Africa with 'pre-transitional' levels of fertility (no sign yet of any significant, sustained decline from the very high levels recorded in surveys from the 1950s or 1960s). There were a lot more which appear to have 'stop-start' patterns of decline (n=9), and TFRs between 4 and 6.

Fertility stalls have been reported for countries outside Sub-Saharan Africa (see fig.1), but the high number of Sub-Saharan African countries with stalls suggests that the transition to a low mortality, low fertility demographic regime may prove much harder to achieve in Sub-Saharan

Africa than it has elsewhere. It has also fuelled concern about continuing population growth in the region. "Recent evidence of the stagnation of fertility transitions in Africa has generated renewed interest in the population debate" (Bongaarts and Sinding 2009).

Definitions of fertility stalling

Although researchers agree on the broad definition of fertility stalling, they diverge on the details of the criteria for identifying 'cases' – and these differences generate different counts for the numbers of countries in a stall. There are different ways of drawing the line between countries that have 'pre-transitional' levels of fertility and countries that have started their fertility transition; and different ways of deciding when a slowdown in fertility decline constitutes a stall. For example, Shapiro (2008) uses a fairly high level of fertility (>7) to classify a country as pre-transitional – which means that he would have a higher count for countries 'in a stall' than a researcher who sets the boundary at TFR>6. His criterion for a stall, on the other hand, is 'strict' (Shapiro 2011), and excludes cases that Bongaarts would count as stalls.

Fig. 1 Countries outside SSA for which stalling has been reported*

Asia/MENA	Timing of stall	Stalling @ TFR	2005-10 TFR	S & C America	Timing of stall	Stalling @TFR	2005-10 TFR
S Korea	late '60s - early '70s	4 - 4.5	1.23	Argentina	1940s-1970s	3 – 3.5	2.25
Sri Lanka	mid '70s	3.5	2.31	Costa Rica	mid '70s	3.5 - 4	1.92
Iran	mid '70s	6+	1.89	Brazil	1986-1991	3 - 4	1.9
Thailand	early '80s	3.5 - 4	1.49	Peru	1992-1996	3.5	2.6
Gaza/W Bank	mid-1980s – early 90s	6+	-	Colombia	1990-1995	3	2.45
Turkey	1993-1998	2.5	2.16	Guatemala	1990s	5 – 5.5	4.15
Bangladesh	1996-2000	3 – 3.5	2.4	Dominican Rep.	1999-2002	3	2.67
Egypt	1995-2000	3 – 3.5	2.98	Ecuador	1989-2004	3 – 3.5	2.75
Indonesia	2002-2007	2.5	2.5				
Jordan	1998-2008	3.5	3.6				
Syria	2000-2009	-	3.2				

* Apart from Indonesia, Jordan and Syria, these reports of stalling fertility refer to stalls that have now ended. The reports come from various sources, and some of them (e.g. Sri Lanka, Thailand) have been contested as involving measurement errors. For a complete list, see accompanying research brief.

This is because Bongaarts counts a country as stalling if the decline in fertility over two measurements is 'not significantly different' from zero, whereas Shapiro states that a stall occurs if TFR fails to decline across two measurements. One criterion places Ethiopia and Cote d'Ivoire in a stall; the other does not. Garenne (2008) has an even 'stricter' definition than Shapiro, and does not count Zambia as a case of stalling.

A measurement problem?

Schoumaker (2009) is one of a number of researchers who have asked whether the cases of fertility stalling that have been identified by Bongaarts in Sub-Saharan Africa are genuine or spurious. This is a measurement problem rather than a disagreement about criteria, and it turns on the robustness of the estimates of period fertility that are used in the Demographic and Health Surveys to classify a country's fertility trend as stalling or not. Schoumaker argues that some of the estimates for Sub-Saharan Africa suffer from serious data quality problems, and shrinks Bongaarts' count of 9 countries in a stall to just one, Kenya. Machiyama (2010), taking a slightly different approach to remeasurement, agrees

that the evidence for stalling is compelling only in Kenya, though he identifies 'possible stalls' in Benin, Rwanda and Zambia.

Explanation

Schoumaker and Machiyama, by rejecting most of the supposed cases of fertility stalling in Sub-Saharan Africa as spurious, have no reason to look for common factors to explain stalling *across the region*. For both of them, it is a question of explaining one or two isolated cases. This is not how the problem presents itself to other commentators such as Bongaarts, Shapiro or Garenne. Bongaarts (2008) argues that there has been a slowdown in fertility declines across the region, and that this can be explained by (i) the impact of the HIV/AIDS epidemic on mortality (ii) poorly performing economies (iii) lower priority assigned to family planning programs. Shapiro and Garenne consider a different set of cases from Bongaarts (and each other), and focus more exclusively on the explanation of stalling. Shapiro does agree with Bongaarts, however, in highlighting the role of infant and child mortality. Garenne, on the other hand, fails to find any common factors among the six countries he identifies as stalling.

Fig.2 Cases of stalling and stagnation in Sub-Saharan Africa identified from most recent DHS**

Declining	Declining	Pre-transitional TFR>6	Stalling	Stalling
Ethiopia 2005-11	Madagascar	Burundi 1987-2010	Benin 2001-06	Zimbabwe 2006-11
Eritrea 1995-2002	Malawi 2004-10	Chad 1996-2004	Burkina Faso 2003-10	
Ghana 2003-08	Namibia 2000-06/7	Mali 2001-06	Cameroon 2004-11	Gabon 2000-12
Guinea 2005-12	Rwanda 2005-07/8	Niger 1998-2006	Mozambique 2003-11	Cote d'Ivoire 1998-2011
Kenya 2003-08/9	Senegal 2005-10/11	Uganda 2006-11	Nigeria 2003-08	
Lesotho 2004-2009	Tanzania 2004/5-10		Zambia 2001-07	

**Includes only countries with more than 1 DHS where the most recent DHS is no earlier than 2004. The criteria for pre-transitional fertility is TFR > 6. TFR in Cote d'Ivoire declined by 0.2 children over a 12 year period and in Gabon by 0.1 children over 12 years, i.e. < 0.03 children per year. These would both be stalls by Bongaarts' 2008 criterion. All the other stalls follow Shapiro's criterion.

References

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