

**NEW TIMES, NEW FAMILIES:
THE STALL IN GHANAIAAN FERTILITY**

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Abstract

In recent times, population scientists have shown increasing interest in stalled fertility transitions. The patterns and explanations of these stalls make interesting studies. This paper examines the case of Ghana based on data from the Demographic and Health Surveys (DHS). The main aim of the paper is to examine the recent stall in the fertility decline in Ghana and to explain its dynamics. The findings show that the pace of the Ghanaian fertility decline stagnated between the period of the 1998 and 2003 DHS. The recent fertility change has revealed varying patterns of fertility at the regional level. In the Northern Region, for example, persistent high fertility has been evident, whereas in the Greater Accra Region, the fertility decline has stalled. The stall in fertility is explained within the framework of both individual and broader societal factors.

Introduction

In recent times, population scientists have shown increasing interest in stalled fertility transitions (Nahmias and Stecklov 2007, Bongaarts 2006, Westoff and Cross 2006, Eltigani Eiltigani 2003, Knodel et al. 2005, Gendell 1985, 1989). The patterns and explanations of these stalls make interesting studies. In simple terms, a stall in fertility decline can be said to have occurred if the TFR fails to decline between two surveys while the country is in mid transition. A mid transition is presumed to be the stage where the TFR is between 2.5 and 5.5 births per woman at the time of the most recent survey (Bongaarts 2006).

A more elaborate assessment of stalls in fertility decline has been provided by Gendell (1985). He outlines four criteria to determine whether a stall in fertility has taken place or not. The first criterion is that a fertility decline must already have started. Gendell's second criterion is that, in order to distinguish a stall from a generally slow decline, the decline should have been fairly rapid. Third, he concedes that a stalled fertility decline may still show gradually declining fertility but the pace of fertility decline should be substantially different. Finally, Gendell excludes cases where fertility has brought the TFR close to the long run replacement level, as he argues that such scenarios undermine the essential concept of a stalled fertility transition (Gendell 1985). In sum, a stall in fertility must be preceded by an onset and a stalled fertility decline may still show evidence of a gradually declining fertility.

Stalling fertility transitions have an impressive spatial pedigree. Stalls have been uncovered in a number of middle and low income countries such as Iran (Aghajanian 1991), Malaysia (Hirschman 1986), Sri Lanka (Gendell 1989) and Egypt (Eltigani Eltigani 2003). The phenomenon is more recent in Sub-Saharan Africa, with stalls being reported for Kenya (Westoff and Cross 2006, Bongaarts 2006), South Africa (Moultrie et al. 2006) and Ghana (Agyei-Mensah 2006). Interestingly, most studies of the stalls in fertility decline mentioned above have been conducted at the national aggregate level (Bongaarts 2006, Eltigani Eltigani 2003, Gendell 1985, 1989). Even where the emphasis has been on the sub-national level (see Moultrie et al 2006, Nahmias and Stecklov 2007) comparisons have not been made across geographical regions and subgroups. An exception is the assessment of the Kenyan stall by Westoff and Cross (2006). In addition, most of the explanations attributable to these stalls are based on individual level characteristics. Very few studies have looked at the broader societal factors which underpin these stalls. It needs to be emphasized that uncovering stalls in fertility decline at the national aggregate level, provides no indication of whether there are spatial differences across geographic regions and among subgroups.

Against this backdrop, this paper examines the evidence surrounding the recent stall in fertility decline in Ghana. Ghana provides an intriguing context in which to examine stalls in fertility decline, because compared with other countries in the West African sub-region, fertility decline has been more rapid and substantial. This has apparently made Ghana the vanguard in the sub-region and of significant interest for policy makers and researchers alike. With a current Total Fertility Rate of 4.4 as at 2003, the TFR in Ghana is the lowest in the sub-region (Agyei-Mensah 2006). In the 1970s, the findings of the World Fertility Survey prompted in no small measure the argument that fertility decline had begun in Ghana (Cochrane and Farid 1989). This was based on the evidence of a small decline in the five-year period preceding the 1979 GFS survey. A detailed data quality analysis of the GFS data at the time indicated that no severe omission of births had occurred, but that the number of children who had died had been underestimated (Owusu 1984). The argument of the decline in fertility was also bolstered by Singh and Shah's (1985) analysis that in spite of reporting errors which might have led to a spurious decline in fertility, the beginning of a long-term decline in fertility was consistent with the data.

However, the so called fertility decline was not sustained in the 1988 Ghana Demographic and Health Survey, leading to suggestions that the fertility decline may have stalled (Ghana Statistical Service 1989). Among the reasons cited for the absence of a

further decline in fertility was the stability in age at first marriage, the very small increase in the use of contraception, out-migration of young males and the economic crisis that hit the country during the mid to late seventies and early eighties (Ghana Statistical Service 1989). More recently, Gaisie (2005) has produced a new set of estimates of the fertility data for the 1979 GFS which shows that the fertility rates were higher than the previously reported figure of the 1979 GFS (ie total fertility rate of 6.69 as compared with 6.47). Assuming this re-assessment is correct; it implies that there was no stall in fertility in Ghana in the 1980s. The subsequent Demographic and Health Surveys conducted in 1993, 1998, and 2003 underscore significant and steady declines in fertility since then; falling from 6.43 in 1988 to 5.50 in 1993, 4.455 in 1998, and then a stall to 4.4 in 2003. What then accounts for the recent stagnation in Ghanaian fertility, and is this stagnation apparent across geographic regions and subgroups?

The macro-economic data for Ghana has been relatively positive during the past two decades, with the country becoming a success story in international development circles. The impression on the ground however, is that the average Ghanaian struggles to make ends meet. So is the fertility stall a positive income effect or a negative income effect? The main objective of this paper is to analyse recent trends in the pace of the Ghanaian fertility transition in order to ascertain the nature of the recent stall in fertility decline. The paper is also interested in its spatial dimensions. It raises a number of research questions: first, what is the nature of the Ghanaian

stall? Second, what are the relative contributions of both individual and societal forces in explaining the stall in fertility decline?

And finally, what are the future prospects?

The Evidence of the Stall in Ghanaian Fertility

In order to account for the recent changes in fertility in Ghana, trends are examined by the national, rural urban and administrative region as well as by educational attainment (see Table 1). At the national level the evidence is clear and revealing. There has been stagnation in the TFR from 4.6 births per woman in 1998 to 4.4 in 2003.

Table 1; Trends in the total fertility rate, by background characteristics, 1993-2003

Background Characteristic	GDHS 1993	GDHS 1998	GDHS 2003
Residence			
National	5.5	4.60	4.4
Urban	3.99	2.96	3.1
Rural	6.36	5.41	5.6
Region			
Western	5.54	4.70	4.5
Central	5.57	4.78	5.0
Greater Accra	3.56	2.66	2.9
Volta	5.41	4.44	4.4
Eastern	5.10	4.41	4.3
Ashanti	5.60	4.76	4.1
Brong-Ahafo	5.46	5.40	4.8
Northern	7.39	6.98	7.0
Upper West	6.02	6.14	4.7
Upper East	6.44	4.98	5.5
Education			
No education	6.67	5.83	6.0
Primary	6.10	4.94	5.3
Middle/JSS	4.71	3.78	3.5
Secondary/Higher	2.90	2.80	2.5

Source: Ghana Statistical Service et al. 1994; 1999; 2004

The trends in fertility change by administrative region are also quite interesting. Among the 10 administrative regions, 6 regions (i.e. Eastern, Western, Central, Volta, Upper West and Greater Accra) experienced stalls in fertility decline between 1998 and 2003. Stalls have not yet been reported in the Ashanti and Upper East regions. In the Northern Region, high persistent fertility has been evident, and there has been no change in fertility. In the Brong Ahafo Region, a stall was observed between 1993 and 1998, but this has resulted in a further decline since 1998. (see Table 1). Further analysis of the changes in fertility in the administrative regions and urban rural contrasts are provided in Table 2. We see that there was no percentage change in the TFR for the Volta Region between 1998 and 2003 (0%), thus reemphasizing the stall in fertility. A similar 0% change was observed for the Northern region between 1998 and 2003, but this cannot be said to be a stall in fertility decline since there has not been any prior significant decline in fertility in that region. The Upper West, Greater and Central regions recorded significant increases in fertility between 1998 and 2003. Slow declines were reported for the Eastern (-2.3%), Western (-4.3%) regions.

Table 2: Spatial Progression of the Ghanaian Fertility 1988-2003

	1988	1993	1998	2003	%change 1988-1993		%change 1993-1998		%change 1998-2003	
Urban	3	4	3	3.1	1	33.3	-1	-25.0	0.1	3.3
Rural	6.6	6.4	5.4	5.6	-0.2	-3.0	-1	-15.6	0.2	3.7
Western	6.1	5.5	4.7	4.5	-0.6	-9.8	-0.8	-14.5	-0.2	-4.3
Central	6.6	5.5	4.8	5	-1.1	-16.7	-0.7	-12.7	0.2	4.2
Gt.Accra	4.6	3.6	2.7	2.9	-1	-21.7	-0.9	-25.0	0.2	7.4
Volta	5.7	5.4	4.4	4.4	-0.3	-5.3	-1	-18.5	0	0.0
Eastern	6.7	5.1	4.4	4.3	-1.6	-23.9	-0.7	-13.7	-0.1	-2.3
Ashanti	5.9	5.6	4.8	4.1	-0.3	-5.1	-0.8	-14.3	-0.7	-14.6
B-Ahafo	6.9	5.5	5.4	4.8	-1.4	-20.3	-0.1	-1.8	-0.6	-11.1
Northern	6.8	7.4	7	7	0.6	8.8	-0.4	-5.4	0	0.0
U.East	6.8	6	6.1	4.7	-0.8	-11.8	0.1	1.7	-1.4	-23.0
U.West	6.9	6.4	5	5.5	-0.5	-7.2	-1.4	-21.9	0.5	10.0

Source: Ghana Statistical Service et al. 1989, 1994; 1999, 2004

The trends in fertility by educational attainment are also quite interesting. There have been sharp increases in fertility in the two least-educated strata, while in the Middle/JSS and Secondary/Higher categories; the TFR has shown a significant decline. This pattern is consistent with the analysis of the Kenyan stall where Westoff and Cross (2006) observed increases among the least educated and decline among the most educated.

Regional variations in stalling fertility transitions are not only unique to Ghana. In the analysis of the Kenyan stall, Westoff and Cross (2006) observed similar stalls in the pace of the fertility decline. Stalls in fertility decline were recorded in the Eastern, Coast and Nairobi Provinces. Similar to the Northern Region of Ghana, there was no evidence of any change in the TFR in the Western Province over the decade. The contrast here is that the TFR in the Northern Region (7.0 as at 2003) is relatively higher than that of the Western province (5.8 as at 2003).

Explaining the Stall in the Ghanaian Fertility Decline:

Research on Ghana's fertility decline during the past decades have revealed the importance of socio-economic and ideational factors (Agyei-Mensah 2006). Thus in accounting for the recent stall in fertility, we need to find out what is happening to these factors. Explanations for the stall are sought within the framework of both micro and macro level forces. I begin with the micro evidence.

The Micro Evidence

Reproductive Preferences

For declines in fertility to be sustained, there must be changes in fertility norms towards smaller family sizes. A plausible reason for the stall in Ghanaian fertility may have to do with fertility desires. I think reducing fertility from levels of 6 to 8 down to 4 to 5 may not be so difficult, because most couples do not want the burden of many children surviving (6+). But the further step down below 4 children makes couples anxious and insecure. We notice that the onset of the fertility transition (6.4 in 1988 to 5.5 in 1993) was marked by a significant reduction in the average ideal number of children from 5.3 in 1988 to 4.4 in 1993 and 4.3 in 1998. In 2003, the mean ideal number of children reported was 4.4. Thus fertility desires since 1993 have hovered around 4.4 births. Indeed, there has not been any significant drop in fertility desires since 1993. It should be noted that the effects of the burden of children and its influence on fertility desires operate differentially among couples of different geographical and socio-economic groups. The results of the GDHS 2003 indicate that urban residents desire fewer children than their rural counterparts. What is worrying is that fertility desires amongst both urban and rural dwellers has not gone down since the 1993 GDHS. It is also of interest to note that with the exception of the Greater Accra Region, ideal family size increased in all the administrative regions between 1998 and 2003 (see Table 3).

Table 3: Mean Ideal Number of Children (Women 15-49) By Administrative Region

Region	1998	2003
National	4.3	4.4
Urban	3.7	3.9
Rural	4.6	4.9
Western	4.2	4.3
Central	4.0	4.1
Greater Accra	3.5	3.4
Volta	3.8	4.4
Eastern	4.1	4.3
Ashanti	4.1	4.6
Brong Ahafo	4.3	4.5
Northern	6.9	8.2
UpperEast	5.9	7.0
Upper West	5.9	6.2

Source: Ghana Statistical Service et al. 1999; 2004.

Another way to examine the contribution of reproductive preferences to the recent stall in fertility is by examining the percentage of women who want no more children. Recent analysis of the Kenyan stall shows that there has been a reversal in the decline of the number of children desired. The percentage of women wanting no more children increased from 49% in 1989 to 52% in 1993, 53% in 1998 and declined to 49% in 2003 (Westoff and Cross 2006). The case of Ghana is slightly different. Analyses of the four different Demographic and Health Surveys (GDHS 1988, GDHS 1993, GDHS 1998, GDHS 2003) conducted in Ghana since 1988 shows that the proportion of women who wanted no more children rose from 23 percent in 1988 to 34 percent in 1993, 35 percent in 1998 and 36 percent in 2003. Thus unlike Kenya, where there has been a recent reversal, the case of Ghana shows slight increases

since 1993. Indeed, the data shows that the proportion of Ghanaian women who want no more children has not witnessed any significant change since 1993. This observation is consistent with the statistics for ideal family size.

We also analyzed the reproductive preference data to examine the situation with respect to the administrative regions. It was of interest to note that amongst the 10 administrative regions, it was only in the Northern and Brong Ahafo Regions where there was a reversal in the proportion of women who wanted no more children between 1998 and 2003. The proportion of women who wanted no more children in the Northern Region is of particular interest given the regions persistent high fertility. Here, the proportion of women wanting no more children declined from the 1998 figure of 17.9% to 15.1% in 2003 (see Table 4). All the other Administrative Regions recorded increases.

Table 4: Percentage of Currently Married Women who want no more children, 1998, 2003 GDHS

	1998	2003
Region		
National	35.0	36.0
Urban	36.8	36.4
Rural	34.2	35.6
Western	30.5	37.6
Central	42.7	43.7
Greater Accra	41.5	45.7
Volta	43.2	45.6
Eastern	39.9	46.7
Ashanti	32.5	37.1
Brong Ahafo	34.5	33.5
Northern	17.9	15.1
Upper East	19.9	21.9
Upper West	25.3	23.2

Source: Ghana Statistical Service et al. 1999; 2004

The Timing of Marriage and Post Partum Variables

The stall in Ghanaian fertility can also be seen within the context of the recent stability in the timing of marriage and first birth, as well as postpartum variables. For example, the median age at first marriage increased only slightly from 18.8 in 1993 to 19.6 in 2003 among women aged 20-49 years. Similarly the median age at first birth remained stable at 20.2 in 1993 and 20.5 in 2003. In the case of postpartum variables, the median duration of postpartum abstinence remained roughly the same between 1993 and 2003: 9.0 months in 1993 and 8.8 months in 2003. And post-partum amenorrhoea changed in a manner that would lead to an increase in fertility, falling from 13 months in 1993 to 10.8 months in 2003 (Agyei-Mensah 2006).

The Role of Infant Mortality

One possible reason for the stall in fertility decline in Ghana is the recent increase in the infant mortality rate from 57 to 64 per 1000 live births. The stall in mortality is also evident at the administrative regions. With the exception of the Central, Brong Ahafo and Upper East regions, where there were significant reductions in the infant mortality rate between the 1998 and 2003 GDHS, 5 regions reported increases in mortality: Greater Accra, Volta, Eastern, Ashanti and Upper West. Three regions experienced slight reductions: Northern and Western Regions. Despite the slight reduction in the infant mortality rate in the Northern Region, infant mortality levels are still relatively very high (69 per 1000 live births), and this may partly explain the

regions relatively high fertility. The relatively low infant mortality reported in the Upper East Region is interesting and may be linked to the introduction of the Navrongo Community Health and Family Planning Programme introduced in the Region in the early 1990s.

The apparent increase in mortality at the national level is quite surprising given recent efforts at immunization and child health programmes. In a recent analysis of the mortality data, Johnson et al (2005) conclude that Ghana is not experiencing an increase in mortality but rather stagnation in the decline of mortality approximately since the 1990s. They argue that mortality in 1998, particularly neonatal and infant mortality was underestimated.

Table 5: Trends in the Infant Mortality Rate in Ghana 1993-2003 By Administrative Region and Rural Urban

	1988	1993	1998	2003
Residence				
National	77	66	57	64
Urban	67	55	43	55
Rural	87	82	68	70
Region				
Western	77	76	68	66
Central	138	72	84	50
Greater Accra	58	58	41	45
Volta	74	78	54	75
Eastern	70	56	50	64
Ashanti	70	65	42	80
Brong-Ahafo	65	49	77	58
Northern	103	114	70	69
Upper East	103	105	82	33
Upper West	103	85	71	105

Source: Ghana Statistical Service et al. 1989; 1994; 1998; 2004

The Contributions of Modern Contraception

An assessment of the contraceptive data for the 1998 and 2003 GDHS data shows a significant increase in the use of modern contraception from 13.3 reported in 1998 to 18.7 percent in 2003. Even though the figures are relatively low compared to what has been observed for Kenya (ie 24 % for both 1998 and 2003), there has not been a plateau of contraceptive use in Ghana based on the last two surveys. A similar pattern runs through the 10 administrative regions as well as rural urban contrasts (see Table 6). Of particular interest again is the relatively low contraceptive use in the Northern Region, which stands as 7.7 percent, the lowest amongst the 10 administrative regions. The low contraceptive rate may also explain in part the high fertility in this particular region.

Table 6: Trends in the percentage of Women Currently Using Any Modern Method of Contraception by Administrative Region and Rural Urban

Residence	1998	2003
National	13.3	18.7
Urban	17.4	24.2
Rural	11.4	14.9
Western	8.7	17.7
Central	13.1	13.2
Greater Accra	17.4	26.0
Volta	12.1	19.3
Eastern	19.6	21.5
Ashanti	14.0	21.0
Brong Ahafo	14.8	24.8
Northern	5.6	7.7
Upper East	7.5	9.7
Upper West	9.1	19.5

The Macro Evidence

During the early 1980s, Ghana experienced dramatic political and socioeconomic changes, beginning with the introduction of the Structural Adjustment Programme in 1983. The country returned to constitutional rule in 1992, a clear departure from the military regimes which took power after coups in 1972, 1979 and 1981. Since the 1990s, the annual rate of inflation varied between 10% and 15 % per annum and is currently estimated at 10.9 percent. Poverty reduction has been a major economic drive of the government in recent years and this has been facilitated by multilateral as well as bilateral donor support. Ghana received significant financial support as part of its entry into the Highly Indebted Poor Country Initiative (HIPC), and has been a beneficiary of the G8s debt cancellation and relief programme as well as President Bushs Millenium Challenge Account for poverty reduction in a select group of countries.

There have been pronounced increases in the production and consumption of consumer durables, large investments in transportation and communication infrastructure, and modest increases in primary education and consumption of medical services including modern contraceptives. The exchange rate of the cedi to the US dollar has stabilised and this has given much confidence to the stock

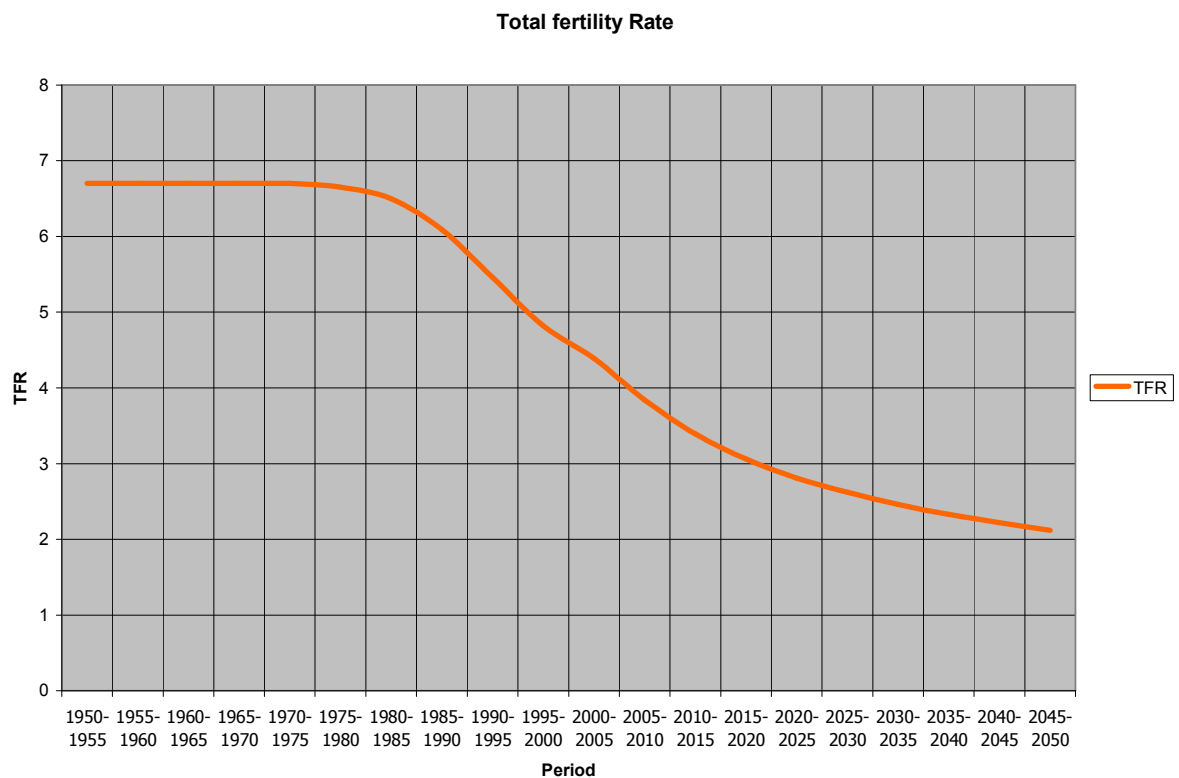
exchange and borrowing. But there are general concerns that the macro economic gains have not trickled among the poorer segments of the population. This is seen in the massive influx of young men and women to the cities especially Accra to eke out a living.

As in the case of Kenya, there is a possibility that family planning programmes may have been slowed down in favour of HIV/AIDS programmes. The National AIDS Commission has over the years assisted NGOs and researchers with grants for various HIV/AIDS related programmes. Even though the HIV prevalence rate in Ghana is not as high as other countries in eastern and southern Africa, there have been numerous public programmes and interventions aimed at reducing the epidemic.

FUTURE PROSPECTS

The question remains to what extent these trends will continue in the near future. Analysis of fertility data based on the 2004 Revision of the UN Population Division Estimates and Projections is provided in (Fig.1). The projection provides a plausible range of fertility levels up to 2050. On the basis of the medium variant projection, fertility in Ghana will go further down to below 4 births between 2005-2010, reaching replacement fertility by 2045-2050. However, the likelihood and degree of further decline below 4 births by the close of 2010 remains uncertain.

Figure 1: Period Total Fertility Rate Ghana: 1950-1955 to 2045-2050



Source: United Nations 2005.

SUMMARY AND CONCLUSION

The overarching objective of this paper has been to examine the recent stall in the Ghanaian fertility decline since the 1998 GDHS. With the exception of the Brong-Ahafo, Ashanti and Upper West Regions, where the TFR has continued its decline, stalls in fertility are evident in 6 regions: Eastern, Western, Central, Upper West, Volta and the Greater Accra Regions. In the Northern Region, high persistent fertility has been evident.

In the search for explanations for the recent stalls in fertility, we looked at both individual as well as broader societal forces. It appears that the recent stall can be linked to the stagnation in under-five mortality, the stall in fertility desires, and women with low educational levels. Fertility levels are the highest in the Northern Region and has been persistent over the past decades. Conditions for fertility decline are currently absent in the region: the infant mortality rate is generally high, contraceptive use is very low and there has been a reversal in the proportion of women wanting no more children.

The evidence at the macro level suggests that in spite of the general improvements in the macro economic situation, there has been worsening economic conditions especially amongst the rural and urban poor. This could partly account for the stall in fertility observed. It also appears that the over concentration on HIV/AIDS programmes may have stalled efforts at promoting family planning services. This factor has also been associated with the stall in fertility decline in Kenya. We need to explore this factor further.

What are the implications for further fertility decline? Fertility levels in the country are generally low in Southern Ghana. To bring fertility further down to say replacement level, efforts should be made to reduce fertility in the Northern part of the country, particularly in the Northern Region where fertility levels have been relatively high and persistent. The Navrongo Family Planning Programme has

clearly shown that fertility can be reduced where there is a vigorous and sustained community effort at introducing health programmes in local communities. It will also help in bringing fertility further down if efforts are made to encourage women to pursue higher education. It seems there has been an overly concentration in increasing access to education amongst primary and middle levels. I think it is time efforts are made to encourage more women in accessing secondary and post secondary education. As we observed earlier fertility amongst women with secondary and post secondary education has declined, whereas for the two least educational strata fertility has increased.

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