

Proving the Link between Structural Adjustment Programs, Educational Discontinuities and Stalled Fertility in Sub-Saharan Africa

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Abstract

In the second half of the 1990s and early 2000s, some sub-Saharan African countries have experienced a levelling off of their fertility decline and in some cases even a reversal leading to an increase – so-called stalling in the fertility transition. Goujon, Lutz and K.C. postulated in 2015 that the structural adjustment programs (SAPs) may have resulted into education discontinuities, due to budget cuts in the social sector, which may in turn have been causing the stalls in fertility. We explore the link further by using longitudinal cohort-educational trends and longitudinal cohort-age specific fertility trends from retrospectively collected consecutive demographic and health surveys (DHSs) conducted in the region. By applying the tools of panel data econometrics techniques to DHSs, we provide micro-level evidences that the educational discontinuities experienced during the implementation period of SAPs partially, but not fully, explain the stalling in the fertility transition experienced in the region.

1. Introduction

The demographic transition from high mortality and fertility regimes to low mortality and irreversible low fertility situations has been taking place in almost all regions of the world, at different levels or pace, and with a different timing. Starting from the 1980s, quite late compared to other low-income regions such as Latin America, Sub-Saharan African countries have also shown clear signs of a general decline in fertility. However, these declines in fertility have not only been slow but have also been stalling at times. Particularly in the second half of the 1990s

and early 2000s, some sub-Saharan African countries have experienced a levelling off of their fertility decline and in some cases even a reversal leading to an increase – so-called stalling in the fertility transition.

The interruption of the fertility decline in some Sub-Saharan African countries remains a demographic mystery as little consensus exists on the causes of the stalls. Many scholars link the fertility stalls with some specific period factors such as the trend in socio-economic development prevalent in the stalling countries (Shapiro and Gebreselassie, 2008); the low priority assigned to family planning programs in the beginning of the 21st Century (Agyei-Mansah, 2007; Bongaarts, 2008); the impact of HIV/AIDS mainly through its effect on child mortality (Moultrie et al., 2008; Westoff and Cross, 2006) and/or other related factors. On the other hand, recently, Goujon, Lutz and K.C. (2015) provided a plausible explanation by linking the early-life educational conditions of women with the stalled fertility transitions. They showed descriptively that countries that experienced stalls in their fertility decline also experienced stalls in the educational attainment of the cohorts of women who were born some 20 years before the fertility stall was observed. Those were times when Structural Adjustment Programs (SAPs) were implemented in most countries of the region, causing discontinuities in the educational improvements for the cohorts of women who were of primary school age, due to budget cuts in social spending. The fact that those cohorts of women, who were forced to drop out of school or denied to enroll due to SAPs, have reached reproductive age in the early 2000s would provide a plausible explanation for the fertility stalls occurring in the same period as women without education tend to bear more children than those with some education.

The primary purpose of this study is to further examine and if possible prove the causal link between education discontinuities due to SAPs and the fertility stalls that many sub-Saharan African countries experienced at the beginning of the 21st Century. To that end, we investigate the link between longitudinal cohort educational trends and longitudinal cohort specific fertility trends from retrospectively collected consecutive demographic and health surveys (DHSs) conducted in the region. Furthermore, applying tools of panel data econometrics techniques to several DHSs, we provide micro-level evidence that the educational discontinuities experienced during the implementation of SAPS partially explain the stalled fertility transitions experienced by some countries in sub-Saharan Africa.

2. Data and Methods

Retrospectively collected micro-level longitudinal data on the demographic history and other socio-economic characteristics of women and their households were extracted from the consecutive DHSs of 12 countries: Cameroon, Côte d'Ivoire, Ethiopia, Kenya, Ghana, Nigeria, Mozambique, Rwanda Tanzania, Uganda, Zambia, and Zimbabwe, using the criteria developed by Bongaarts (2008).

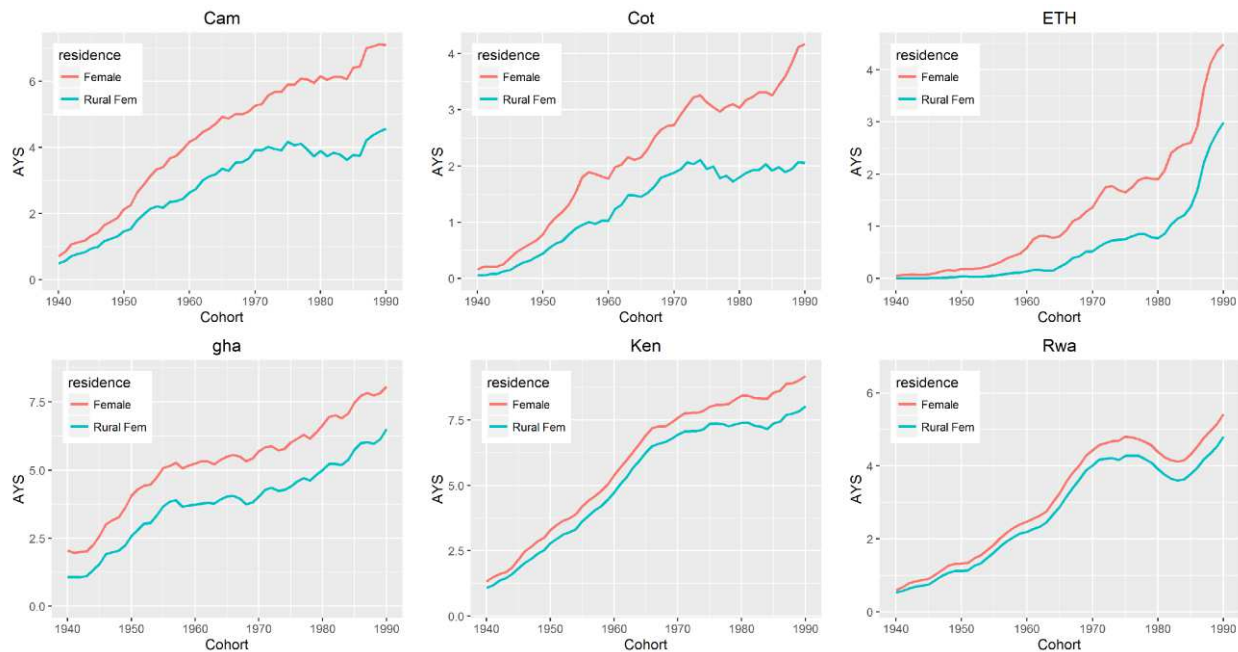
From the DHSs household files, we have collected data on average years of schooling by single-year cohorts of women and area of residence over the period 1920-1990 for all women aged above 20 (1). In parallel, from the DHSs individual files, we have also collected longitudinal data on cohort age specific fertility rates by single-year cohorts of women and area of residence for all women born over the period 1950-1990 (2). The two reconstructed trends are then matched in order to compare the age-specific fertility pattern of the cohorts of women who were potentially affected by SAPs with the age-specific fertility patterns of women of the previous and successive cohorts.

We are also conducting a multivariate analysis in order to examine the statistical causal linkage between the educational discontinuity and the fertility stalls as well as to identify the relative impact of this educational discontinuity over period-specific factors such as child survival, family planning, and contraceptive prevalence obtained from DHSs. We also added longitudinal data on income per capita as a proxy for macroeconomic progress from the Penn World Table 8.0.

1. Preliminary Results

The preliminary results of the study reveal that the cohorts of women who were of primary school age at the time of SAPs do not have better or worse levels of educational attainment than the previous cohorts. This is particularly true for countries which experienced intensive SAPs such as Côte d'Ivoire and Kenya. On the other hand, countries which did not participate in SAPs in the 1980s e.g. Ethiopia or did not experience a budget cut in the education sector e.g. Ghana show little or no discontinuity in the educational progress across cohorts (see Figure 1). Similarly, the cohort age-specific fertility rates (ASFRs) have been declining in each successive birth cohorts and for all age groups before it was stalled by the cohort of women born between 1975 and 1985 (see Kenya in Figure 2).

Figure 1: Trends in average years of schooling among women aged 20+ born between 1940 and 1990

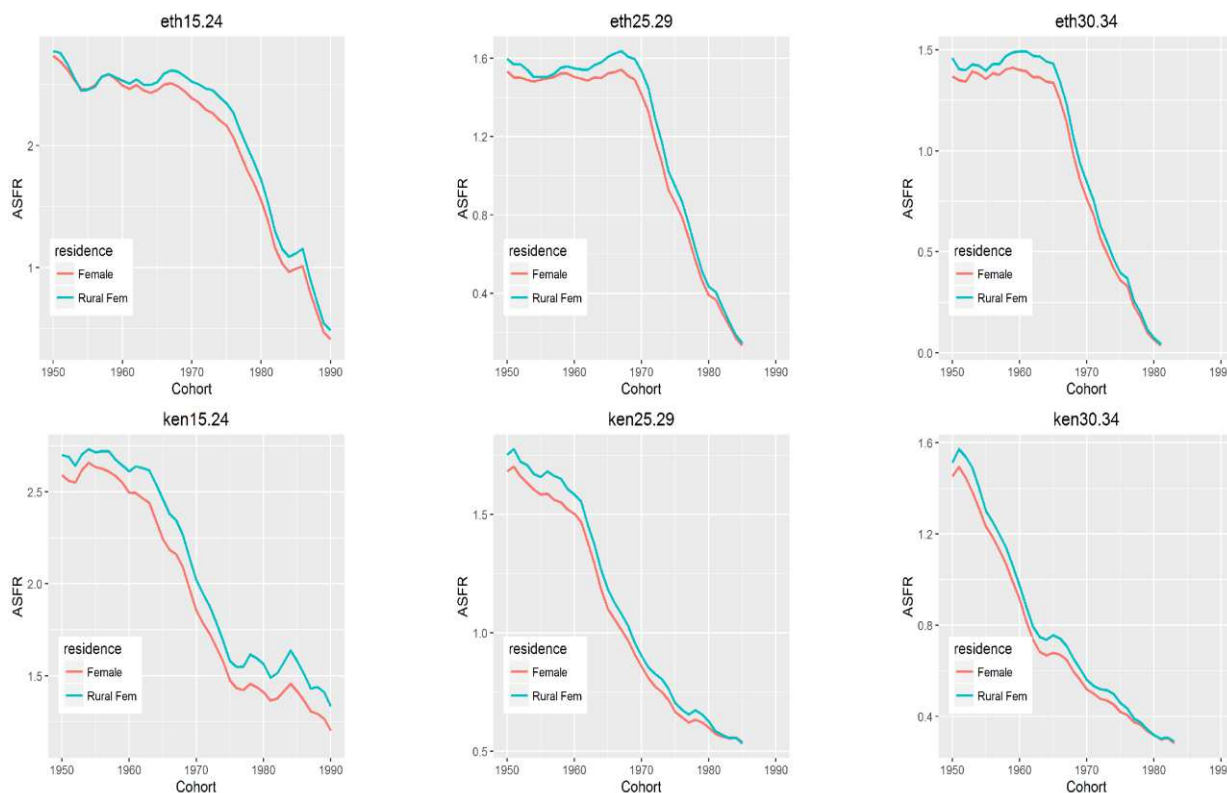


Source: Authors' calculations

More interestingly, the stall in cohort age-specific fertility trends happened only for the age group 15-24 indicating that women who dropped out of school or were never enrolled as a result of SAPs have entered child bearing earlier than previous cohorts and bear a higher number of children at earlier ages. However, they could catch the declining cohort specific fertility trends at later ages. The fact that most recent and more educated cohorts are replacing the cohorts who were affected by SAPs is important for future fertility and means that the fertility stall is likely a temporary phenomenon.

As expected, this pattern in cohort ASFRs varies along the intensity of SAPs implementation. Figure 2 shows the ASFR patterns across cohorts of women in Kenya, a country with an intense SAP, compared to Ethiopia, a country which did not participate in a SAP. It clearly reveals that, in Ethiopia, the ASFRs have been declining smoothly across cohorts in all age groups except some stall around the 1983-84 birth cohorts and age group 15-24. This is possibly linked to the fact that this cohort of women were in primary school age when the civil war was at its peak and the country was in political transition (1991-1995). This cohort of women entered reproductive age around the year 2005 and experienced higher ASFRs than cohorts born later, that were not affected by the war.

Figure 2: Patterns of cohort age specific fertility rates for a country which intensively participate in SAP(Kenya) and for Ethiopia which don't participate in the SAPS of the 1980s.



Source: Authors' calculations

The results of the multivariate analysis are still work in progress and will be presented at the PAA conference.

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