Stopping, spacing and postponing: The future of the African fertility decline

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Background

- Stalled fertility declines have been identified in several countries (e.g. Kenya, Ghana, Zimbabwe)
  - but there is a lack of agreement as to what constitutes a stall,
  - or , indeed, the existence and causes thereof

- In the vast majority of countries, fertility decline has been slow, and is often somewhat at odds with reported current contraceptive prevalence rates.

Contraceptive use and total fertility (DHSs 2003 r 2008)

Quantum and tempo in fertility transitions

- Rapid decline in fertility can only come about with an increase in the proportion of women who stop childbearing at low parities
- Spacing (and, as we have argued elsewhere, postponing) of childbearing shifts the timing of births, and only if sustained over an extended period of time will the initial tempo effect translate into a quantum reduction in fertility
- Examination of family formation strategies might help to cast light on the generally slow pace of fertility decline in Africa
  - In other words, in trying to assess the future prospects for fertility decline, we should be looking at revealed (as opposed to declared) family formation preferences

Data and methods

- Data from 66 DHS s from 25 countries
- Single event-exposure file constructed for each country, analytical time defined in terms of segments of time since last birth
- Piecewise log-rate hazard models fitted to the data, examination of gross and net effects
- Hazards converted into life tables, and median birth intervals used as a summary measure
  - Results compared with those produced applying the Brass-Juárez technique
- Full description of the model fitted, as well as the controlling for selection effects, in Moultrie, Sayi and Timæus (2009)

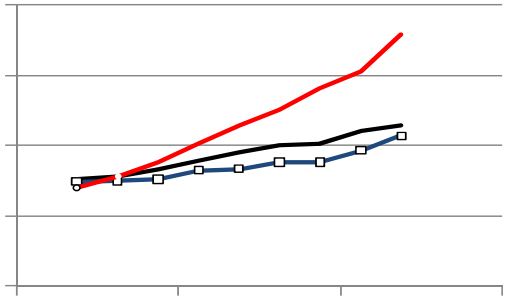
Covariates

- To remove selectivity, we control for
  - Birth order of index child
  - Mother's age at start of each interval segment (time-

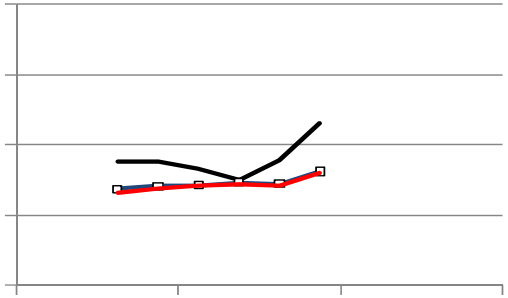
Results: Gross effects

- Period median birth intervals correspond extremely well with results from Aoun's extension of the Brass-Juárez method to projected (cohort) median birth intervals
  - Strong validation of the results from the earlier method
- Birth intervals in Southern Africa have increased dramatically over time, especially in South Africa, Namibia, Lesotho and Zimbabwe. Elsewhere in the region, birth intervals have increased slowly, if at all
- These findings are consistent both with the low levels of contraceptive use and the Caldwell hypothesis about fertility decline in Africa.

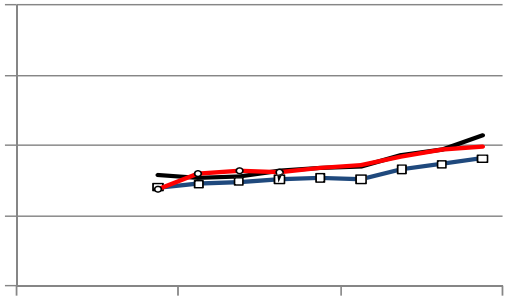
Results: SouthernAfrica Nett



Results: EastAfrica Nett



Results: West Africa Nett

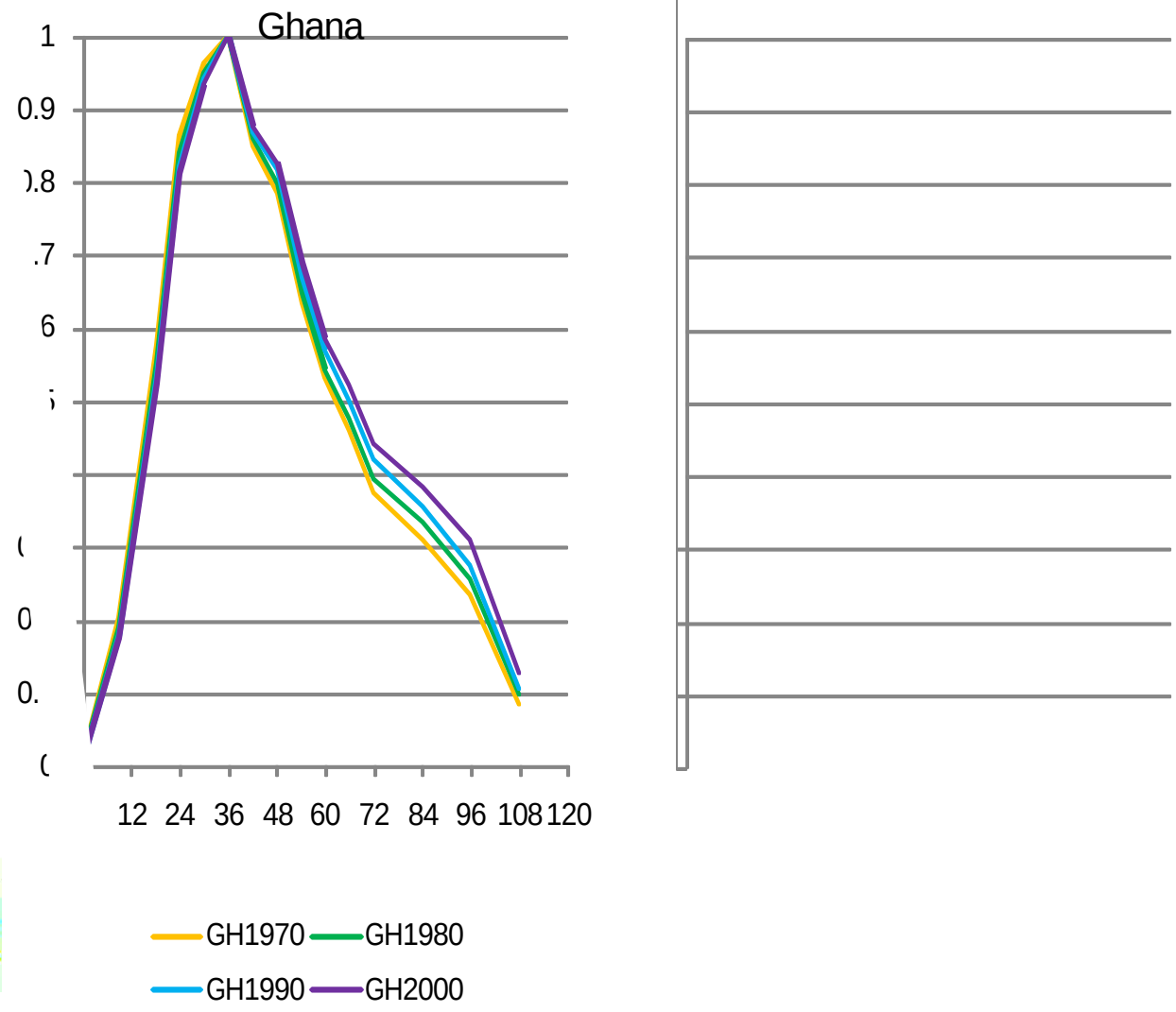


Determination of family formation strategies

- Examine changes in the coefficients describing the shape and position of the hazard function associated with closing a interval

over46.8 16l S Q tC 2 9 2 8250Td 0.0003 Tj/TT11Tf0.0001Tc0.2250Td(time)TjEM

West Africa


Ghana
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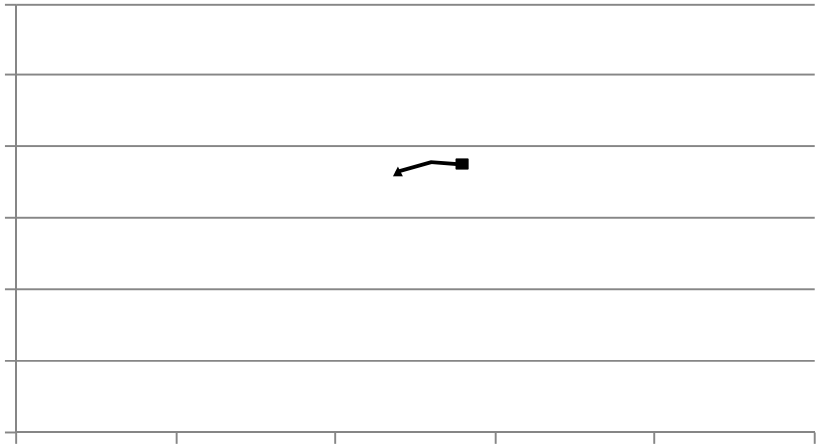
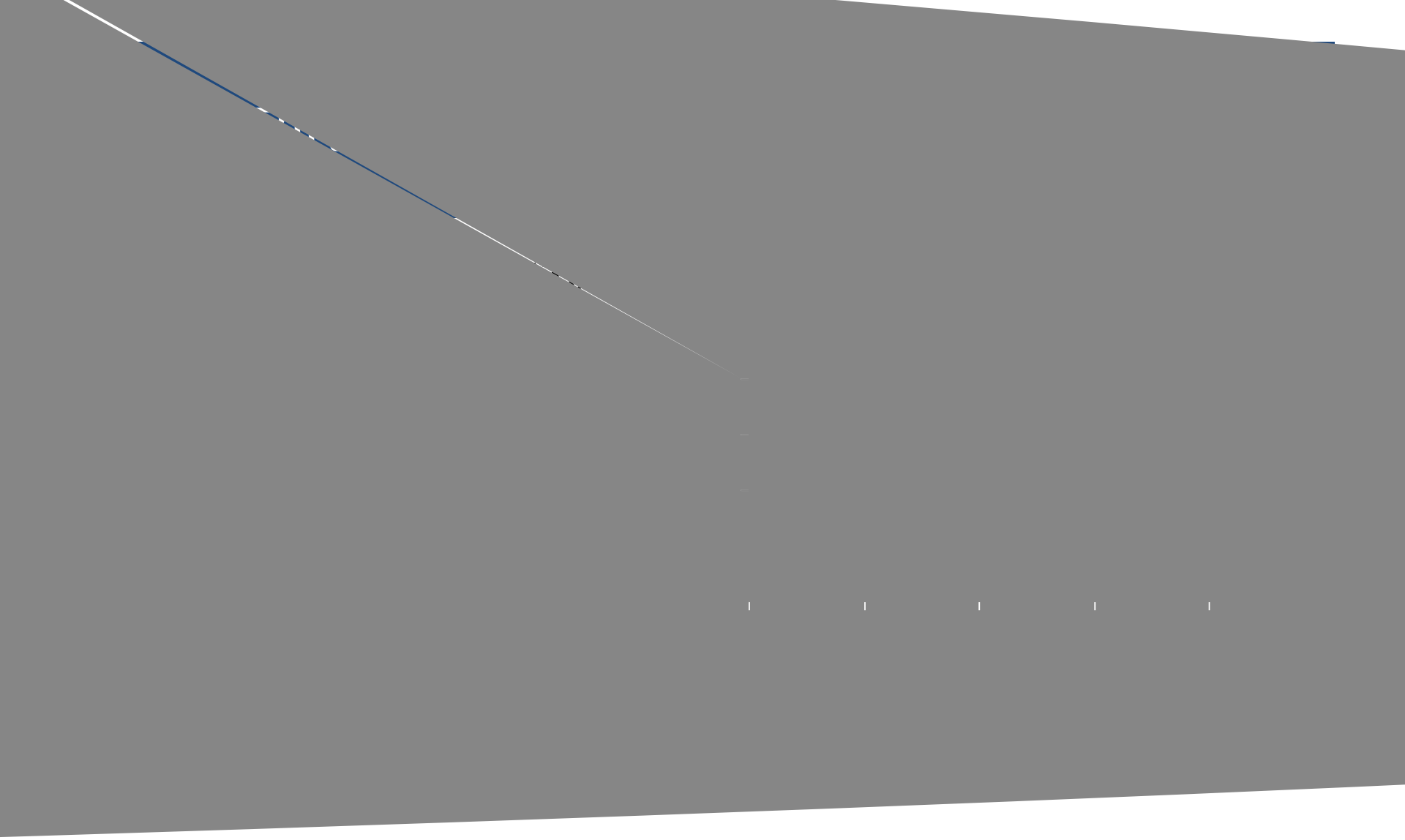
0.9
.8
.7
6
0
0.
12 24 36 48 60 72 84 96 108 120
GH1970 GH1980
GH1990 GH2000

An African fertility transition

- In countries where birth intervals have lengthened substantially, use of contraception has been the principal contributor
- In the overwhelming majority of countries studied, hazards of closing a birth interval suggests that family size limitation is not the principal reason for using contraception
  - Instead, as Caldwell suggested, women use contraception as a means to implement desired child spacing preferences, or to postpone births
- Moreover, in almost every country, both cohort and parity are very poor predictors of birth interval length
  - Unlike that observed in moderate-high fertility countries in South-East Asia

Birth intervals by cohort and parity





Conclusions – Substantive

- Fertility decline in Africa is following a very different path compared with other parts of the world
- Birth intervals are lengthening at all ages and parities
- The lengthening of birth intervals is being achieved largely by

Implicationsfor fertility declinein Africa

- Confirmation of the Caldwell hypothesis
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