
Fertility in Sub Saharan Africa: What Can We Learn from INDEPTH Sites?

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ISC 11-13 November 2015, Addis Ababa



Fertility and FP in sub-Saharan Africa

- The region has the highest fertility rates in the world (2010-2015: 5.1 children per woman, UN 2015), the lowest contraceptive prevalence and the highest level of unmet need for contraception (22% of women in union, Alkema et al. 2013)
- Decreases in fertility contribute to hasten the demographic dividend
- Better contraceptive use helps avoid unintended births, instrumental in lowering maternal and child mortality
- Universal access to SRH services among which contraceptive services remains an important development goal, re-affirmed in the SDGs, and an area of donor involvement

DHS: main source of data on fertility and FP in SSA

- Demographic and Health Surveys are today the principal source of data on fertility and its proximate determinants in Sub Saharan Africa
- While this source of data is very useful to monitor national levels and trends in standardized individual outcomes such as fertility and contraceptive use, it is:
 - limited in its capacity for innovation and to pick up on reproductive behaviors that may be specific to SSA
 - cross-sectional
 - not well-fitted to evaluate improvements in the contraceptive service environment and to grasp other contextual factors bearing on reproduction

INDEPTH sites: an alternative source of evidence?

- Health and Demographic Surveillance Systems (HDSS) seem uniquely positioned to become an alternative source of data on this area of knowledge:
 - locally grounded, yet possibilities for multi-site research
 - capacities for innovative research
 - longitudinal
 - development and test of health interventions

37 HDSS in Sub-Saharan Africa

- 37 HDSS are now implemented in 14 countries in Western, Eastern and Southern Africa, mainly in coastal East and coastal West Africa
- Population of 8,000 to 260,000 individuals (average for African INDEPTH sites= 83,000 individuals)
- Data on births systematically collected
- Quite a few sites have been monitoring fertility now for ten years or more
- Creation of INDEPTHStats tool on the INDEPTH website.
- As of July 2014, fertility data were available for 22 African sites, from the year when the site started until 2012

Objectives of this paper

- Data published via INDEPTHstats (17 African HDSS sites with at least five years of data) and comparison of the fertility estimates from the HDSS to those from the DHS, focusing on the region containing the HDSS
- Analysis of the literature produced in INDEPTH sites on fertility and its main determinants (1998 and 2013)
- ***Overall objective:*** contribute to the debate on the quality of the fertility data collected in the African INDEPTH sites, and reflect on what the study of fertility trends in small, localized yet comparable areas can contribute to scientific knowledge, in complement to the usual analyses performed at the national level

Country	National TFR 2010-2015*	HDSS	From	To	DHS region	From	To
Ethiopia	4.6	Gilgel Gibe	2006	2011	Oromiya	2000	2011
Gambia	5.8	Farafenni	1993	2011	-	-	-
Ghana	3.9	Dodowa	2006	2011	Greater Accra	1988	2008
		Kintampo	2005	2011	Brong Ahafo	1988	2008
		Navrongo	1996	2011	Upper East	1993**	2008
Kenya	4.4	Kilifi	2004	2011	Coast	1989	2008/9
		Kisumu	2003	2011	Nyanza	1989	2008/9
		Nairobi	2002	2011	Nairobi Area	1989	2008/9
Malawi	5.4	Karonga	2003	2011	Northern	1992	2010
Mozambique	5.6	Manhica	2000	2010	Manhica	1997	2011
Senegal	5.0	Mlomp	1990	2011	Ziguinchor	1999	2011
		Niakhar	1990	2011	Fatick	2005**	2010/11
South Africa	2.4	Africa Centre	2000	2011	KwaZulu Natal	1998	1998
		Agincourt	1993	2011	Mpumalanga	1998	1998
Tanzania	5.0	Ifakara	1997	2011	Eastern	1992	2010
		Magu	1994	2011	Lake	1992	2010
		Rufiji	1999	2011	Eastern	1992	2010

A diversity of situations

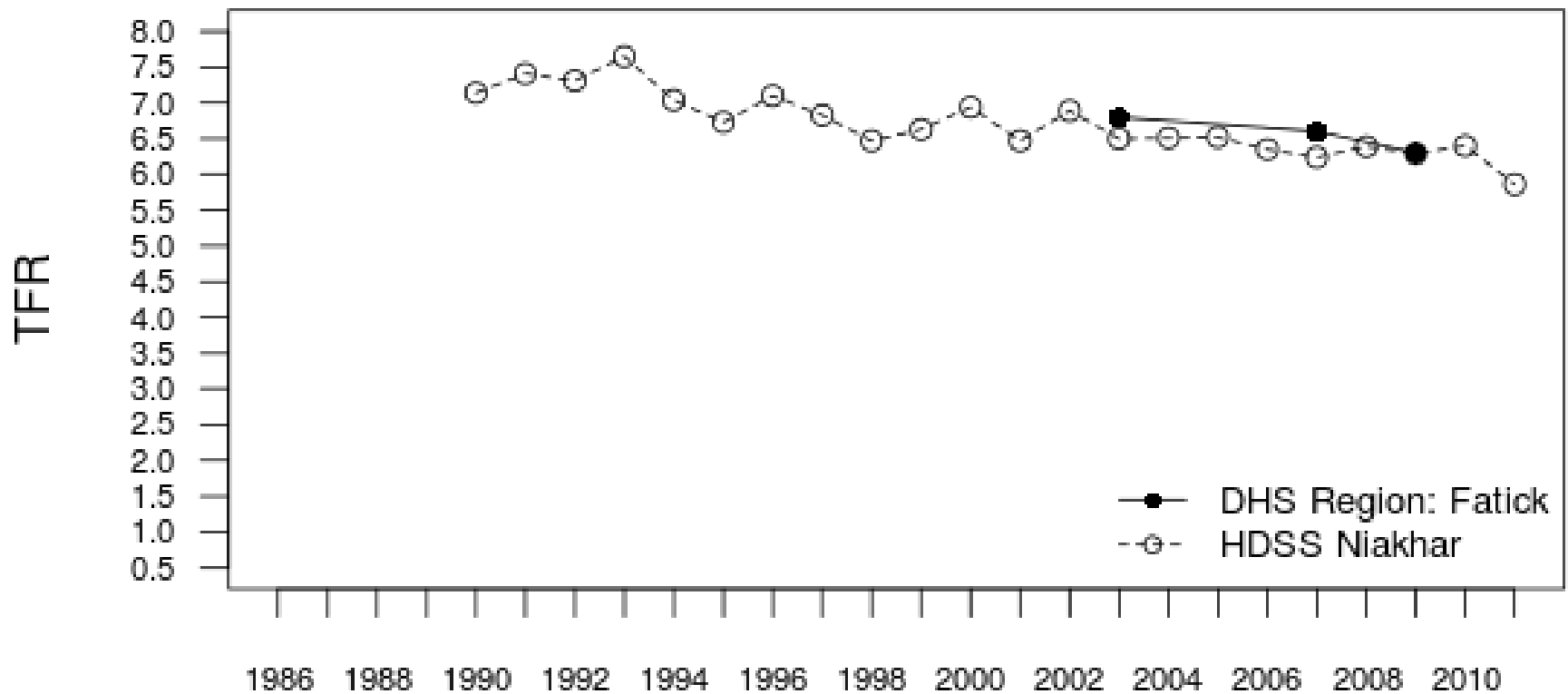
- 17 sites in 9 countries: 3 in West Africa and 6 in Eastern and Southern Africa
- Most of the countries are covered by three or four DHS surveys since the late 1980s or early 1990s, except for South Africa, and the Gambia
- Different stages in the fertility transition
 - Half of the countries (Gambia, Malawi, Mozambique, Senegal and Tanzania) are at the early stages of the fertility transition (TFR = 5-6 children per woman)
 - Three countries (Ethiopia, Ghana and Kenya) in the middle of the transition (TFR = ~ 4 children per woman)
 - South Africa at the end of the fertility transition (TFR = 2-3 children per woman)

Comparing DHS and HDSS TFRs

- DHS TFRs: as computed by Statcompiler (moved back 2 years, Garenne 2011)
- The definition of the DHS region in which the HDSS are located varied across times for two sites
- Not always the same depth of comparison:
 - Long HDSS series, long DHS series: most cases
 - Short HDSS series, long DHS series (new sites in Ghana, Kenya)
 - Long HDSS series, short DHS series (South Africa)
 - Short HDSS series, short DHS series (Ethiopia)
- HDSS profiles available on the INDEPTH website to understand differences between the sources

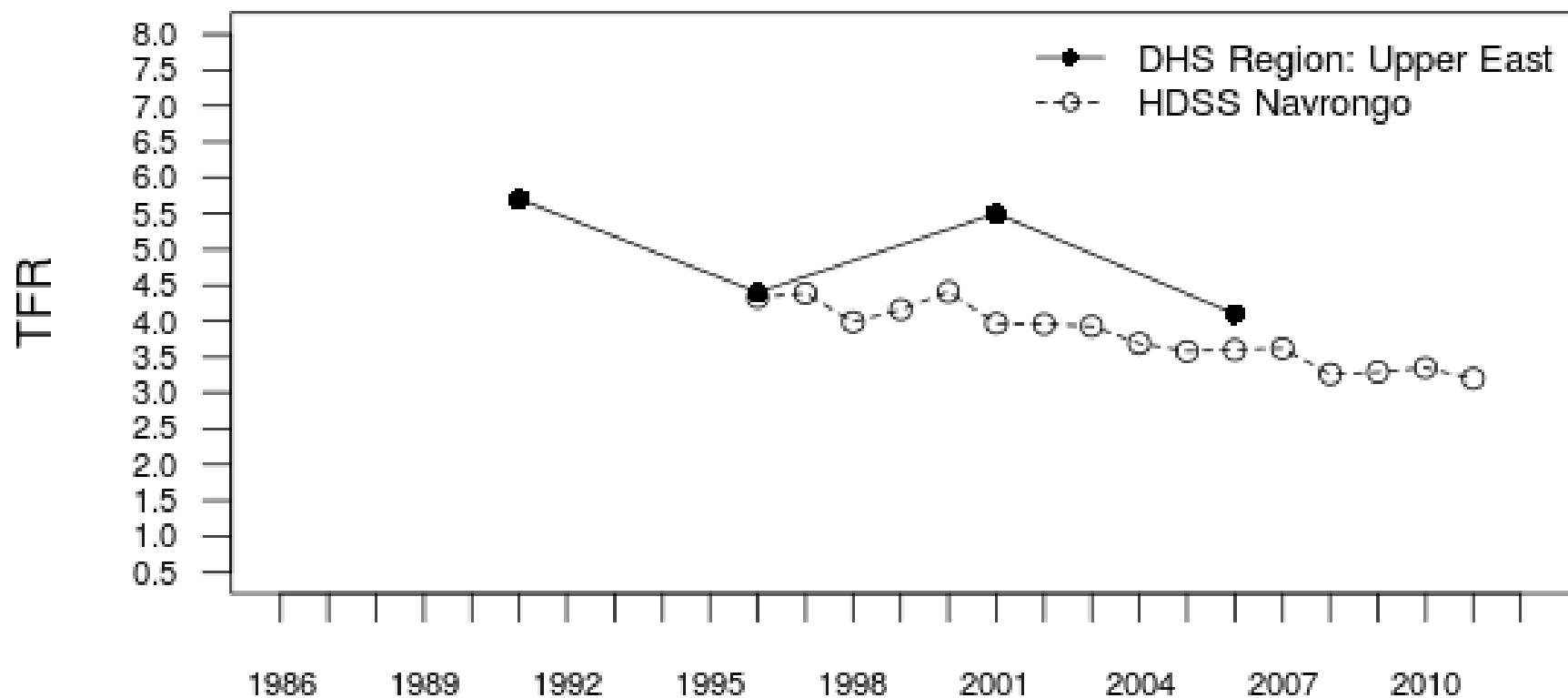
Good match for 7/17 sites

Senegal



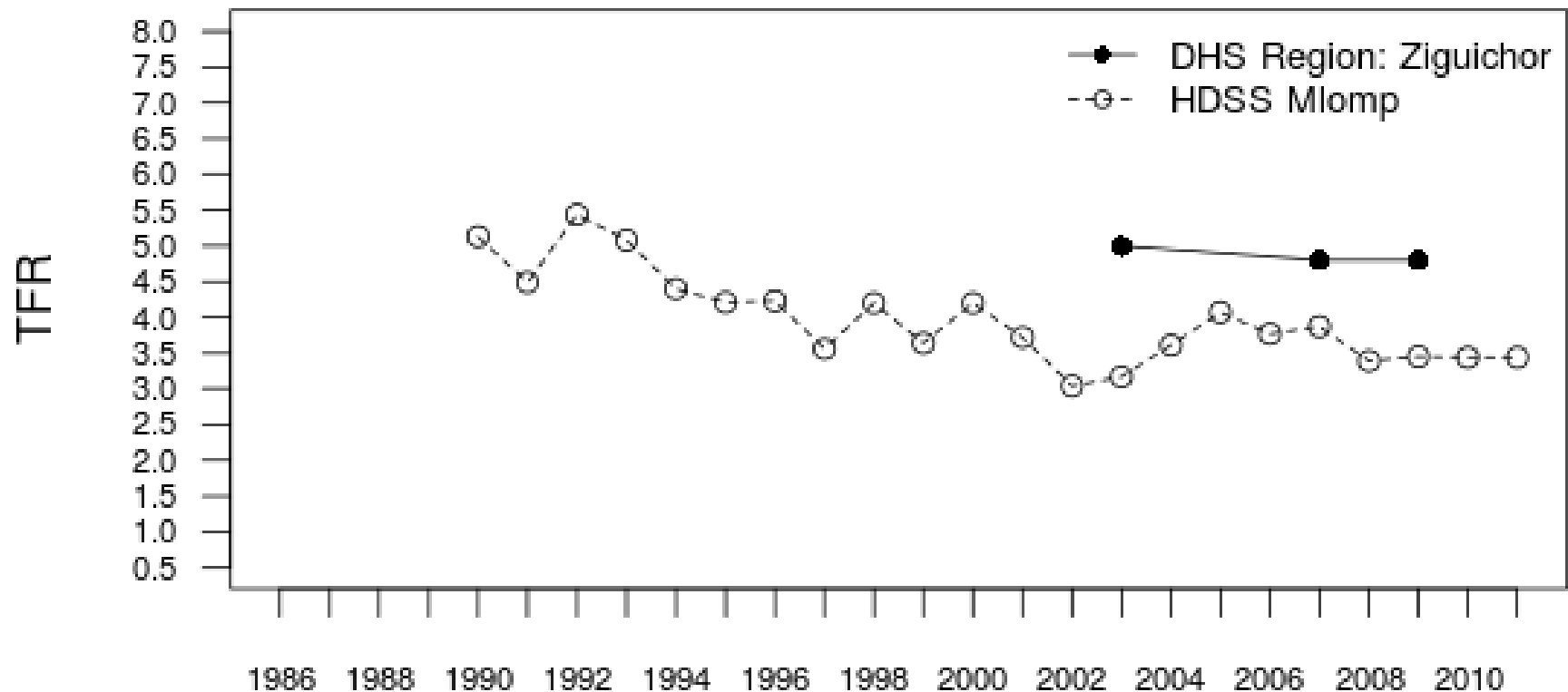
Fertility lower in 5 HDSS...

Ghana



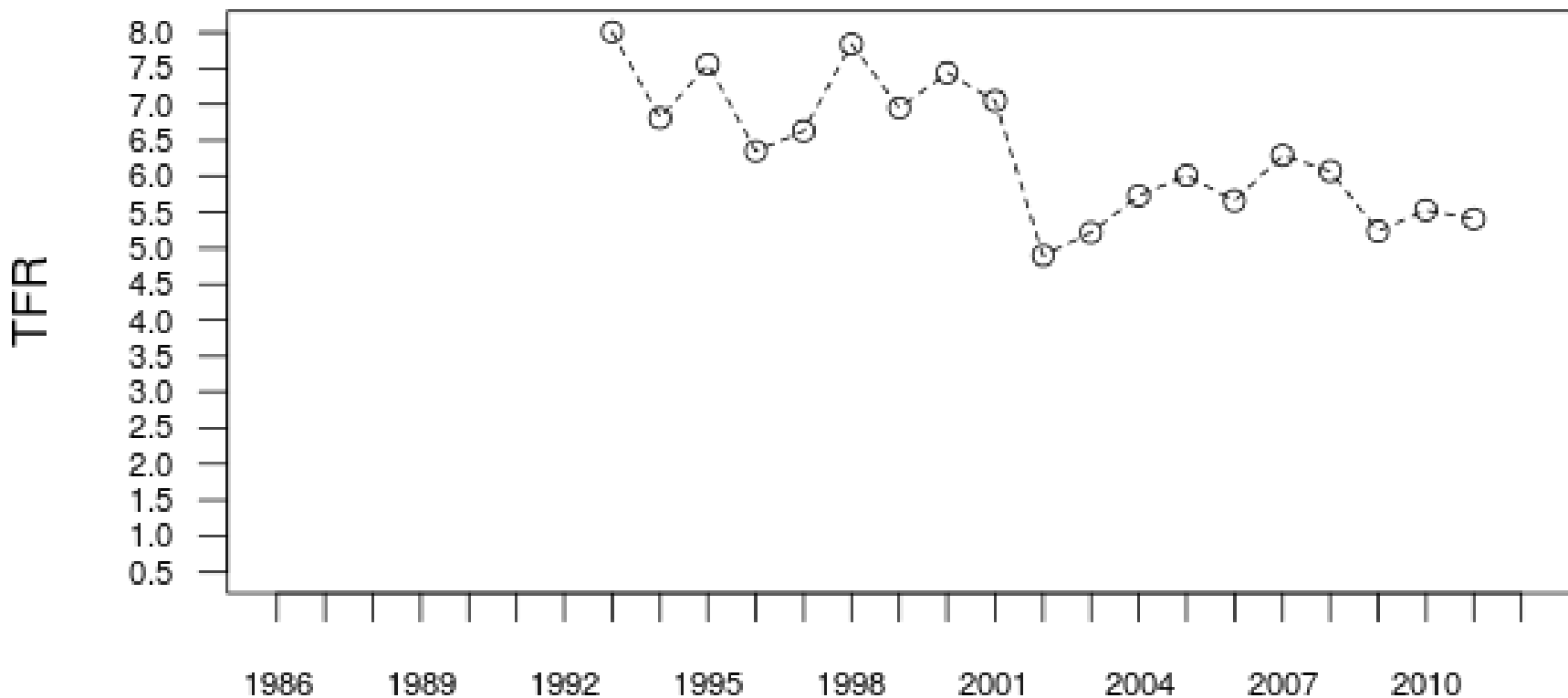
...due to FP experiments, urbanization,

Senegal



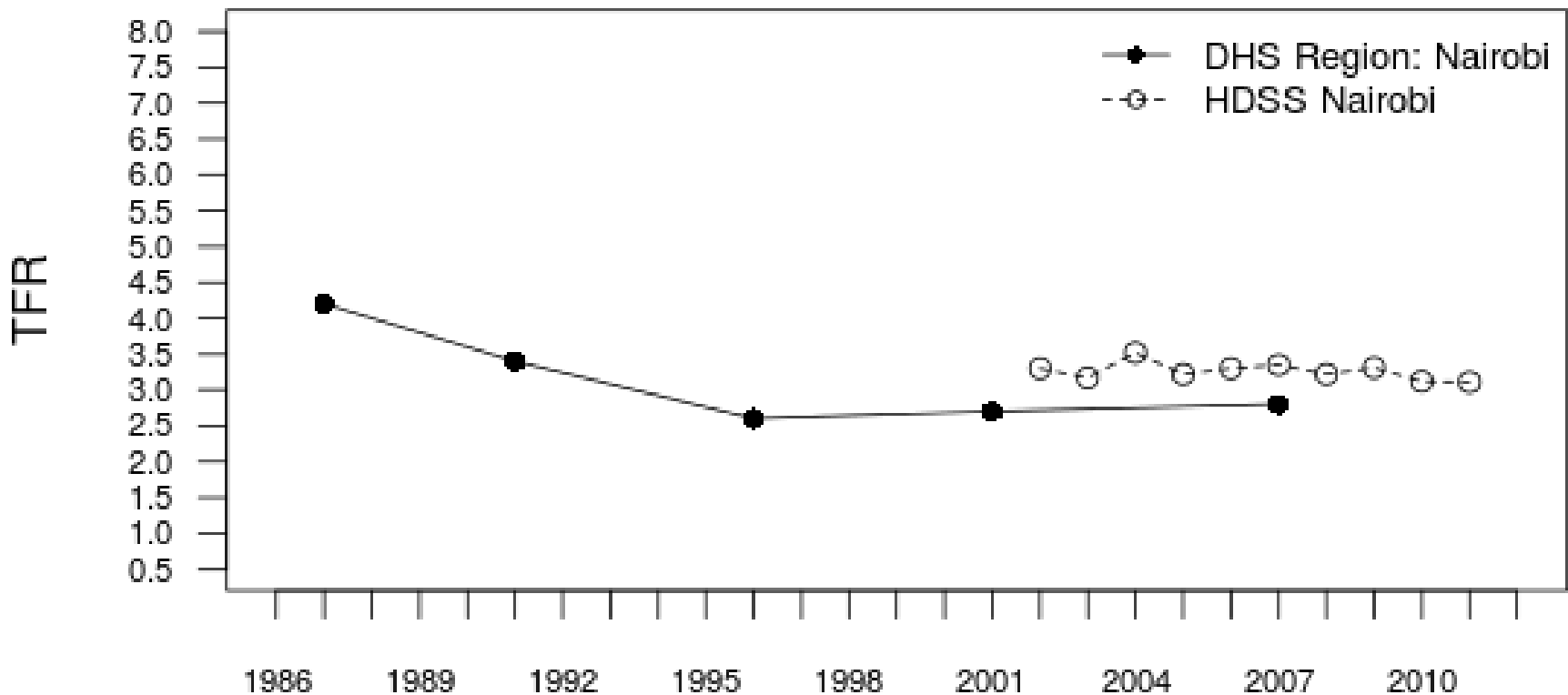
What happens when a town is added to the HDSS area

Gambia HDSS Farafenni



Fertility higher in 3 sites

Kenya



Literature on fertility by HDSSs

- INDEPTH list of publications for years 1998 and 2013, as provided by the organization: 66 articles in 1998 and 493 in 2013.
- All social sciences or public health publications dealing with reproductive health
- Retrieved the abstracts for all these studies; classified them according to their main theme into four categories: HIV/Aids and other STIs, safe motherhood, fertility and its proximate determinants, and other.
- We also analyzed the methodological design of these studies

A very small share of INDEPTH publications devoted today to fertility

- Out of the 66 articles published in 1998, **36%** (24) were public health / social science articles on a reproductive health topic
 - 8 articles were on STIs and HIV
 - 7 on fertility and its proximate determinants,
 - 6 on safe motherhood; 3 other
 - In 2013, 95 publications (**19%** of total) were social science / public health publications on reproductive health topics
 - 54 (57%) were related to HIV/AIDS and other STIs
 - 29 (31%) to safe motherhood
 - 8 (8%) to fertility and its proximate determinants; 5 other
- ⇒ **Altogether 1.4% of the publications in 2013 pertain to fertility and its proximate determinants, compared to 10.6% in 1998**

Specificities of INDEPTH SRH studies

- Longitudinal

Ex: hormonal contraception did not increase the risk of HIV infection in sero-discordant couples (Lutalo et al. 2013)

- Implementation

Ex: The Navrongo experiment first had an impact on fertility but its scaled up version without social mobilization did not (Phillips et al. 2012)

- Innovation

Ex: A test in the Ouaga HDSS showed that the use of traditional methods of contraception is probably underreported in DHS (Rossier et al. 2014)

Conclusions

- Overall, fertility data from HDSS are as good as DHS data (better? no recall biases, no sampling errors)
- The shortcomings of HDSS fertility data are not linked to the estimation of the period total fertility rate
- Problem: often no past birth histories (no parity) and no data on the proximate determinants
- Few data = few analyses = few human resources on fertility and determinants in the sites = difficulties in attracting FP interventions... and vice versa...
- HDSS-DHS TFR comparison show the extreme variability of fertility rates at the local level
- INDEPTH uniquely positioned to investigate the diversity of the African fertility decline and its contextual factors
- This void of proximate determinants data could be an opportunity to tackle new approaches in the field

A new Working Group on Fertility and SRH for INDEPTH

- New working group to promote fertility and SRH research in INDEPTH sites
- Coordination: Clémentine Rossier and Valérie Delaunay
- Come at 15:30 in Saba Hall to the WG meeting to learn about the working group and promote this area of research in your site!!
- Call for first workshop (February 1-5 2016) on adolescent fertility just sent out to site leaders