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Authors

Agadjanian, Victor
Prata, Ndola

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War and Reproduction: Angola's Fertility in Comparative Perspective

Victor Agadjanian and Ndola Prata

(Department of Sociology, Arizona State University and Bay Area International Group, Institute of Human Development and School of Public Health, University of California at Berkeley)

For four decades, Angola has experienced war, which has inevitably influenced the country's social development. The intensity and geographical spread of the war has fluctuated over that period. This paper examines fertility and other relevant socio-demographic characteristics in Angola and attempts to relate them to its protracted civil conflict. To situate Angola's fertility in the sub-Saharan context, comparisons are made with a selection of other African countries. The analysis paints a picture of a generally pre-transitional society characterised by an early start of childbearing, high fertility and a contraceptive prevalence that is among the lowest in Africa. Angola also trails behind most of the sub-continent in childhood mortality and maternal care indicators. The available data suggest that Angola's fertility drops when hostilities peak and rebounds in the periods of relative peacefulness, and that these fluctuations are stronger in regions more affected by the fighting than in less affected ones. However, there is no indication that the war has exerted any enduring and direct impact on trends in Angola's fertility beyond its generally inhibiting effect on any improvements in social welfare that might otherwise have encouraged some fertility decline.

Introduction

In this article, we attempt to assess the impact of the civil war on reproductive dynamics in Angola. This goal would be difficult enough for countries with more and much better demographic data, but in the case of a society with such a patchy and unreliable record of demographic trends as Angola, this goal is inevitably reduced to a general exploration of possible associations between war and fertility. To highlight the possible effects of war and to situate Angola's reproductive trends in a broader picture of regional and sub-continental reproductive dynamics we will draw comparisons, where data allow, with other, more peaceful sub-Saharan countries.

Literature on the impact of war on fertility is relatively scarce. Studies of twentieth century western societies, most of which were in advanced stages of the demographic transition, documented a sharp decline of fertility during war years with a rebound in postwar periods.[1] However, in developing countries that are largely pre-transitional, or are in early stages of the transition to lower fertility, the evidence is less clear. For example, studies of fertility in Lebanon did not find any significant impact of the

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1 J. Hobcraft, 'Fertility in England and Wales: a fifty-year perspective', *Population Studies*, 50, 3 (1996), pp. 485–524; R.R. Rindfuss and J.A. Sweet, *Postwar Fertility Trends and Differentials in the United States* (New York, Academic Press); K. Schwartz, 'One hundred years of fertility development', *Zeitschrift fur Bevolkerungswissenschaft*, 22, 4 (1997), pp. 481–491.

civil war in that country on the tempo of fertility decline,[2] nor did the Iran—Iraq war of the 1980s affect Iranian fertility.[3] In the only recent study dealing with sub-Saharan Africa, Lindstrom and Berhamu did detect some short-term fluctuations in Ethiopian fertility associated with politico-military instability and famine, but their data did not allow them to assess the long-term impact of war.[4]

War in Angola

Many sub-Saharan nations have lived through spells of political and military instability since most of them gained independence in the second half of the 20th century, but even in the grim sub-Saharan list Angola's case stands out. The war in Angola began long before that country became independent from Portugal in 1975. As early as 1961, the nationalist group known as the MPLA launched its attack against the Portuguese military, starting what Angolan official historiography would later label 'The First War of National Liberation'. Soon after the MPLA uprising other nationalist groups joined in the anti-colonial struggle. When the Portuguese colonial regime collapsed and Angola attained its independence in 1975, the MPLA, supported by its ethnic base in and around the capital Luanda and its overseas allies, elbowed its way to monopoly power.[5] As a result, a bitter civil war erupted, pitting the then Marxist MPLA government, strongly supported by the Soviet Union and Cuba, against the US- and South Africa-backed UNITA opposition that has drawn most ethnic support from Angola's central highlands. Up to the moment of writing, the tragedy of civil war in Angola has lingered on with few intermissions despite dramatic political changes that have taken place in the country and in the world around it. A ceasefire brokered by the United Nations in 1991, in the wake of the end of the Cold War, was shattered a year later when UNITA contested the results of the first multi-party presidential and parliamentary election in September 1992. After the bloody outbreak of violence that followed, a shaky peace was re-established in November 1994 with the signing of the Lusaka Protocol, only to degenerate into an all-out (and still continuing) war again at the end of 1998.[6]

The war has taken an enormous toll of Angola's people and her economy. Hundreds of thousands have been uprooted and forced to flee the fighting. The public health system in much of Angola has been reduced to a shambles, and the population of many parts of the country has come to rely heavily on domestic, and especially international, non-governmental organizations for the supply of basic food and medical care.[7] High levels of child malnutrition and low levels of immunisation, even by unenviable sub-Saharan standards, attest to the state of public health in Angola[8]. In another ominous sign of a large-scale and profound health crisis, Angola recently experienced a severe outbreak of poliomyelitis – a disease about which most of the world has all but forgotten.[9]

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2 M. Khlat, M. Deeb and Y. Courbage, 'Fertility levels and differentials in Beirut during wartime: an indirect estimation based on maternity registers', *Population Studies*, 51, 1 (1997), pp. 85–92; A. Kulczycki and P. C. Saxena, 'New evidence on fertility transition through wartime in Lebanon' (paper presented at the *Population Association of America Annual Meeting*, Los Angeles, California, 23–25 March, 2000).

3 M. Ladier-Fouladi and B. Hourcade, 'The paradoxes of demographic trends in Iran: fertility in rapid decline'. In J. Chasteland and J. Chesnais (eds), *La Population du Monde: Enjeux et Problemes* (Paris, 1997), pp. 209–224.

4 D. P. Lindstrom and B. Berhamu, 'The impact of war, famine, and economic decline on marital fertility in Ethiopia', *Demography*, 36, 2 (1999), pp. 247–261.

5 N. MacQueen, *The Decolonization of Portuguese Africa* (London and New York, Longman 1997).

6 C. Pycroft. 'Angola – 'The forgotten tragedy', *Journal of Southern African Studies*, 20, 2 (1994), pp. 241–243; I.A. Spears. 'Angola's elusive peace: the collapse of the Lusaka Accord', *International Journal*, 54, 4 (1999), pp. 562–581.

7 'Angola: Município da Gabela tem um médico para 260 mil pessoas', *Público*, March 3, 2000; Médécins Sans Frontières, 'Façade of normality in Angola hides manipulation, violence, and neglected population' (MSF Report and Press Release, November 9, 2000: MSF web site, www.msf.org).

8 V. Agadjanian and N. Prata. 'Civil war, infant mortality, and child health: a sub-Saharan case study' (paper presented at the *Population Association of America Annual Meeting*, Los Angeles, California, 23–25 March 2000).

9 Center for Disease Control, 'Outbreak of poliomyelitis – Angola, 1999', *Morbidity and Mortality Weekly Report*, 48, 16 (April, 1999), pp. 327–329.

The magnitude of human and socio-economic destruction caused directly and indirectly by the civil war looks particularly staggering if we take into account the exceptional agricultural potential of Angola and its unusual mineral wealth – especially in oil and diamonds. From being a net exporter of agricultural products, Angola turned into a country surviving on food imports and donations. Commercial farming has reverted to subsistence agriculture, and most of the country's fertile land has been left uncultivated. Diamond mining has been largely controlled by the UNITA opposition, which has used the proceeds to purchase weapons.[10] Only the revenues from offshore oil production, which is generally shielded from any direct disruption by the hostilities, have saved the country from a complete economic collapse. Moreover, in an ironic twist of global macroeconomics and domestic imbalances, in a country haunted by the spectre of mass starvation,[11] the GDP growth rate, fuelled by the rising prices of crude oil, has recently been among the highest in the world.[12] This sudden financial windfall, however, may make very little difference to the living and health conditions of the overwhelming majority of the Angolan population, as the lion's share of the oil sale proceeds and oil exploration bonuses goes to finance the government's war effort, while the spending on health care, for example, is a meagre three per cent of the government's total expenditures.[13] However there may be cause for some cautious optimism in this respect as there was a significant decline in expenditure on arms in 2000. In addition, an improvement in health-related development expenditure is one of the benchmarks of a recent agreement with the IMF that should lead to structural adjustment in Angola in return for long-term low interest loans.[14]

Angola's protracted civil war, endemic poverty and erratic politics have crippled Angolan researchers' attempts to study their country's social dynamics and problems; they have also deterred foreign scholars from doing so. The overwhelming majority of scholarly publications on contemporary Angola have naturally dealt with the war, but with an almost exclusive focus on its political and military aspects. The investigation of social, and especially socio-demographic, aspects of the war has been sketchy and largely limited to Portuguese-language reports that have rarely reached a wider international audience. Yet even before independence the anti-colonial war was claimed to be having a profound impact on the demography of at least some parts of Angola, primarily through mass displacements and killings of the civilian population.[15] This impact could only widen as the anti-colonial struggle gave place to generalised civil war after independence. Ours, therefore, is a modest attempt to start filling a significant void in Angolan studies.

10 J. H. Sherman, 'Profit vs. peace: the clandestine diamond economy of Angola', *Journal of International Affairs*, 53, 2 (2000), pp. 699–719.

11 'Angola facing war and hunger', *The Economist*, May 29, 1999.

12 'Lions 3, tigers 1', *The Economist*, January 22, 2000.

13 See Hodges's Table 6 in International Monetary Fund, 'Angola: Statistical Annex' (Washington, DC, IMF Staff Country Report, Number 99/25, April 1999), p. 19. In addition to this known bias in the use of Angola's oil revenues, there have been continuous allegations of embezzlement of a considerable part of these revenues by the ruling elite. See, for example, 'Angolan paradox: oil wealth only adds to misery', *New York Times* (April 9, 2000); International Monetary Fund, 'The IMF's Staff Monitoring Program for Angola: the Human Rights Implications' (a backgrounder by Human Rights Watch, New York, June 22, 2000, updated September 25, 2000).

14 Despite the recent surge in oil prices and Angola's ever burgeoning offshore oil finds, the government is anxious to obtain IMF money as the real benefits of significantly increased oil production are still some five years off and the government is short of cash. We are grateful to an anonymous reviewer for this observation.

15 R. Pelissier, 'Conséquences démographiques des révoltes en Afrique portugaise (1961–1970). Essai d'interprétation', *Revue Française d'Histoire d'Outre-Mer*, 61, 222 (1974), pp. 47–48.

Available Demographic Data

In most sub-Saharan countries, available statistics are limited in coverage and dubious in quality: this problem, like many others, is magnified in Angola. The colonial era census and vital registration data are notoriously flawed.[16] Even though it is impossible fully to establish the type and degree of bias, there are reasons to suspect that the fertility of the black population was systematically under-reported, especially in earlier censuses.[17] In the quarter century of Angola's independent existence, only one national census has taken place and even that census, conducted in 1983–1985, was limited to accessible government-controlled areas (the provinces of Luanda, Cabinda, Zaire and Namibe, and the cities of Lubango, Uige and Negage). A demographic and socio-economic survey was carried out in 1988 in the relatively safe southern and south-western parts of Angola, but the demographic module of that survey focused mainly on mortality.[18] The four-year-long stretch of relative peace after the signing of the Lusaka Accord in 1994 generated a lot of optimism and some socio-demographic studies. Two of those studies produced especially valuable data that we use in our analysis: the Living Standards Measurement Survey (LSMS), a World Bank standard priority model survey conducted in 1995,[19] and the 1996 Multiple Indicators Cluster Survey (MICS) commissioned by UNICEF.[20] With a sample size of about 5,000 households the LSMS covered mainly urban areas in five provinces, whereas the MICS was a nationally representative survey of nearly 4,500 households in which 4,890 women aged 14 to 49 were interviewed. Both surveys lack the breadth and depth of information that a complete fertility analysis would require. For example, neither collected nuptiality information and birth histories are available only in the MICS and only for the last three births. Nonetheless, these survey data allow for important insights into the dynamics of Angolan fertility.

To assess better Angola's reproductive history and reality we will draw comparisons with five African countries located in different parts of the sub-continent. Four of these countries – Benin, Ghana, Kenya and Zimbabwe – have enjoyed greater political stability since their independence than has Angola (even though Benin and Ghana have had their share of military coups), whereas one – Mozambique – has gone through a major civil war. These countries are at different stages of the fertility transition: whereas Kenya and Zimbabwe are in the forefront of the fertility decline in the sub-continent, Ghana is somewhat behind, and Mozambique and Benin are considered to be among the laggards.[21]

16 C. A. Da Costa Carvalho, 'La Population Noire de l'Angola' (Lisbon, Instituto Nacional de Estatística, Caderno No.6, 1979).

17 D. Heisel, 'The demography of Portuguese territories: Angola, Mozambique and Portuguese Guinea', in W. Brass, A. Coale, P. Demeny, D. Heisel, F. Lorimer, A. Romaniuk and E. Van De Walle (eds), *The Demography of Tropical Africa* (Princeton, New Jersey, University Press, 1968).

18 *Famílias e Aldeias no Sul de Angola: Análise de um Inquérito Socio-económico e Demográfico nas Zonas Rurais da Região Sul-sudoeste* (Luanda, Instituto Nacional de Estatística, 1990).

19 M. A. Sousa, J. M. Grave and C. Ceita, *Perfil da pobreza em Angola* (Luanda, Instituto Nacional de Estatística, 1996).

20 Angola, *Inquérito de Indicadores Múltiplos. Demografia, Água e Saneamento, Saúde Materno Infantil, Nutrição, Vacinação, Fecundidade, Mortalidade* (Luanda, National Institute of Statistics, 1998).

21 B. Cohen, 'The emerging fertility transition in sub-Saharan Africa', *World Development*, 26, 8 (1998), pp. 1431–1461; D. Kirk and B. Pillet, 'Fertility levels, trends, and differentials in Sub-Saharan Africa in the 1980s and 1990s', *Studies in Family Planning*, 29, 1 (1998), pp. 1–22.

Table 1. Selected demographic and socioeconomic indicators

	Angola	Benin	Ghana	Kenya	Mozambique	Zimbabwe
Population, millions (1998)	12	6	19	29	16	12
Population density (persons/km^2)	9	50	80	50	20	30
Population growth rate, 1998 (%)	2.9	2.8	2.6	2.4	2.0	1.9
Urban population, 1998 (%)	33	41	37	31	29	34
Population below the poverty line (%)	61	33	31	42	69	26
GNP per capita (US Dollars, 1998)	380	380	390	350	210	620
Women's education (women aged 15–49, %):						
no education	35	71	29	12	43	11
primary	43	20	18	59	53	47
secondary or higher	22	9	53	29	4	42
Life expectancy at birth [Male–Female] (years)	45–48	52–55	58–62	50–52	44–47	55–57
Infant mortality (per 1,000 live births)	124	87	65	76	134	56
Under-five mortality (per 1,000 life births)	209	140	96	124	213	86
Maternal mortality ratio (per 100 000 births)	1,500	500	210	590	1,500	280
Population (%) with access to:						
sanitation	16	20	42	77	21	66
safe water	32	50	56	53	32	77
formal health care	24	42	25	n/a	30	n/a

Sources: *Benin, Enquête Démographique et de Santé, 1996; Ghana Demographic and Health Survey, 1998; Angola: Inquérito de Indicadores Múltiplos; Kenya Demographic and Health Survey, 1998; Moçambique, Inquérito Demográfico e de Saúde, 1997; Relatório do Desenvolvimento Humano; Sousa* et al. *Perfil da pobreza em Angola; The World Bank 2000, World Development Indicators; Zimbabwe Demographic and Health Survey, 1994.*

For all these countries we use data from the most recent Demographic and Health Surveys (DHS)[22] as well as other data[23] when necessary and available.

General Socio-demographic Profile

Table 1 provides a general socio-demographic portrait of Angola and compares it with those of the selected sub-Saharan nations. Some general points about its profile in relation to possible influences on fertility can be made. Angola stands out as a very sparsely populated country. Coupled with the availability of vast quantities of highly fertile agricultural land, Angola's low population density, other things being equal, should prevent any significant incidence of land shortage, which in turn removes one set of factors that might induce fertility decline. As historical evidence from other parts of the world suggests, land shortages may be conducive to fertility reduction through undernutrition-related subfecundity, later marriage, out-migration or direct fertility control. This logic, however, may not readily apply to a country where agriculture has been all but paralysed by ceaseless warfare in the countryside. Compared to the other countries, Angola is similarly urbanised but it is important to note that its urban population has been significantly boosted by war-triggered massive population displacements from rural areas.

   Angola compares favourably with Mozambique and Benin in terms of women's

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22 DHS are standardised surveys focused primarily on reproductive characteristics, contraceptive behaviour, child mortality and health and have been carried out around the developing world (more than once in several countries) since the second half of the 1980s. DHS interview women aged 15 to 49 and in some countries also interview their marital partners. We use data from the following DHS final reports: *Benin, Enquête Démographique et de Santé, 1996* (Calverton, Maryland, Macro International, 1997); *Ghana Demographic and Health Survey, 1998* (Calverton, Maryland, Macro International, 1999); *Kenya Demographic and Health Survey, 1993* (Calverton, Maryland, Macro International 1994); *Kenya Demographic and Health Survey, 1998* (Calverton, Maryland, Macro International, 1999); *Moçambique, Inquérito Demográfico e de Saúde, 1997* (Calverton, Maryland, Macro International, 1998); *Zimbabwe Demographic and Health Survey, 1994* (Calverton, Maryland, Macro International, 1995).

23 *Fertility Trends and Determinants in Six African Countries. DHS Regional Analysis for Anglophone Africa* (Calverton, Maryland, Macro International 1994); *World Development Indicators* (Washington, DC, World Bank, 2000); *Relatório do Desenvolvimento Humano, Angola 1997* (Luanda, UNDP, 1997).

schooling, especially in the proportion of women with secondary or higher levels of education who are typically in the vanguard of fertility change.[24] Yet women in Zimbabwe, Ghana and Kenya are generally better educated.

In macroeconomic terms, Angola – despite its unique economic potential – is among the poorer sub-Saharan countries, although it is not among the very poorest, such as Mozambique. It is important, however, to exercise caution in interpreting Angola's levels of national income: almost half of it has been spent on weapons and other war-related needs and the other half has been very unevenly distributed. These qualifications may explain why an ostensibly richer Angola has the second highest share of people living in poverty and is very similar to Mozambique, a country much less endowed with resources, on such key public health indicators as life expectancy, infant, childhood and maternal mortality and sanitation. Angola's life expectancy is also among the lowest in sub-Saharan Africa and its infant and child mortality is among the highest, and more than twice as high as in countries with relatively advanced health care systems, such as Zimbabwe and Kenya.

Maternal mortality rates[25] are another indicator of health care in general, and of reproductive health in particular, and again Angola is at the bottom of the sub-Saharan list. Angola also trails all the other selected countries in the proportion of the population with access to proper sanitation (availability of safe excreta disposal facilities) and, along with Mozambique, has the lowest percentage of people with access to a safe water supply.

Childhood Mortality

Levels and trends of childhood mortality are important influences on fertility behaviour. The connection between levels of childhood mortality and fertility is well established in the demographic literature. Despite variability in the patterns and strength of this relationship, a decline in childhood mortality and therefore an increase in children's survival chances has been shown to reduce demand for children and to prolong postpartum infecundability associated with lactation.[26] Figure 1 depicts the trends in mortality among children under five estimated from survey data. The Angolan curve is a combination of the estimates obtained from the 1988 survey conducted in Angola's south and south-west and the nationally representative 1996 MICS. The information for other countries is taken from their respective DHS final reports and from other published sources.[27]

Angola's disadvantageous position is obvious. The only country where under-five mortality approaches Angola's levels is Mozambique – a country that shares with Angola the legacy of Portuguese colonialism and the experience of a civil war. In fact, their similar backgrounds make a comparison of the two nations particularly instructive in eliciting the impact of war on mortality. Both Angola and Mozambique experienced a decline of childhood mortality in the early independent years, a decline that may have lasted

24 I. Diamond, M. Newby and S. Varle, 'Female education and fertility: examining the links', in C. H. Bledsoe, J. B. Casterline, J. A. Johnson-Kuhn and J. G. Haaga (eds), *Critical Perspectives on Schooling and Fertility in the Developing World* (Washington, DC, 1999). pp. 23–48; S. L. Jejeebhoy, *Women's Education, Autonomy and Reproductive Behaviour: Experience from Developing Countries* (Oxford, Clarendon Press, 1995).

25 The number of maternal deaths per 100,000 live births in a given year.

26 S. Preston, *The Effect of Infant and Child Mortality on Fertility* (New York, Academic Press 1978); M. R. Montgomery and B. Cohen, *From Death to Birth: Mortality Decline and Reproductive Change* (Washington, DC, National Academy Press, 1998).

27 DHS estimates of under-five mortality were obtained from birth history data. Angolan estimates were calculated using information on children ever born and children surviving (the Brass method); the model life table used as standard was South level 14 from the Coale-Demeny set.
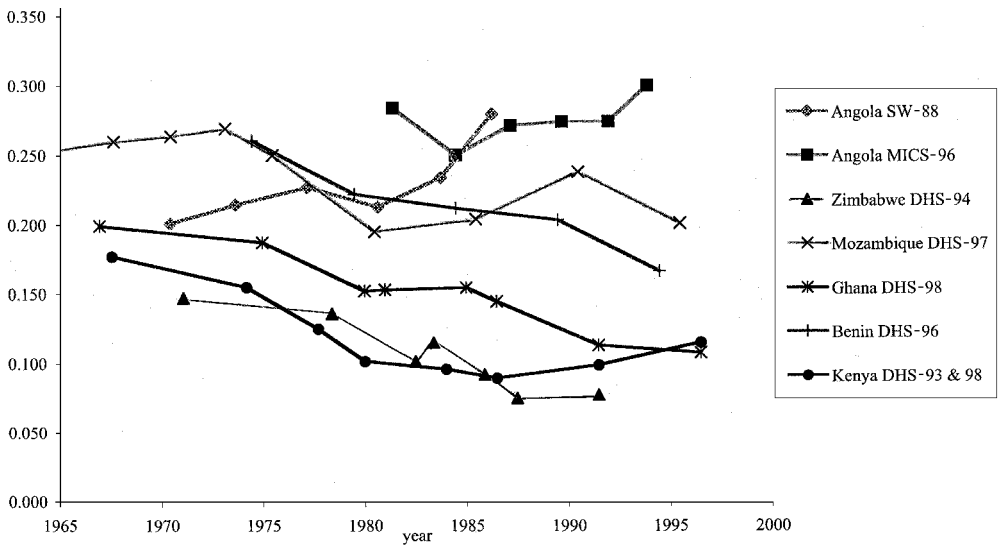
Note: Rates that refer to a period of two or more years are plotted at mid-point.
Sources: *Benin, Enquête Démographique et de Santé, 1996; Famílias e Aldeias no Sul de Angola; Ghana Demographic and Health Survey, 1998; Inquérito de indicadores múltiplos; Kenya Demographic and Health Survey, 1993; Kenya Demographic and Health Survey, 1998; Moçambique, Inquérito Demográfico e de Saúde, 1997; Zimbabwe Demographic and Health Survey, 1994.*

Figure 1. Trends in under-five mortality.

in some parts of Angola into the mid-1980s. These declines can be attributed to the young nations' efforts to create accessible and effective systems of disease prevention and treatment. By the mid-1980s, however, the impetus of the early post-independence years began to wane under the debilitating pressure of incessant fighting and mortality began to rise. In Mozambique, childhood mortality peaked in the early 1990s, just before the 1992 ceasefire, when the country was on the brink of self-destruction. Since then it has declined steadily as peace and economic recovery began to take hold. In Angola, childhood mortality stabilised in the period of relative peacefulness that preceded the 1992 elections, but then increased sharply again after the dispute over the election results degenerated into total warfare. By contrast, childhood mortality in Benin has been declining steadily from levels that were similar or above Angola's in the mid-1970s to much lower levels in the mid-1990s. Childhood mortality rates in the three other countries included in this comparison – Ghana, Kenya and Zimbabwe – have been consistently below those in the war-ravaged former Portuguese colonies. Although these three countries also demonstrate stagnation and even a certain increase in under-five mortality since the mid-1980s or early 1990s – a likely repercussion of structural adjustment policies – these trends, however troublesome, do not bring these countries' infant mortality even near Angola's levels.

Although sufficient data to make an accurate assessment of the mortality-fertility link in Angola are not available, we suggest that the war in Angola, by forestalling the decline of mortality, may have also discouraged fertility reduction. However, fertility decline is a product of a variety of factors. Whereas childhood mortality is known to be very sensitive to changes in the politico-military climate,[28] the reaction of fertility to war, as we mentioned earlier, is more complex. Below we examine some key aggregate fertility characteristics of

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28 M. Garenne. 'Political crises and child survival: five case studies in sub-Saharan Africa' (paper presented at the International Union for the Scientific Study of Population 23rd General Conference, Beijing, China, 11–17 October 1997).
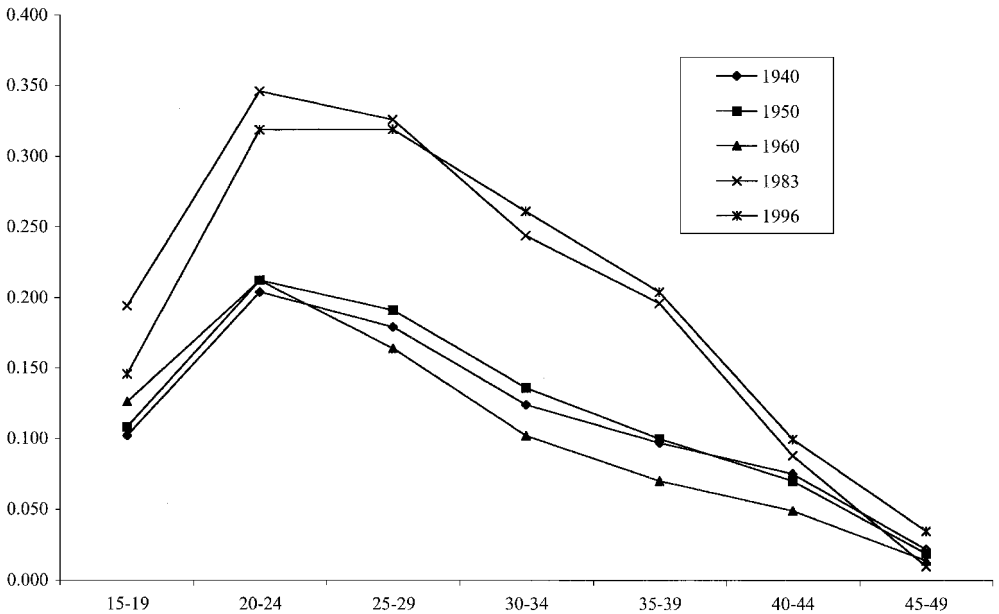
Sources: Lopez-Escartin, N. 1992. *Données de Base sur la Population: Angola.* Centre Français sur la Population et Développement (CEPED) Working Paper (Paris, 1992); *Inquerito de Indicadores Múltiplos.*

Figure 2. Trends in age-speci fic fertility rates, Angola 1940–1996.

Angola, and compare them with those in the selected sub-Saharan countries, in an attempt to establish, or at least hypothesise, links between Angola's politico-military situation and fertility trends.

Age-specific Fertility

Figure 2 shows changes in age-specific fertility rates (ASFRs) in Angola between 1940 and 1996.[29] The data point to a considerable rise in Angolan fertility between 1960 and the mid-1980s. Although a pre-decline rise of fertility has been a common occurrence historically,[30] and some increase in fertility was probably taking place after World War II in several sub-Saharan societies,[31] the apparent jump in Angolan fertility seems too large to be attributed just to improved nutrition and reproductive health and a gradual erosion of traditional methods of fertility regulation. It is likely to be inflated by the already mentioned underreporting of blacks' fertility in colonial censuses and may also reflect to some extent the selective coverage of the 1983–85 census. In any case, even though the increase can be seen in all ages (with the exception of the latest stages of the reproductive span), the overall pattern of age distribution of childbearing has not changed much: in the mid-1990s, as in 1940, fertility peaked in the age range 20 to 29. If the data are broadly representative, little change occurred between the early/mid-1980s and the mid-1990s and age-specific

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29 ASFRs for the 1940, 1950 and 1960 censuses were computed using Brass multipliers, and for the 1983–85 census using P/F ratios. For 1996 ASFRs were computed from the MICS data by dividing the number of live births in the 12 months preceding the survey by the number of women in each age group.
30 T. Dyson, and M. Murphy, 'The onset of fertility transition', *Population and Development Review*, 11, 3 (1985), pp. 399–440.
31 K. A. Foote, K. H. Hill and L. G. Martin, *Demographic Change in Sub-Saharan Africa* (Washington DC, National Academy Press, 1993); A. Romaniuk, 'Increase in natural fertility during the early stages of modernization: evidence from an African case study, Zaire', *Population Studies*, 34, 2 (1980), pp. 293–310.
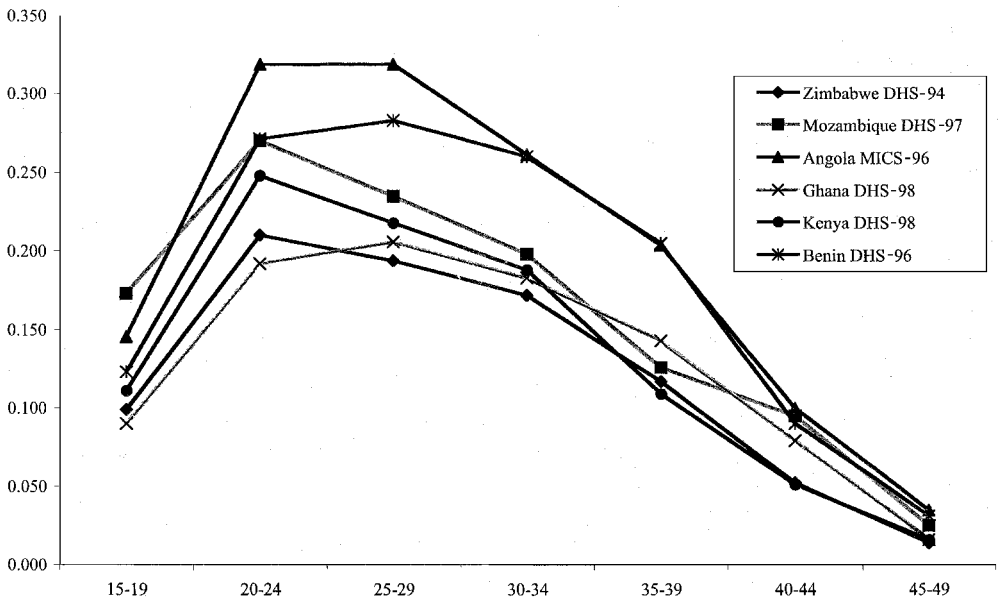
Sources: *Benin, Enquête Démographique et de Santé, 1996; Ghana Demographic and Health Survey, 1998; Inquérito de indicadores múltiplos; Kenya Demographic and Health Survey, 1993; Kenya Demographic and Health Survey, 1998; Moçambique, Inquérito Demográfico e de Saúde, 1997; Zimbabwe Demographic and Health Survey, 1994.*

**Figure 3.** Age-specific fertility rates for selected countries.

fertility remained well above the levels of the colonial era for all but the youngest and oldest age groups. Yet there is an overall shift of reproductive activity to older ages, and especially an appreciable decline of fertility levels in the two youngest age groups.

Considering the limited coverage of the 1983–1985 census, it is difficult to assess whether the recent trends presented in Figure 2 are a sign, or at least a precursor, of a sustained reduction of fertility in Angola or whether (and how) they reflect the politico-military experience of the nation. When the 1996 estimates of age-specific fertility in Angola are compared with recent estimates from the other countries (see Figure 3), the shapes of the distributions are generally similar. However, the high levels in Angola, especially in the peak reproductive ages of 20–29, stand out in comparison not only with the countries that are in the forefront of the fertility transition (i.e. Kenya and Zimbabwe) but even with the generally pre-transitional societies of Benin and Mozambique. Assuming that the MICS data do not grossly overestimate Angola's fertility, there is therefore no evidence that war might have lastingly depressed fertility in Angola.

Total Fertility

Recent trends in total fertility rates (TFRs) in Angola and the other five countries are presented in Figure 4. The TFR is calculated as the sum of the age-specific rates through all ages of the reproductive span[32] and indicates the total number of children a woman would have during her reproductive life if she were to follow the current age-specific schedule of childbearing. Although the TFR, like the age-specific rates from which it is computed, is a period (synthetic cohort) measure that does not allow one to follow the

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32 For the 1960 and 1970 Angolan censuses TFRs were estimated using the stable population theory.
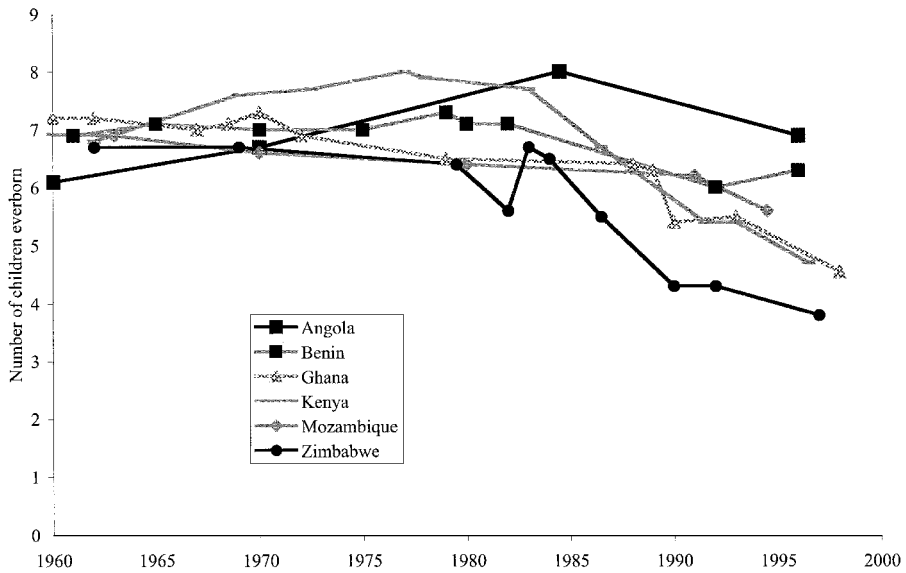
Sources: *Benin, Enquête Démographique et de Santé, 1996; Ghana Demographic and Health Survey, 1998; Angola, Inquérito de Indicadores Múltiplos; Kenya Demographic and Health Survey, 1993; Kenya Demographic and Health Survey, 1998; Moçambique, Inquérito Demográfico e de Saúde, 1997; Zimbabwe Demographic and Health Survey, 1994.*

Figure 4. Trends in total fertility rates in selected countries.

fertility of real age cohorts, a comparison of TFRs for different societies at different points in time may shed some light on the dynamics of reproductive changes.

As can be seen from Figure 4, Angola's total fertility is the highest among the countries compared, yet it has been declining as in all the other countries (with an inexplicable, even if moderate, increase in Benin in the mid-1990s). The Angolan data suggest that the country's TFR peaked in the mid-1980s, when the war was in a medium-intensity guerrilla stage, and then declined in the mid-1990s to a level still slightly above that of the early-1970s levels. Although these trends seem generally plausible, it should be remembered that reservations remain about the exact magnitudes of total fertility because of the quality and limitations of the Angolan data.

The available data are insufficient to chart a more detailed path of changes in Angola's total fertility. However, the data from the MICS do allow a very specific and reliable comparison to be made between fertility in the period of relative peacefulness when the survey was conducted (1996) and fertility in the period some two years earlier, when the country was ravaged by fierce fighting. Due to data constraints we cannot compare the TFRs but we can compare the predicted probabilities of having a birth in each of these periods. Our calculations clearly indicate that there was a higher probability of births in the postwar period than in the period of heightened warfare: controlling for a variety of other factors, a woman would have had a 42 per cent chance of having a birth in the period of warfare compared with a 50 per cent chance in the postwar period.[33] These results can be interpreted as a sign of a postwar fertility rebound following a depression of fertility during the period of fighting. The data also suggest that, even with this 'boom', fertility was still

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33 The predicted probabilities were estimated using the STATA software package (*Stata Reference Manual*, Release 6.2 (College Station, Texas, Stata Press, 1999)), from a logistic regression model of the odds of having a birth in each of the analysed periods (ever-pregnant women only). The model controls for women's age, parity, education, language spoken in household, area of residence, household size, sex of head of household, sanitation, ownership of a radio, and strength of war impact.

Table 2. Recent total fertility rates (TFRs) by womens' education and area of residence

	Angola (1996)	Benin (1996)	Ghana (1998)	Kenya (1998)	Mozambique (1997)	Zimbabwe (1994)
Education						
None	6.9	7.0	5.8	5.8	5.8	5.2
Primary	7.3	5.0	4.9	5.2	5.7	4.7
Secondary +	5.8	3.2	2.8	3.5	3.7	3.3
Residence						
Urban	6.8	5.2	3.0	3.1	5.1	3.1
Rural	7.0	7.0	5.4	5.2	5.8	4.9
Country total	6.9	6.3	4.6	4.7	5.6	4.3

Sources: *Benin, Enquête Démographique et de Santé, 1996; Ghana Demographic and Health Survey, 1998; Angola, Inquérito de Indicadores Múltiplos; Kenya Demographic and Health Survey, 1993; Kenya Demographic and Health Survey, 1998; Moçambique, Inquérito Demográfico de Saúde, 1997; Zimbabwe Demographic Health and Health Survey, 1994.*

lower in 1996 than it had been in the early 1980s. However, given the limitations of the 1983–1985 census, such a conclusion must remain speculative.

Even in countries that have not fully embarked on the path of fertility transition, fertility levels tend to vary across major socio-demographic categories. Table 2 summarises the differences in total fertility by women's average educational level and area of residence computed from the 1996 MICS and obtained from the most recent DHS of the selected sub-Saharan countries. Normally one would expect a strong negative correlation between schooling and fertility: at each higher level of education fertility should be lower. As can be seen, this correlation is present in all the countries except Angola. Here, women with primary education have higher fertility than women with no education at all, although women with secondary or higher levels of education have lower fertility. This pattern is not uncommon in developing countries, especially in sub-Saharan Africa,[34] and reflects the very early stage of the fertility transition, when the erosion of traditional child-spacing practices (such as prolonged postpartum abstinence and prolonged breastfeeding), which is associated with education, is not adequately compensated for by contraceptive use. The largely pre-transitional nature of Angolan society is also indicated by the fact that the fertility gap between uneducated women and those with secondary or higher levels of education is noticeably smaller in Angola than in any other country on our list. The urban versus rural comparison invites the same conclusion, as urban and rural areas in Angola display very similar levels of fertility, while there are pronounced urban–rural differentials in the other countries. Urban living conditions in Angola are particularly difficult, even by sub-Saharan African standards. Problems such as severe overcrowding, mass unemployment, dilapidated and insufficient housing and chronic shortages of food and other consumer items might be expected to depress fertility. Yet at the aggregate level there is no evidence that urban conditions have pushed Angola's urban fertility down.[35]

Age at Start of Childbearing and Adolescent Fertility

One typical feature of the fertility transition is postponement of childbearing. Using data obtained from the most recent surveys, Figure 5 depicts the median ages at first birth in

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34 Jejeebhoy, *Women's Education, Autonomy and Reproductive Behaviour.*
35 It is also possible that urban–rural fertility differences have been partially blurred by the mass flight from the countryside to generally safer cities, but no data are available to estimate the fertility impact of this forced migration.
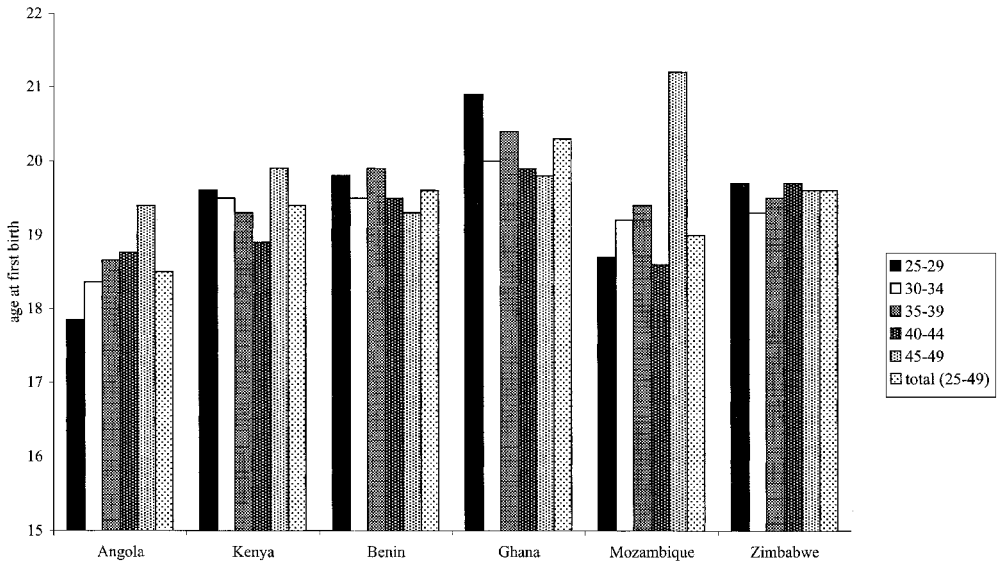
Figure 5. Median age at first birth by age group at the time of the survey.

Angola and the comparison countries for all women and for specific age cohorts. Despite some apparent decrease in fertility rates among Angola's youngest women between the mid-1980s and mid-1990, as shown in Figure 2, Angolan women still tend to start childbearing earlier than women in the other five countries, and this holds for all age cohorts except the oldest (over forty). Yet even among older women, Angola's figures are among the lowest. Also notably, the age at first birth in Angola *diminishes* consistently from the older age groups to the younger ones. This is also generally the case in Mozambique, but in the other four countries the age at first birth tends to rise, especially in the youngest cohort, which is congruent with the notion of the fertility transition. Hence, on this indicator too, Angola shows no sign of a sustained fertility decline: in fact, the trend directly contradicts an expectation that war might have hastened fertility reduction by delaying the start of childbearing. In reality, the war impact may have been exactly the opposite: although quantifiable data are lacking there is abundant evidence of widespread rape and sexual enslavement of young girls, especially by UNITA soldiers.[36] It is also plausible to suggest that, because of war-induced hardships, families may try to marry off girls earlier in order to alleviate the household's economic burden.

The trends highlighted in Figure 5 also suggest a high level of adolescent childbearing in today's Angola. Indeed, as Table 3 shows, Angola, along with Mozambique, has the highest levels of adolescent fertility of the countries compared. Pressure on women to start childbearing early is traditionally common in sub-Saharan societies[37] and the Angolan data provide no hint that this pressure is easing. Remarkably, Angola is the only country on our list where the levels of adolescent fertility in urban areas are slightly *higher* than in rural areas. In all the other countries the reverse is true and in most of them the gap is quite wide,

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36 *Angola Unravels: the Rise and Fall of the Lusaka Peace Process* (New York, Human Rights Watch, 1999), pp. 52−54.

37 C. H. Bledsoe and B. Cohen, *Social Dynamics of Adolescent Fertility in Sub-Saharan Africa* (Washington, National Academy Press, 1993).

Table 3. Adolescent fertility: percentage of adolescents who have begun childbearing

	Angola (1996)	Benin (1996)	Ghana (1998)	Kenya (1998)	Mozambique (1997)	Zimbabwe (1994)
Age						
15	8.0	2.7	1.6	3.3	7.5	2.9
16	20.7	7.4	5.8	6.0	19.6	9.7
17	30.6	22.4	13.9	19.6	43.5	16.2
18	39.7	35.3	21.1	30.1	63.0	31.1
19	62.9	56.1	31.7	44.9	66.7	44.1
Residence						
Urban	33.9	18.7	8.5	17.5	30.6	15.2
Rural	32.8	32.5	17.4	21.8	43.6	21.6
Total	33.3	26.0	14.1	20.9	40.0	19.7

Sources: Benin, Enquête Démographique et de Santé, 1996; Ghana Demographic and Health Survey, 1998; Angola, Inquérito de Indicadores Múltiplos; Kenya Demographic and Health Survey, 1998; Moçambique, Inquérito Demográfico e de Saúde, 1997; Zimbabwe Demographic and Health Survey, 1994.

which is compatible with the 'normal' expectation that young women are more likely to postpone childbearing (mainly through contraception and abortion) in urban areas than in rural areas. Unfortunately, because recent Angolan data lack information on age at entry into first marriage, we are not able to assess the magnitude of pre-marital adolescent fertility, which has been seen as a growing problem in various parts of sub-Saharan Africa.[38]

Fertility Intentions

Although stated fertility intentions and preferences should not be seen as accurate predictors of reproductive outcomes, such statements can serve as approximate gauges of a society's reproductive climate and of its future fertility. The intention to have no more children is arguably the least biased measure of desired fertility, although even this measure is imperfect.[39] Table 4 presents data on the intention to cease childbearing in Angola and the other countries by area of residence and by number of living children. The overall proportion of women who said that they did not want to have more children places Angola in the middle of the list but much closer to countries where fertility changes have been less advanced. Thus, less than a quarter of MICS respondents wanted to stop childbearing – considerably fewer than in Kenya, Zimbabwe or Ghana, as many as in Benin and somewhat more than in Mozambique. As in the majority of the countries included in the comparison, Angolan urban women are somewhat more likely to want to end procreation than rural women, but the urban–rural difference is very small. When we disaggregate the samples by the number of living children, the pattern becomes more complex. Angolan women with

38 M. Garenne, S. Tollman and K. Kahn, 'Premarital fertility in rural South Africa: a challenge to existing population policy', *Studies in Family Planning*, 31, 1 (2000), pp. 47–54; S. Singh, 'Adolescent childbearing in developing countries: a global review', *Studies in Family Planning*, 29, 2 (1998), pp. 117–136; A. Mturi and W. Moerane, 'Non-marital childbearing among adolescents in Lesotho', this volume; Michel Garenne, Stephen Tollman, Kathleen Kahn, Terri Collins and Shirley Ngwenya, 'Understanding marital and premarital fertility in rural South Africa', this volume.

39 In fact, as one of the authors of this study has argued in an analysis of fertility intentions in Mozambique, women, especially at lower parities, rarely draw a clear-cut subjective difference between short-term and long-term reproductive future, and even what appears a 'definitive' resolution to end childbearing is subjectively predicated on a number of individual conditions and circumstances. See V. Agadjanian, 'Reproductive intentions and contraceptive use in Maputo, Mozambique: meanings and determinants' (paper presented at the IUSSP Seminar on Reproductive Change in Sub-Saharan Africa, Nairobi, 2–4 November 1998).

Table 4. Percentage of women who want no more children by number of living children and area of residence

	Number of living children							Area of Residence		Total
	0	1	2	3	4	5	6+	urban	rural	
Angola (1996)	7.7	9.3	14.1	20.0	38.9	60.9	77.3	24.2	22.0	23.2
Benin (1996)	1.0	1.3	5.3	14.5	25.1	38.5	58.6	27.1	20.8	23.0
Ghana (1998)	0.8	2.3	16.1	36.1	53.2	64.3	78.4	36.8	34.2	35.0
Kenya (1998)	1.7	8.1	33.9	51.8	72.2	78.4	88.8	49.0	54.4	53.3
Mozambique (1997)	1.0	2.1	6.7	14.7	19.9	38.3	55.5	24.3	15.1	16.9
Zimbabwe (1994)	2.5	5.5	19.5	31.4	50.8	61.4	80.3	39.9	37.3	38.0

Sources: Benin, Enquête Démographique et de Santé, 1996; Ghana Demographic and Health Survey, 1998; Inquérito de Indicadores Múltiplos; Kenya Demographic and Health Survey, 1993; Kenya Demographic and Health Survey, 1998; Moçambique, Inquérito Demográfic e de Saúde, 1997; Zimbabwe Demographic and Health Survey, 1994.

no children or one child display an unusually strong inclination to have no more children. The relatively high proportion of childless women intending not to have children is particularly suspect and may be an artefact of the data collection process.[40] As in all the countries, in Angola the share of potential 'stoppers' rises with each additional child, although overall the Angolan pattern, especially among higher-parity women, is more similar to those in the three demographically more advanced countries than to those in Benin and Mozambique, whose fertility levels are close to Angola's.[41] However, given the nature of the variable, this pattern alone is not sufficient to claim that the war has precipitated the rise of anti-natalism in Angolan society.

Contraceptive Use

Fertility decline is usually associated with contraceptive uptake. The use of modern contraception is particularly indicative of reproductive changes occurring in society. Sub-Saharan Africa trails most other parts of the world in contraceptive use but, in some countries, such as Zimbabwe and Kenya, contraceptive prevalence has reached fairly high levels and has contributed to the fertility declines recorded there.[42] In Angola, the national family planning programme started as part of the maternal and child health services in the mid-1980s with the main objective of improving the health and well-being of mothers through child spacing.[43] Since the programme's inception, family planning services have, in theory, been offered free of charge through state-run clinics. The programme's impact has been severely constrained, however, by shortages of properly trained health workers, the limited range of available contraceptives, and frequent interruptions in their supply. The Ministry of Health's family planning education programmes usually target only women who seek the services, leaving the general public largely uninformed about the benefits and potential side-effects of contraceptives. Private alternatives to the state-run clinic-based

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40 It is likely, for example, that many of these respondents, such as unmarried adolescents, misunderstood the question on life-long reproductive plans as referring to short-term fertility intentions.

41 Because of a lower proportion of higher-parity women in the MICS, the overall share of Angolan potential 'stoppers' is closer to those in the Benin and Mozambique DHS.

42 Cohen, 'The emerging fertility transition in Sub-Saharan Africa'.

43 A. Carvalho, C. Laudari, M. Marini, and A. Faundes, 'Characteristics of contraceptive acceptors in Luanda, Angola', *African Journal of Fertility, Sexuality and Reproductive Health*, 1, 2 (1996), pp. 109–114.

Table 5. Current use of contraception by area of residence and education (per cent)

	Angola (1996)	Benin (1996)	Ghana (1998)	Kenya (1998)	Mozambique (1997)	Zimbabwe (1994)
All methods	8.2	16.4	22.0	39.0	5.6	48.1
Urban	13.4	19.0	30.4	49.6	17.7	57.6
Rural	4.2	15.0	18.1	36.2	2.7	44.2
Modern methods	4.2	3.4	13.3	31.5	5.1	42.2
Urban	15.0	5.8	17.4	41.0	16.6	53.9
Rural	1.9	2.1	11.4	29.0	2.3	37.3
no education	2.3	2.1	8.9	16.1	2.5	25.9
Primary	7.2	7.0	12.9	21.8	6.3	38.9
Secondary +	28.5	11.1	20.3	46.3	27.1	54.7
Capital/largest city						
All methods	33.0	27.6	32.2	56.3	30.3	61.6
Modern methods	27.5	4.9	17.4	46.8	28.5	57.7

Sources: Benin, Enquête Démographique et de Santé, 1996; Ghana Demographic and Health Survey, 1998; Angola, Inquérito de indicadores múltiplos; Kenya Demographic and Health Survey, 1998; Moçambique, Inquérito Demográfico e de Saúde, 1997; Zimbabwe Demographic and Health Survey, 1994.

family planning services are limited and expensive. However, because of the weakness of the state-run family planning system and the absence of a community-based distribution network, users increasingly have to rely on private providers whose services are poorly regulated and whose prices are often exorbitant.

Reflecting the state of the national family planning system, Angola's levels of contraceptive use are among the lowest in sub-Saharan Africa, especially in comparison with such contraceptive leaders as Zimbabwe and Kenya, although, as can be seen from Table 5, its prevalence rates do not differ much from those in Mozambique and Benin. It is also evident from Table 5 that, as elsewhere, female education in Angola is unequivocally associated with contraceptive use, with the rise in contraceptive prevalence being particularly impressive for women with secondary or higher educational.

As is generally the case, contraceptive prevalence is higher in urban areas than in rural areas, and in Angola the gap between the two parts of the country is the second widest after Mozambique. Notably, in both Lusophone nations, the urban–rural differences are inflated by a very high contraceptive prevalence in their capital cities. Although this pattern is not atypical for sub-Saharan Africa as a whole, in Mozambique and especially in Angola it also reflects the war-induced distortion of the health and family planning systems in favour of the safer environment of the capital cities with their significantly better infrastructure. The urban–rural differences in contraceptive use have yet to translate into tangible fertility differences in Angola however, since, as already noted and shown in Table 2, fertility levels in the rural and urban areas remain very similar.

Prenatal Care and Delivery

To get a broader picture of the social and health context of reproduction it is important to bring maternal health into the discussion. Table 6 shows some key indicators of maternal health pertaining to prenatal care and delivery in Angola and the other countries included in our comparison.[44] Again, Angola's record is among the worst. Even in the situation of

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44 The 1996 MICS provides information on the last childbirth only, whereas the DHS figures are averages for all births in three years preceding the survey.

Table 6. Maternal health indicators

	Angola* (1996)	Benin** (1996)	Ghana** (1998)	Kenya** (1998)	Mozambique** (1997)	Zimbabwe** (1994)
No prenatal care (%)	41.0	18.6	10.5	5.5	27.4	5.6
Urban	23.8	11.5	4.9	2.5	3.9	3.6
Rural	53.5	21.9	12.3	6.2	33.9	6.3
Median number of prenatal visits	4.4	5.2	4.3	5.7	5.0	5.1
Tetanus vaccine, 1 + doses (%)	55.7	71.5	80.7	89.9	33.6	82.1
Urban	73.4	74.3	88.0	91.3	58.1	83.6
Rural	43.9	70.1	78.4	89.5	26.8	81.5
Delivery at home (%)	79.5	34.9	55.7	57.0	55.0	30.0
Urban	66.8	19.7	22.7	31.0	17.2	8.5
Rural	88.7	42.0	66.2	62.4	65.5	38.2
Delivery without care (%)	65.2	30.0	13.2	34.1	48.8	13.3
Urban	56.8	18.3	5.2	17.3	17.9	4.7
Rural	71.2	35.2	15.7	37.9	57.4	16.4

Notes: * Based on last birth only; **Average for all births in last three years.
Sources: Benin, Enquête Démographique et de Santé, 1996; Ghana Demographic and Health Survey, 1998; Angola, Inquérito de Indicadores Múltiplos; Kenya Demographic and Health Survey, 1998; Moçambique, Inquérito Demográfico e de Saúde, 1997; Zimbabwe Demographic and Health Survey, 1994.

relative peace and stability, which characterised the time when the MICS was carried out, more than 40 per cent of Angolan mothers did not receive any prenatal care, a considerably higher percentage than in the next worst setting of Mozambique. In rural areas the situation is particularly dismal – over half of women there did not get any care – but even in Angola's urban areas the situation was much worse than in the other countries. Surprisingly, however, those Angolan women who had access to such care had approximately the same average number of prenatal visits as their counterparts in countries with much higher overall coverage. This could be due to the fact that women who come to their first consultation, usually around the end of the first trimester of pregnancy, are strongly encouraged to come back for additional consultations throughout the rest of pregnancy, especially if their pregnancy is thought to be at risk.

Anti-tetanus vaccination is a vital component of prenatal care as it protects both the mother and her baby. It is particularly important in countries with a high share of home births and therefore high risks of obstetric infections. In Angola, all pregnant women are expected to receive it free of charge. Yet only just over half of Angolan women were immunised against the deadly disease, with the coverage in the countryside being particularly low. Although Mozambique's coverage was even worse, the gap between Angola and the better-off countries, where at least 70 per cent of women were vaccinated, is staggering.[45] When we look at place of delivery, the roots of the very high level of maternal mortality that we mentioned earlier become clear. Only about one in five Angolan parturients in the mid-1990s gave birth in a hospital or a clinic; in rural areas this ratio approaches one in ten. Although, in several sub-Saharan countries, more than half of all women do not give birth in a medical facility, a large share of them (with the exception of

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45 The tetanus immunisation coverage may be higher than that of prenatal care for several reasons. Although virtually all women who receive formal prenatal care are also immunised against tetanus, women can also get the tetanus vaccine directly through the Enlarged Programme of Immunization (EPI), which targets all women of reproductive age. In addition, small household or work-related accidents also require a tetanus shot.

Table 7. Variations in Angolan fertility and related characteristics by the degree of war impact, MICS 1996

Indicators	Greater war impact			Lesser war impact		
	total	urban	rural	total	urban	rural
Predicted probabilities of a birth occurring between 9/93–8/94 (%)	39.0	34.3	40.9	44.0	40.0	48.0
Predicted probabilities of a birth occurring between 9/95–8/96 (%)	52.2	49.6	53.5	48.3	45.7	50.9
Average number of children ever born	3.6	3.8	3.6	3.6	3.5	3.6
Women who want no more children* (%)	28.1	31.9	26.5	30.1	34.1	25.5
Women using a contraceptive method (%)	4.4	6.2	3.6	11.0	16.5	4.9
No prenatal care (%)	47.9	33.7	54.1	35.5	19.1	52.8
Tetanus vaccine, 1 + doses (%)	44.5	58.7	38.8	64.8	80.3	49.7
Delivery at home (%)	86.2	78.6	89.4	74.3	61.5	88.0
Delivery without care (%)	63.2	61.5	63.9	66.7	54.6	79.5

Note: Women with at least one living child.

Mozambique) still receive some form of assistance by trained personnel during delivery. As the numbers in Table 6 suggest, in Angola almost none of the non-institutional deliveries are performed with such assistance.

War-related Regional Variations in Angolan Fertility

Despite the long stretches of fighting that have marked the last several decades of Angolan history, not all the areas of the country have suffered in the same way or to the same degree. Rural areas, especially in the central, south-eastern, and eastern parts of Angola, have been affected the most and more directly. Some urban areas, particularly in those regions, have also been strongly affected. The majority of urban areas, some parts of the countryside in relatively stable areas of the south and south-west, the area around the capital Luanda, and the coastal belt have all experienced consequences from the war but the impact has been mainly indirect. Even during the most widespread period of warfare in 1992–1994 some parts of the country – both urban and rural – saw greater devastation than others.

In this section, we compare fertility and reproductive health characteristics between the parts of the country where the impact of war, especially in its 1992–1994 bout, has been stronger and more direct, with the parts where this impact has been relatively weaker and more indirect. The greater-impact zones include Angola's northern region (i.e. the provinces of Uige, Zaire and Malanje), eastern region (i.e. Lunda Norte, Lunda Sul and Moxico), and centre-south region (i.e. Huambo, Bie and Kuando-Kubango). The lesser-impact zones are the capital region (i.e. provinces of Luanda, Bengo, Kwanza Norte and Cabinda), the southern region (i.e. Huila, Namibe and Cunene) and the western region (i.e. Benguela and Kuanza-Sul).[46] Although this simple classification does not reflect fully the complexity and the scale of the impact of war on Angolan society, it is sufficient to illustrate our main points. Table 7 presents some of the reproduction-related characteristics obtained from the 1996 MICS by the region of war impact and by urban and rural areas within each region. The differences both across and within these regions are instructive.

46 Our classification is constrained by the regional classification employed in the MICS.

To highlight changes in fertility over time, we again compare the predicted probabilities of having a birth between September 1993 and August 1994, when the fertility effects of the fighting that flared up after the announcement of the results of the 1992 elections should have been particularly strong, and between September 1995 and August 1996 (i.e. at least a year after hostilities ceased). In both regions, the probabilities rose between the 1993/94 and 1995/96 periods, conforming to the postwar fertility rebound suggested earlier. The upswing was more pronounced in greater-impact regions, where both urban and rural areas displayed higher peacetime probabilities than their counterparts in lighter-impact zones. The spike was highest in the rural areas of the more affected regions: those areas were generally worst hit by the fighting, which noticeably depressed the wartime probability of birth, at least relative to less affected rural areas.

However, the data show no regional variation in lifetime fertility (with the exception of somewhat lower parity in the lighter-impact urban areas that include the capital, Luanda), which indirectly suggests that there has been no lasting, direct effect of the war on fertility trends. Another possible indication of that is a rather uniform pattern of fertility intentions: both regions had a very similar percentage of women who wanted no more children (we exclude childless women from this comparison), and the urban–rural differences with each region conform to the universal expectation of stronger anti-natalism in urban areas. Contraceptive use was similarly low in both the more and less affected rural areas, reflecting the limitations of the national family planning system and the particularly poor supply of contraceptives in the countryside. In contrast, the gap between the urban areas of both regions was very wide, mainly because of a much higher contraceptive prevalence in the capital Luanda.

The coverage of prenatal services was considerably higher in the lesser-impact region. The difference was especially large in urban areas, mainly due to the advantages of the public health infrastructure in the capital. In rural areas, the difference between the two zones of war impact was much smaller but still in the same direction. In such matters as anti-tetanus immunisation and non-institutional delivery, greater-impact zones were also generally disadvantaged. Delivery without professional obstetric care, however, showed an unexpected pattern of a considerable disadvantage in rural areas of *lesser* impact. Notably, however, both the more and less affected regions were worse off on most maternal health indicators than the other sub-Saharan countries included in our comparison (see Table 6).

Conclusions

The available demographic information on Angola paints a picture of a largely pre-transitional society. Recent data allude to the possibility of some fertility decrease and a shift of reproduction to older ages (which commonly characterises the start of fertility decline) but the limitations of these data, especially of the 1983–1985 census, cast some doubts on whether these changes are real and reliable. Although it is difficult to establish a direct causal link between war and fertility in Angola, the data certainly offer no evidence that war might have accelerated fertility decline. Angola's relatively high levels of urbanisation and female education might have been expected to facilitate fertility decline but do not seem to have done so in this war-torn society. In fact, it seems far more plausible to argue that war has slowed down and even halted long-term fertility changes in Angola – by keeping childhood mortality high, crippling the government's efforts to expand family planning and maternal and child health care, restricting couples' access to contracep-

tive information and services, and also possibly by causing mass social and marital disruptions that, in turn, might have led to an earlier start of childbearing.

Whereas any long-term connection between war and fertility in Angola proved difficult to establish, short-term fluctuations, akin to those captured by Lindstrom and Berhamu,[47] could be seen in Angola in the 1990s. A rebound of fertility after a drop during the period of fierce fighting in 1992–1994 appears credible from the data. At the same time, our analysis of regional variations in fertility underscores the importance of taking the unevenness of the war impact into account. The reproductive panorama differed widely between the parts of the country most affected by hostilities and those spared the worst of them. In accordance with the logic of a postwar fertility rise, the more heavily affected rural areas, where the fighting was most ferocious and devastation most generalised, demonstrated the strongest upward trend.

When debating how Angola's civil war may have influenced its people's demographic behaviour, and reproductive behaviour in particular, one should not forget one indirect yet quite important way in which this influence may have been exerted. We have already mentioned the paradoxical contrast between Angola's mineral wealth and agricultural potential and the squalor in which most Angolans live. The war has not only consumed a huge share of Angola's oil and diamond revenues but has also undermined the foundations of institutional legitimacy in Angolan civil society. Angola's ruling elite has been accused of using the war as an excuse to circumvent the law systematically, to plunder the country's wealth, to rob its people of the basic goods and services such as food, medicine and education, and to suppress any criticism of mismanagement and corruption.[48] The roots of the dismal state of Angola's health care system, and specifically of its reproductive health services, must therefore be sought in this top-down lawlessness and unaccountability as much as in the destruction directly caused by the fighting.

VICTOR AGADJANIAN
Department of Sociology, Arizona State University, USA

NDOLA PRATA
Bay Area International Group, Institute of Human Development and School of Public Health, University of California at Berkeley, USA

47 Lindstrom and Berhamu, 'The impact of war'.
48 *Angola Unravels*; 'Angolan Paradox'; International Monetary Fund, 'The IMF's Staff Monitoring Program for Angola'.