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World Population Growth: The Force of Recent Historical Trends

Today, most of the policymakers and scholars who deal with social, economic, and demographic issues regard population growth as a problem. That notion dates back at least to Malthus and his predictions based on the dynamics of population growth vis-à-vis resource availability. In the early twenty-first century, prices of certain basic food products have begun to rise. The consensus is that if there are too many people now, the situation will be even more difficult in the future. Although the prices of calories and energy have escalated during the last decade, the world is not only increasingly populated but also increasingly industrialized and rich. The question of whether or not its population is too large deserves more attention, since population growth is not always undesirable. In the nineteenth and twentieth centuries, and nowadays in several developing world situations, many nations considered population growth and increased population density an asset that contributed to economies of scale and cheaper labor, providing the basis for urbanization and economic growth.[1]

Despite all of the concerns, the global population has been growing at diminishing rates since 1970. A key question is whether contemporary population growth reflects a high rate of fertility or

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1 Thomas Robert Malthus, *Essay on the Principle of Population* (Oxford, 1798).

improved health standards and an attendant reduction in mortality, stemming from material prosperity and technological progress. History helps us to understand this issue. This article presents preliminary data with an eye toward establishing the variables that influence (and have hitherto influenced) demographic growth worldwide. The intention in this exploratory analysis is to discover the reasons behind demographic growth and its most plausible evolution. These early results may well enable us later to model the worldwide population dynamics for the second half of the twentieth century, based on economic, demographic, and cultural factors—including, in particular, female and child education and employment, infant mortality, changing income levels, and ethnic differentials. We also draw implicitly on studies of earlier demographic eras.

The first issue is to ascertain whether the variable determining demographic growth is fertility (and therefore reproductive habits) or mortality (and therefore progress in health care). We refrain from analyzing nuptiality, since religion no longer has the influence on fertility dynamics that it had before 1960, when it largely determined family formation and the age at which couples conceived their first child. Furthermore, finding a homogeneous indicator of family formation and nuptiality for historical populations would be difficult. Most of the literature, including historical demography, deals with Europe and the United States—that is, the "European demographic system," in which children were conceived by married, monogamous couples. Indeed, most statistical calculations of nuptiality and fertility center on this family arrangement.

Voth and Voigtländer demonstrated that delaying the age of marriage reduced fertility by one-third in the West, thus decreasing demographic pressure on assets and allowing for the increased income and consumption that paved the way for the economic vibrancy of pre-industrial Western Europe. Extending the conclusions pertaining to this limited sample to all of the world's civilizations and religions, however, requires certain simplifications regarding the culture of, and motives for, marrying and having children. For example, in certain polygamous African societies, the ability to conceive children depends more on women's fertility than on the kind of social or cultural values that characterize most Western societies. Hence, any attempt to capture fertility patterns that are common to, and statistically significant for, the whole

world's population throughout history would entail an unavoidable loss of explanatory power.[2]

The questions that we seek to answer on the basis of the data and results in this article are relevant only to fertility patterns during the second half of the twentieth century. The limitations of nuptiality involved in the nineteenth-century European demographic system would be relevant if fertility were increasing and the number of years in which women can conceive were a key factor in fertility levels. As will become apparent, our intention is not to explain which factors are obstacles to female fertility reaching its full potential but to appreciate the main factors responsible for declining fertility. The social contingencies that prevent the maximum reproductive level from being attained are thus of secondary importance.

ARE DEMOGRAPHIC PATTERNS CONVERGING ACROSS THE WORLD? The concluding volume of Coale and Watkins' seminal *Decline of Fertility in Western Europe* stated that despite sharp contrasts in economic achievements, the demographic transition took place at much the same time throughout Western Europe. Once a threshold of per capita GDP was crossed in nineteenth-century Europe, epidemics and famines ceased to threaten the population, and adult and infant mortality diminished. More recently, as Becker, Philipson, and Soares showed, life expectancy within these nations also rose to similar levels during the last half-century.[3]

The timing of declines in mortality throughout the world has thus shown more regularity than would be predicted on the basis of economic premises. Meanwhile, urbanization and industrial growth brought about a reduction in legitimate fertility. The circulation of information that better transportion and communication systems, internal migration, and rising levels of literacy permitted extended the reach of urban demographic behavior. Despite economic divergence, population dynamics tended to converge. Improving health and reproductive practices helped to foster territorial homogeneity and the alignment of demographic variables,

2 See Joachim Voth and Nico Voigtländer, "How the West 'Invented' Fertility Restriction," *American Economic Review,* CIII (2013), 2227–2264.

3 Ansley J. Coale and Susan C. Watkins (eds.), *The Decline of Fertility in Europe* (Princeton, 1986); Gary S. Becker, Tomas J. Philipson, and Rodrigo R. Soares, "Quantity and Quality of Life and World Inequality," *American Economic Review,* XCV (2005), 277–291.

not only in nineteenth-century England but also Europe in general. Scholars have used microhistorical methods to emphasize the distinctive features of several European regions, highlighting religious beliefs and socioeconomic variables that may help to explain why behavior in different regions is similar but not always identical.[4]

The European demographic transition is unique for its relatively early occurrence. According to World Bank datasets and Annual Reports, most of the world still had high rates of both fertility and infant mortality in 1960. Thus, in the post–World War II period, the countries benefiting from the golden age of capitalism had not yet experienced the demographic transition—particularly the poorer tropical countries. As late as 1995, those tropical countries were among the most poverty-stricken in the world; their predicament has generated a voluminous literature about the geographical reasons for economic growth or its absence. The important consideration for our purposes, however, is that in 1960, the poorest countries in the world (the ones in the tropics) had the highest fertility and infant-mortality rates, as well as the lowest rates of female and child education. The communications and information-exchange network referred to earlier had not yet developed there sufficiently to encourage the declines in fertility and infant mortality that were already underway in the developed world.[5]

The global scenario had changed significantly by 2010, however, when most of the world had shifted to modern demographic patterns. Thus, on the eve of the twenty-first century, much of the planet had undergone the transition from high to relatively low fertility (and high to low infant-mortality rates), the main exceptions being the countries of sub-Saharan Africa—a region marked not only by high fertility but also staggeringly high levels of infant and adult mortality. Thus, a group of countries still lags behind in the demographic transition, encumbered with characteristics that prohibit economic growth. The upshot for Africa is both international and civil war, as well as rampant hunger and disease (pandemics)

4 E. Anthony Wrigley, *Poverty, Progress and Population* (New York, 2004); Jan de Vries, *European Urbanization, 1500–1800* (Cambridge, Mass., 1985). Voth and Voigtländer, "How the West"; John Brown and Timothy Guinnane, "Fertility Transition in a Rural Catholic Population: Bavaria, 1880–1910," *Population Studies,* LVI (2002), 35–49.

5 Jeffrey D. Sachs, *Common Wealth: Economics for a Crowded Planet* (New York, 2008); *idem, The End of Poverty: Economic Possibilities for Our Time* (New York, 2005); World Bank, Annual Reports (Washington D.C., 1960–2010).

leading to many deaths. Those factors account for much of the region's high mortality and fertility rates, coupled with the considerable probability of death during the first year of life.

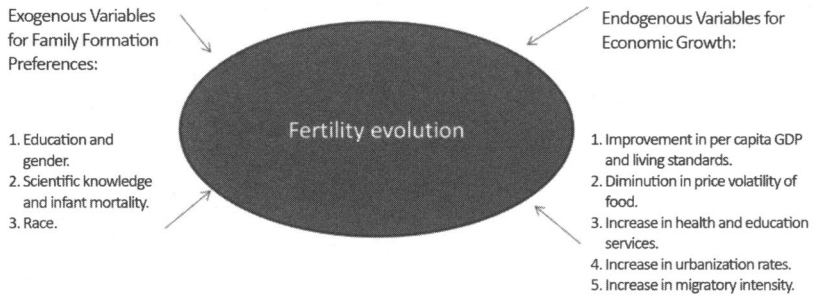
Figures 1A, and 2A and Tables 1A, 2A, 3A, and 4A in the Appendix show aspects of the world's demographic development by region, indicating the tendency toward convergence in both fertility and infant-mortality variables. With some delay, the world's slowest-developing regions in this respect—sub-Saharan Africa and South Asia—show a trend of convergence with the core countries of Europe and North America. The answer to the question of why the world's population is growing does not involve an increase in fertility levels as much as improved health conditions in a major group of countries. Adult and infant-mortality rates have diminished in every country; most of the world's population lives longer and enjoys relatively high living standards.

A SIMPLE MODEL TO EXPLAIN DECLINING FERTILITY The most relevant studies (in addition to the data presented herein) indicate that although nations evinced a tendency to converge in their fertility and mortality numbers during the period under consideration, the relationship between their demographic variables and their income levels is nonlinear. As Fogel reported, life expectancy improved considerably during the twentieth century, at least until the 1960s, thanks to improvements in nutrition and health, but generally speaking, life expectancy appears to have diminishing returns in relation to income. Fogel predicted that life expectancy will not increase by more than ten to fifteen years during the twenty-first century (it nearly doubled in the twentieth century).[6]

Despite the convergence of fertility at an all-time low—close to the replacement level—in much of the world, high fertility in poor countries, mainly in sub-Saharan Africa, remains a matter of grave concern for the United Nations. Even while fertility rates are diminishing elsewhere, present demographic patterns and net reproduction rates indicate that the population in this part of Africa is doubling every thirty years. If all of the world's countries, including those of sub-Saharan Africa, achieve fertility rates close to the replacement level by 2050, the world population could peak at

6 Sachs, *Common Wealth;* United Nations, Human Development Reports (1960–2010). Robert W. Fogel, *The Escape from Hunger and Premature Death, 1700–2100: Europe, America and the Third World* (New York, 2004).

Fig. 1 Variables Affecting Fertility



9.1 billion, which most economic authorities find disconcerting. This period could well see a dramatic shift in the regional distribution of the global population. Since fertility below the replacement level is already in evidence among the developed nations, and it should take several decades for it to occur in the less-developed world, the share of the developed nations in the total world population would decline.[7]

Figure 1 divides the variables that affect fertility into those that are endogenous and those that are exogenous. The endogenous variables are related to economic growth; they constitute the main set of variables considered by most of the models that deal with the European demographic transition. Most studies of Western fertility link rate reductions to endogenous factors associated with economic growth—improved living standards, urbanization, internal migration, improved health, better education, advanced agricultural technologies, and changes in food prices. The primary variable in this respect with regard to influence on fertility is per capita GDP.

Exogenous variables not directly related to economic growth could also have affected the fertility of poor countries during the decades under consideration—infant mortality, female education, and the culture of a particular race. According to Williamson, infant mortality has played a major role in explaining fertility changes in both East and South Asia in recent decades. He regards this variable as exogenous since it depends primarily on scientific knowledge (vaccines, antibiotics, penicillin, etc.) developed in the

7 Sachs, *Common Wealth*, 167.

twentieth-century West, as well as on public-health interventions. The reduction in infant mortality led to a fall in the total number of births per family, due to longer intervals between births as a result of prolonged lactation. Moreover, parents reduced their number of children to ensure the continued survival of their existing offspring, as well as the ability to produce an optimum number of living children with fewer births.[8]

Another exogenous factor influencing family-size preferences is a mother's level of education. According to data provided by Barro and Lee (calculated on the basis of years spent in education by region), the amount of education that women receive is influenced by culture, and the regions with lowest levels of fertility and education are in East and South Asia. However, in societies where families invest in human capital, an increase in the value of women's paid work (wages) can affect the opportunity costs regarding unpaid domestic work, including the bearing and raising of children. When women allocate more time to paid work, they have less time for reproductive work and other unpaid activities. Women's fertility suffers as their labor-force participation increases. Women who achieve a higher level of education produce fewer but healthier and better socialized children. The scholarly literature has amply outlined the effects that the education of mothers has on children's health and education in poor countries.[9]

The third exogenous factor, race and ethnicity, has become

8 Jeffrey G. Williamson, "Demographic Change, Economic Growth and Inequality," in Nancy Birdsall, Allen C. Kelley, and Steven W. Sinding (eds.), *Population Matters* (New York, 2001), 106–135.

9 See Robert J. Barro and John W. Lee, "International Measures of Schooling: Years and Schooling Quality," *American Economic Review,* LXXXVI (2003), 218–223; *idem,* "International Data on Education Attainment: Updates and Implications," Working Paper Series (Harvard University, 2000); Ester Boserup, *Women's Role in Economic Development* (New York, 2007; orig. pub. 1970); Amartya Sen, "More than 100 Million Women Are Missing," *New York Review of Books,* 20 Dec.1990; *idem,* "Missing Women: Social Inequality Outweighs Women's Survival Advantage in Asia and North Africa," *British Medical Journal,* CCCIV (1992), 587–588; *idem,* "Missing Women Revisited: Reduction in Female Mortality Has Been Counterbalanced by Sex Selective Abortions," *ibid.,* CCCXXVII (2003), 1297–1298; Oded Galor and David N. Weil, "The Gender Gap, Fertility and Growth," *American Economic Review,* LXXXVI (1996), 374–387; Jean Drèze and Sen, *India: Development and Participation* (New York, 2002; orig. pub. 1996); John C. Caldwell, *Theory of Fertility Decline* (New York, 1982); Becker, Kevin Murphy, and Robert F. Tamura, "Human Capital, Fertility, and Economic Growth," *Journal of Political Economy,* XCVIII(1990), S12–S37; R. A. LeVine and S. E. LeVine et al. "Women Schooling and Child Care in the Demographic Transition: A Mexican Case Study," *Population and Development Review,* XVII (1991), 495–496; Pau Baizan and Camps, "The Impact of Women's Educational and Economic Resources on Fertility: Spanish

Table 1 Mortality and Race, Twentieth-Century United States

	EVOLUTION OF LIFE EXPECTANCIES AT BIRTH (MALE)		
	WHITE	BLACK	DIFFERENCE (ABSOLUTE) YEARS
1900	48	33	15
1920	56	47	9
1940	63	52	11
1960	68	61	7
1990	73	64	9
1997	74	67	7
	EVOLUTION OF INFANT-MORTALITY RATES (DEATHS FIRST YEAR OF LIFE/BIRTHS × 1,000)		
	WHITE	BLACK	DIFFERENCE
1915	98.6	181.2	82.6
1930	60.1	99.5	39.4
1940	43.2	72.9	29.7
1960	22.9	44.3	21.4
1980	10.9	22.2	11.3
1998	6.0	14.3	8.3

SOURCE Susan B. Carter et al, *Historical Statistics of the United States* (New York, 2006), I, 449–450, 445, 452, 459–461.

less of an issue. The disparity in the demographic patterns of different races is narrowing. Witness, for example, the convergence of mortality rates among blacks and whites in the United States during the second half of the twentieth century (see Table 1), due in part to the equitable distribution of such public goods as water, sanitation, and other health services, as well as to a greater convergence in income levels.[10]

We present two models in the following section. The purpose of the first is to identify relevant variables to explain the global evolution of fertility. Given the considerable disparity in the numerical values of certain variables, the model presents rates for fertility and infant mortality per thousand. The second model presents variables affecting the gender gap.

Birth Cohorts, 1901–1950," in Angelique Janssens (ed.), *Gendering the Fertility Decline in the Western World* (New York, 2007), 25–58.

10 Werner Troesken, *Water, Race and Disease* (Cambridge, Mass., 2004).

EMPIRICAL RESULTS Table 2 contains the results of regression 1, which is based on panel data about the 145 countries for which information is available at five-year intervals from 1965 to 2010. The total number of observations is 1,012; there is a considerable amount of missing values. We avoid fixed effects; some variables, such as race and ethnic fractionalization, are constant in certain countries. The variables included in this panel regression are per capita GDP, population size, infant mortality, infant mortality among the Indian race and among the black population, female education, ethnic fractionalization, and the effects of ethnic composition (share of Indians and blacks in the total population).[11]

One of the most significant findings in Table 2 is the extremely low explanatory power of income levels (per capita GDP) and the strong effect of infant mortality, race, and female education. Taking into account that the dependent variable is fertility rates per 1,000, the effect of income is almost nil. Hence, we can infer that endogenous variables associated with economic growth (such as those shown in Figure 1—living standards, urbanization, internal migration, and services) are inconsequential in the evolution of fertility during the second half of the twentieth century. The reason might be that basic modern health services and other public goods (such as water sanitation, well-established transportation and communication networks, and basic agrarian technologies) were already in place almost everywhere by then. Another possible reason is that the human capital necessary for the spread of the demographic change in Europe had already been established extensively during the second half of the twentieth century through new forms of communication.

If income is not significant, which variables are? According to our model, the relevant variables are those presented previously as exogenous to family-formation preferences—infant mortality, female education, and race (particularly differences related to Indians, blacks, and whites). An increase of 1 point in infant mortality rates leads to an increase of 0.012 in fertility rates. A one-year increase in women's primary schooling causes the number of children born to fall by 0.614 (worldwide average). Fertility levels are higher among blacks and Indians than among whites. Nonetheless, connecting the variables black or Indian with infant mortality has a

11 See data of Barro and Lee at http://barrolee.com;World Bank, Annual Reports.

Table 2 Variables Affecting Fertility at the World Level, 1965–2010: Panel Regression Analysis with Year Fixed Effects (Dependent Variable = Fertility Rates x 1,000)

Per capita GDP	−0.0000191 (0.0000141)
Population	−0.000000935 (0.000000226)**
Infant mortality x 1,000	0.0115972 (0.0038167)***
Infant mortality (Indian) x 1,000	−0.1840857 (0.16889)
Infant mortality (Black) x 1,000	−0.0664981 (0.041899)*
Female education (years of primary school)	−614.0746 (20.93335)***
Ethnic fractionalization	781.9244 (158.8337)***
Indian	15.38975 (2.304191)***
Black	10.2047 (1.104309)***
1965	−115.0131 (198.729)
1970	−374.564 (190.5099)*
1975	−666.8173 (188.6754)**
1980	−825.4787 (187.6272)***
1985	−949.4833 (187.9235)***
1990	−771.5252 (188.9998)***
1995	−1,439.589 (180.2016)***
2000	−1,511.638 (180.3185)***
2005	−1,392.792 (184.8643)***
2010	−1,374.794 (183.4817)***
Constant	6,222.175 (182.8758)***

Table 2 (Continued)

Number of observations = 1,012
F(19,992) = 185.73
R-squared = 0.7535

*p significance 10%.
**p significance 5%.
***p significance 1%.

SOURCES Data for female human capital are from Barro and Lee at http://barrolee.com; for per capita GDP, fertility, and infant mortality from World Bank Annual Reports; for ethnicity, Alberto Alesina et al., "Fraccionalization," *Journal of Economic Growth,* VIII (2003), 155–194. The aggregation from ethnicity to racial groups (black, Indian, etc.) is also based on Alesina's data.

negative effect on fertility levels, probably because of the extraordinary mortality caused by pandemics and civil wars in the areas inhabited by blacks and Indians. Mortality due to epidemics and wars can produce an imbalance in a country's sex ratio or prevent many women from having children because of the spread of diseases such as AIDS.

These results indicate that the way to reduce fertility levels in the poor countries of sub-Saharan Africa and elsewhere is to improve infant-mortality rates by means of scientific and medical innovations that eradicate such pandemics as AIDS, HIV, and malaria. These diseases, which kill people of all ages, also leave the lives of survivors at risk. Additionally, high levels of infant mortality mean that only a limited number of babies born survive the first year, leading many women to have many children in the hope that at least some of them will reach adulthood and support the family when their parents grow old.

Our findings also reveal female education to be the most powerful variable to explain fertility diminution in poor countries. Given that one year more of female primary education in poor countries leads to a diminution of 0.614 births per couple, gender differences in the access to education and wealth may be critical to the evolution of fertility. Table 3 contains results related to variables that affect the gender gap worldwide and therefore women's access to education.

This second model displays results only for the year 2003, the regression based on cross-sectional data across countries. Nonetheless, the results are significant, with important implications for countries seeking to control fertility levels, as China and India have

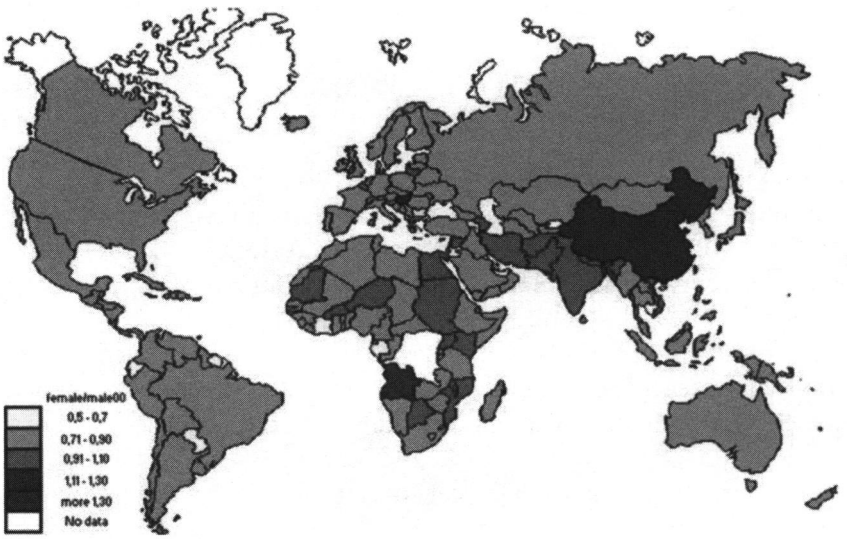
Table 3 Explaining the Gender Gap, 2003—Dependent Variable=Log (Parity Purchasing Power, Female Earnings/Parity Purchasing Power, Male Earnings)

	(1)	(2)	(3)	(4)
Log per capita GDP	0.0009	−0.0228	−0.00977	−0.1752
	(0.0209)	(0.0208)	(0.0138)	(0.0155)
Log economically active female	1.0534	0.9619	1.0881	0.9739
	(0.0958)***	(0.1002)***	(0.0897)***	(0.0986)***
Latin America	−0.1416	−0.1685	−0.07564	−0.1658
	(0.0520)***	(0.0579)***	(0.0542)	(0.0529)***
East South Asia	0.0807	0.0642	0.0917	0.1107
	(0.0377)**	(0.4545)	(0.0369)***	(0.0351)***
Log education gap (years spent in school)	−0.02971			
	(0.0317)			
Market openness		0.0407		
		(0.3242)		
% Indian			−0.0463	
			(0.0023)***	
Log Women in government				0.0614
				(0.03510)*
Constant	−4.5697	−4.1010	−4.5976	−4.2743
	(0.4230)***	(0.4311)***	(0.3504)***	(0.3765)***
N	122	77	118	119
R-squared	0.592	0.569	0.650	0.599

*p significance 90%.
**p signifincance 95%.
***p significance 99%.
SOURCE http://hdr.undp.org/en

attempted to do in the recent past. The tables and figures presented in the Appendix show that fertility levels in South and East Asia fell sharply between 1960 and 2010, mainly because of family-planning policies exogenously imposed on couples. As both China and India evince considerable gender bias, programs like China's one-child policy have resulted in an increase in the infant-mortality rates of girls, in sharp contrast to the trend in the rest of the world. That is not to suggest that infanticide is practiced in these countries. However, where official policy mandates one child per couple, those couples who want a son may well be inclined to offer their daughters for adoption or, as in the case of Taiwan, to arrange a child marriage for them. The end result of such adoption and marriage is

Fig. 2 Male and Female Infant-Mortality Rate within First Twelve Months, Year 2000



SOURCE http://databank.worldbank.org

an increase in the infant-mortality of girls, as several research projects have demonstrated. For infant-mortality rates, male and female together, within the first year after birth, see Figure 2.[12]

A number of demographic variables have shown parallel changes in various parts of the world recently despite substantial differences in their absolute levels. The similar timing of changes in fertility and mortality rates—alongside such related demographic data as infant-mortality rates, years of schooling of women, female labor-force participation, and relevant economic factors—is intriguing. It raises questions about the importance of conditions that are specific to a particular country relative to those that occur on a broader international scale. This observation is hardly new. We noted the similarity in national fertility levels during the European Fertility Transition of the late nineteenth century, as well as the similarity in mortality rates among the black and white populations of the United States during the twentieth century. Whether these trends

12 Boserup, "Women's Role"; Sen"Missing Women."

resulted from technological advances, the new spread of ideas and tastes, or the direct intervention of international agencies or foreign countries is open to debate, as is the importance to be attributed to globalization and international connections.

Civil war and international conflict, phenomena with a long and continuous history, also disrupt fertility and mortality patterns. War has caused an estimated 15 million deaths or more in Africa during the past half-century, creating, in conjunction with disease, a stubborn pattern of high fertility in sub-Saharan Africa until 1990; only a moderate decline followed in the next decade. The relationship between the alarmingly high fertility rates (notwithstanding recent declines) and gender inequality (particularly in women's literacy and labor-force participation) in sub-Saharan Africa and South Asia requires further study. But the intimate connection between such social disparity and unhealthy fertility rates is hardly to be doubted.

An increase in women's years of schooling and their participation in the labor force led, as expected, to a decline in fertility during the second half of the twentieth century, especially in developed economies, where concomitant reductions in child labor opened the doors to education. However, this relationship has been U-shaped, since female labor-force participation is also high in sub-Saharan Africa where income levels are low and female and child labor is necessary to support families. The further causal connection between sub-Saharan Africa's high fertility rates and high infant-mortality rates raises a long-standing issue about the world's policy toward the nations that have lagged behind in economic development. How can we determine what actions to take, who should become the major agents of change, and what is the feasible time period for achieving health, welfare, and gender equality throughout the world?[13]

13 Claudia Goldin, *Understanding the Gender Gap* (New York, 1990); *idem*, "The U Shaped Female Labor Force Function in Economic Development and Economic History," NBER Working Paper Series, 4704 (Cambridge, Mass., 1994).

APPENDIX: DEMOGRAPHIC DEVELOPMENT BY REGION, 1960–2010

Table 1A Mean Fertility by Region, 1960 (Births/Women at Reproductive Age)

	MEAN	STD. DEV.	MIN	MAX
OECD	2.99	0.93	2.17	6.28
Sub-Saharan Africa	6.41	0.82	4.06	8.00
Latin America	6.17	1.22	2.87	7.35
Central Asia & Middle East	6.82	1.22	3.87	7.75
South Asia	6.31	0.75	5.27	6.98
East Asia-Pacific	5.18	1.52	2.04	6.97
Non-OECD Europe	2.82	0.59	2.02	3.44
North Africa	7.16	0.13	7.03	7.34

SOURCE http://databank.worldbank.org.

Table 2A Mean Fertility by Region, 2010

	MEAN	STD. DEV.	MIN	MAX
OECD	1.74	0.38	1.23	3.03
Sub-Saharan Africa	4.62	1.22	1.47	7.06
Latin America	2.63	0.58	1.47	3.98
Central Asia & Middle East	3.98	0.80	1.67	4.70
South Asia	2.97	1.42	1.75	6.29
East Asia-Pacific	2.76	1.17	1.13	5.58
Non-OECD Europe	1.43	0.13	1.15	1.56
North Africa	2.98	1.03	2.13	5.20

SOURCE http://databank.worldbank.org.

Table 3A Mean Infant-Mortality Rates by Region, 1960 (Deaths of Children Younger Than One/Births)

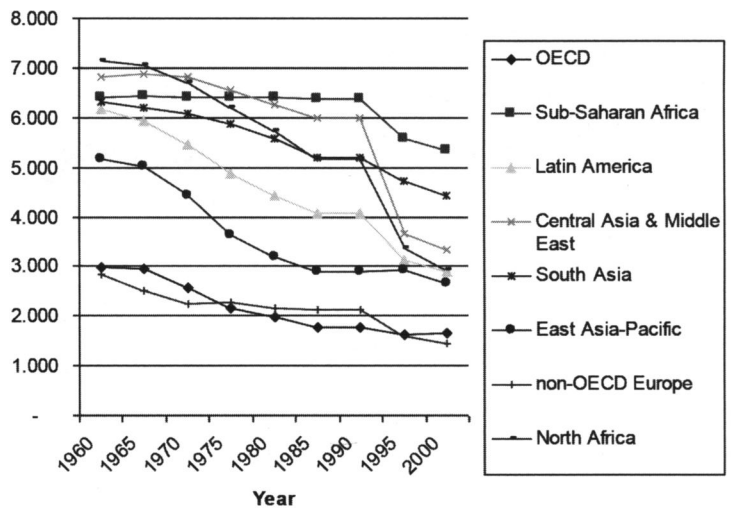
	MEAN	STD. DEV.	MIN	MAX
OECD	0.04	0.04	0.003	0.180
Sub-Saharan Africa	0.17	0.03	0.068	0.219
Latin America	0.10	0.04	0.050	0.190
Central Asia & Middle East	0.14	0.05	0.031	0.212
South Asia	0.15	0.05	0.069	0.186
East Asia-Pacific	0.07	0.05	0.020	0.163
Non-OECD Europe	0.06	0.02	0.003	0.088
North Africa	0.17	0.01	0.158	0.178

Table 4A Mean Infant-Mortality Rates by Region, 2010

	MEAN	STD. DEV.	MIN	MAX
OECD	0.04	0.003	0.03	0.03
Sub-Saharan Africa	0.070	0.030	0.010	0.120
Latin America	0.020	0.010	0.005	0.070
Central Asia & Middle East	0.020	0.016	0.006	0.050
South Asia	0.040	0.020	0.010	0.074
East Asia-Pacific	0.020	0.010	0.002	0.050
Non-OECD Europe	0.010	0.004	0.003	0.019
North Africa	0.030	0.022	0.013	0.070

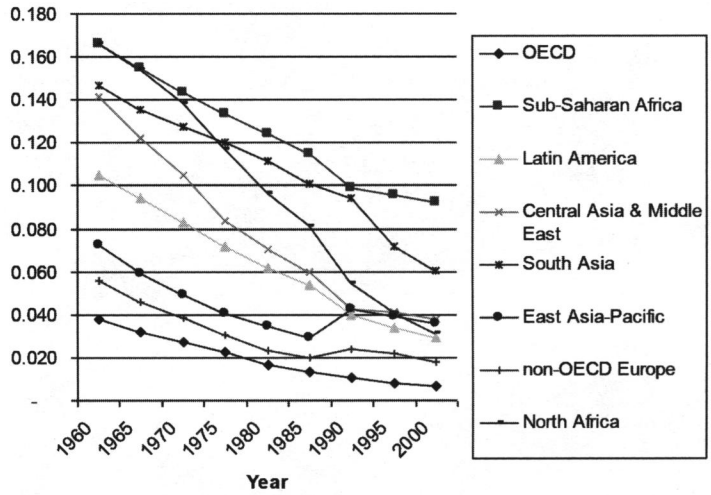
SOURCE http://databank.worldbank.org

Fig. 1A Trends in Total Fertility Rates by Region, 1960–2000



SOURCE http://databank.worldbank.org.

Fig. 2A Trends in Infant-Mortality Rates, 1960–2000



SOURCE http://databank.worldbank.org