

THE EFFECTS OF AGE STRUCTURE ON DEVELOPMENT

POLICY AND ISSUE BRIEF

ELIZABETH LEAHY MADSEN, BEATRICE DAUMERIE AND KAREN HARDEE

Today, the world has the largest generation of young people in history, with 3.6 billion people under the age of 30 worldwide. A population's age structure (the relative size of each age group) deeply affects development opportunities and plays a major role in security and governance challenges.

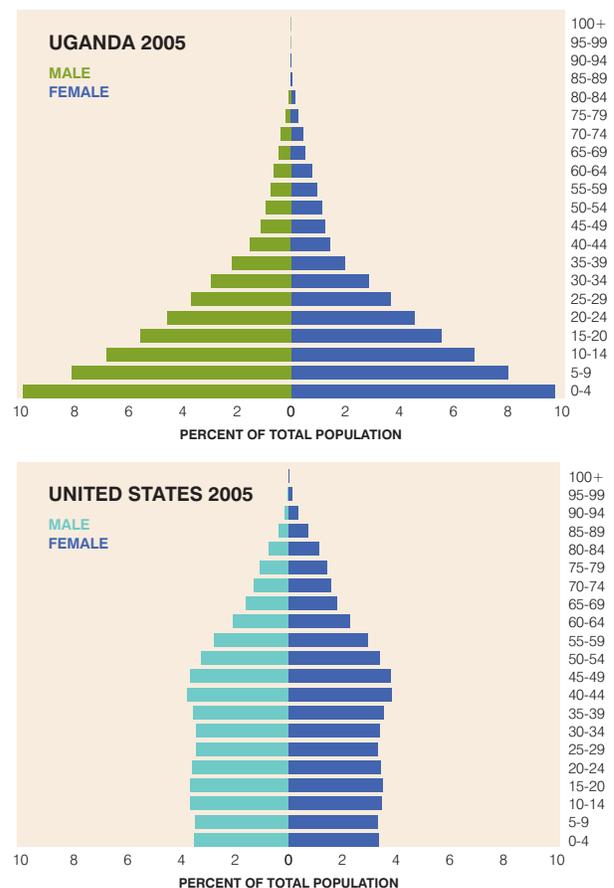
In 2007, Population Action International (PAI) published *The Shape of Things to Come: Why Age Structure Matters to a Safer, More Equitable World*.¹ Here, PAI updates and extends the analysis. Three case studies on Haiti, Yemen and Uganda examine the challenges specific to countries with very young age structures and recommend policy solutions.

Population Age Structure

All countries' populations can be classified into one of four major age structure types based on their progression through the demographic transition, which is the decades-long shift that many countries have followed from high mortality and fertility rates to longer life expectancies and later, to smaller family size.

The four age structure types relate the share of a population that comprises children and young adults under the age of 30 to the share of older adults above age 60. Countries with a **very young** age structure are those in which two-thirds or more of the population are younger than age 30. Those with a **youthful** age structure have begun the demographic transition but still have more than 60 percent of their population younger than age 30. A **transitional** age structure occurs when between 45 and 60 percent of the population comprises young people under age 30. Countries with a **mature** age structure have fertility rates at the replacement level of 2.1 children or less per woman; less than 45 percent of the country's population is under age 30, while up to one-quarter of the population comprises older adults above age 60.

Figure 1
Very Young and Mature Age Structures²



The age structures of Uganda and the United States are at opposite ends of the demographic transition.

Age Structure and Development

Demography is an important factor for development. Youth should be one of the main economic assets for a country or a region. A declining proportion of children and a simultaneous increase in the share of the youth and working-age adult population lowers dependency ratios³ and opens a window of opportunity for economic growth as age structures mature and a larger share of the population enters the workforce.⁴ This “demographic dividend” can be reaped through sound policies, which ensure that when large waves of young people enter the labor market, they are adequately educated and jobs exist for them.

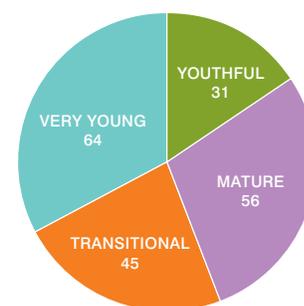
Education, training and a well-functioning labor market are prerequisites to reap the benefits of progress through the demographic transition. Education for women and men as well as vocational training programs in the growing sectors of a country’s economy increase the chances for families to earn stable incomes. Investing in human capital contributes to macroeconomic growth and also to gender equity. Education and employment outside the home empower women to act on their fertility choices. The synergy of stable employment prospects and conscious fertility choices creates a positive dynamic that encourages families to make plans for the future.

However, weak governance and poor socioeconomic development can turn demographic opportunities into demographic challenges. Depending on a country’s politics and economy, youth may become an economic asset or a potential factor of instability.

Age Structure and Conflict

Between 1970 and 2007, 80 percent of all new civil conflicts occurred in countries with at least 60 percent of the population younger than age 30.⁵ The likelihood of experiencing conflict is highest among countries with “very young” age structures, where up to 77 percent of the population is younger than age 30. Between 2000 and 2007, two-thirds of all new outbreaks of civil conflict occurred in countries with very young age structures: Central African Republic, Côte d’Ivoire, Guinea, Haiti, Mali and Nigeria. PAI’s findings are reinforced by empirical analysis by Henrik Urdal at the International Peace Research Institute, who found that after controlling for level of development, regime type, total population size and past outbreaks of conflict, countries with a large “youth bulge” were 150 percent more likely than those with more balanced age structures to experience civil conflict in the last half of the 20th century. The effect is particularly strong for countries with ongoing high fertility rates.⁶ While the relationship between age structure and instability is not one of simple cause and effect, the pattern is consistent. There is no single cause of conflict, and precipitating incidents are built on a constellation of deeper issues, of which age structure can be a part.⁷

Figure 2
Distribution of Countries by
Age Structure Category, 2005⁸



New research findings go a step further in layering the relationship between demography and other structural factors, showing that the likelihood of conflicts erupting in countries with youthful populations is compounded by low rates of secondary education, especially in countries with less-developed economies.⁹

Age Structure and Governance

Age structure is also tied to democracy. Between 1970 and 2007, 13 percent of countries with very young age structures were rated as full democracies, compared to 81 percent of countries with mature age structures.¹⁰ Other measures of governance, such as freedom of speech and civil liberties, show a similar relationship. Countries in which more than 60 percent of the population is younger than age 30 are more likely to face restrictions on political freedoms and civil liberties and experience corruption, weak institutional capacity and regulatory quality, all issues that affect Haiti, Uganda and Yemen.¹¹ Further analysis of the relationship between demography and governance suggests that while countries with youthful populations may achieve democracy, they are less likely to sustain it until their age structures become more balanced.¹²

Gender Inequity and High Fertility

Gender inequality exacerbates high fertility and perpetuates very young age structures. Family planning and reproductive health programs both respond and contribute to improvements in the status of women. Increased schooling for girls produces many benefits, including reduced fertility later in life. Smaller family sizes allow more women to enter the workforce and more families to send their daughters to school, benefitting multiple generations. Legal protections for women must be increased and enforced, together with advocacy at the community level. Community initiatives on reproductive health and gender have increased knowledge and generated solutions to reduce adolescent pregnancies and violence against women.

Environment, Climate Change and Population

Rapid population growth often results in unsustainable pressure on the environment. The challenges produced by high fertility rates and the impacts of climate change often intersect in the parts of the world least prepared to adapt. Climate change

adaptation strategies that include attention to family planning and reproductive health and address the effects of population pressure can help slow the pace of environmental degradation and lessen the challenges caused by declining agricultural productivity or densely populated and vulnerable coastlines, such as in Haiti. The ability to choose and plan the size of their families empowers women and men to better face the challenges of an increasingly unpredictable environment and to provide each of their children with a better future.

Country Cases

The examples of Haiti, Uganda and Yemen—with the youngest age structures in their respective regions—illustrate the challenges for individual welfare and national development faced by nations at the beginning of the demographic transition. They also show the opportunities that lie ahead if governments and their partners implement comprehensive and forward-looking policies to address current age structures and impact future fertility trends.

PAI’s case study of Haiti shows that political instability and repeated natural disasters, including the major earthquake in 2010, have compounded a failure to invest in human resources or in the environment and have prevented the country from achieving a sustainable development path. Haiti has experienced an intense process of urbanization, and unemployment rates are particularly high for urban youth ages 15 to 30. With nearly 70 percent of its population currently under age 30, as large waves of young people enter the labor market in the coming years, jobs are crucial to absorb the demographic boom. Deforestation and soil erosion are widespread, and due to declining agricultural productivity, the country only produces 47 percent of the food it needs.

Uganda, another case study, has the youngest age structure in the world, with 77 percent of its population under the age of 30. If the fertility rate, which has been among the highest in the world for 40 years, stays constant at the current rate of 6.7 children per woman, the population would quadruple by 2045. Its internal conflict has spilled over into the Democratic Republic of the Congo and Sudan, and pastoral violence is rampant along the eastern border with Kenya. Nearly one million Ugandans remain internally displaced.¹³ Eighty percent of the population is rural and depends on agriculture, while inherent fluctuations in the climate leave the country vulnerable to floods and droughts.¹⁴

Yemen has the most youthful age structure in the world outside of sub-Saharan Africa. Nearly half of the population lives in poverty, and by some estimates, more than one-third of adults are unemployed.¹⁵ Yemen also has a weak and autocratic central government and ongoing rebellion and civil strife, contributing to a hospitable environment for militancy and terrorism. Worsening natural resource shortages, particularly water scarcity, demonstrate some of the most obvious current

Figure 3
Risk of Civil Conflict by Age Structure Type, 1970-2007¹⁶

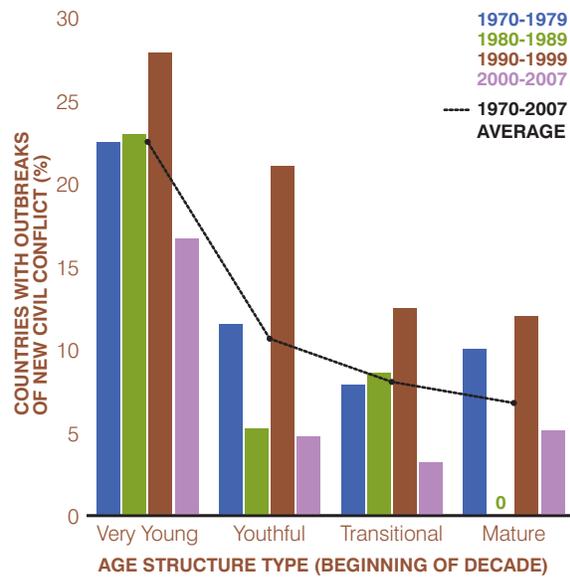
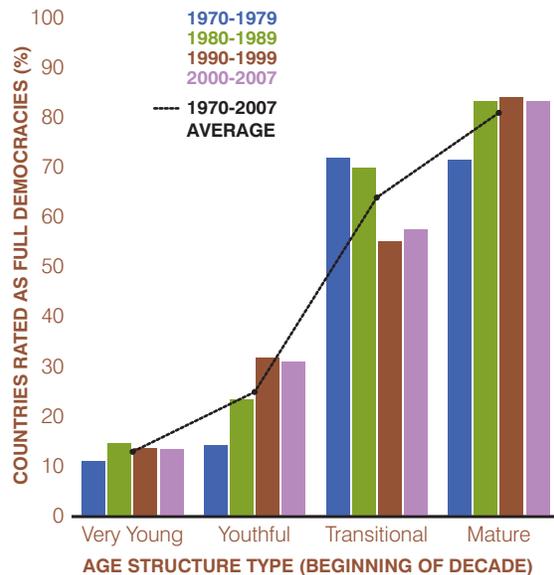


Figure 4
Likelihood of Democratic Governance by Age Structure Type, 1970-2007¹⁷



implications of Yemen’s population growth. With the labor force currently growing at a rate about one percent a year higher than that of available jobs, unemployment levels among young people could reach 40 percent in the next decade.¹⁸ Yemen has the lowest ranking in the world in a global survey of gender equity, and 51 percent of married women are estimated to have an unmet need for family planning—the highest level, by far, in the world.¹⁹

Conclusion

In the three years since *The Shape of Things to Come* was published, the connection between demographic trends and development has been recognized by members of the U.S. Congress, the United Nations Secretary General, and intelligence and security agencies. Policymakers addressing issues such as security, governance, and economic development at the global and country levels must account for the potential effects of demographic variables, with responses linked to economic opportunities for young people. Governments are better able to meet the needs of their people and promote development when age structures are balanced. Age structure responds to both individual opportunities and policy decisions. Policies and programs that can influence age structure—namely, family planning and reproductive health, education and economic outlets for women, and opportunities for growing cohorts of young people—must be fully integrated into development strategies by country governments and international partners.

High rates of unmet need for family planning in countries like Haiti, Uganda and Yemen are linked to low levels of female literacy, high maternal mortality and generally to the low status of women. Multiple policy options are available for translating youthful age structures into a driver for development, but addressing gender inequality is essential to make them fully effective. Age structures are dynamic and can change, but not unless there is political commitment to do so, backed by the funds and services necessary to ensure that women and men can act on the right to choose their own family size. In 1994, nearly 200 countries committed to universal access to reproductive health. Yet today, 215 million women worldwide would like to delay childbirth but are not using family planning.²⁰ Reproductive health programs should serve not only women but also men, so that men can support their partners' fertility choices.

The impacts of age structure on development reinforce the importance of investing in youth. When civil conflict breaks out, it is more likely to occur in countries with young age structures. The connection lies not in young people themselves but in the opportunities that are available to them. It can be easier to stigmatize youth as dangerous than to tackle the underlying structural issues that provide opportunities and motive for conflict. For the growing number of young people in countries such as Haiti, Uganda and Yemen, education, employment opportunities and information about reproductive health can allow them to foster and benefit from a demographic dividend as well as to promote political stability. Balanced age structures increase the chances for peace and prosperity in the parts of the world that most need it.

THE SHAPE OF THINGS TO COME SERIES

© 2010

Endnotes

- 1 Leahy, E, R Engelman, C G Vogel, S Haddock and T Preston. 2007. *The Shape of Things to Come: Why Age Structure Matters to a Safer, More Equitable World*. Washington, DC: Population Action International.
- 2 Age structure types calculated using PAI methodology. Data from: United Nations Population Division. 2009. *World Population Prospects: The 2008 Revision*. New York: United Nations Population Division.
- 3 The proportion of the dependent population (ages 0-14 and 65+) compared to the working age population.
- 4 Bloom, D, D Canning and J Sevilla. 2003. *The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change*. Santa Monica: RAND.
- 5 Conflict analysis drawn from: Uppsala Conflict Data Program (UCDP) and Centre for the Study of Civil Wars, International Peace Research Institute (PRIO). 2008. *UCDP/PRIO Armed Conflict Dataset, Version 4-2008*; N P Gleditsch, P Wallensteen, M Eriksson, M Sollenberg and H Strand. 2002. "Armed Conflict 1946-2001: A New Dataset." *Journal of Peace Research* 39(5): 615-637.
- 6 Urdal, H. 2006. "A Clash of Generations? Youth Bulges and Political Violence." *International Studies Quarterly* 50(3): 607-629.
- 7 Leahy, E, R Engelman, C G Vogel, S Haddock and T Preston. 2007. *The Shape of Things to Come: Why Age Structure Matters to a Safer, More Equitable World*. Washington, DC: Population Action International.
- 8 Age structure types calculated using PAI methodology. Data from: United Nations Population Division. 2009. *World Population Prospects: The 2008 Revision*. New York: United Nations Population Division.
- 9 Barakat, B and H Urdal. 2009. "Breaking the waves? Does education mediate the relationship between youth bulges and political violence?" Policy Research Working Paper Series 5114. Washington, DC: World Bank.
- 10 Democracy ratings drawn from: Polity IV Project. 2008. *Polity IV Project: Political Regime Characteristics and Transitions, 1800-2007*. Center for Systemic Peace and George Mason University.
- 11 Governance ratings drawn from: Freedom House. 2008. *Freedom in the World*. New York: Freedom House; World Bank. 2008. *Governance Matters 2008*. Washington, DC: World Bank.
- 12 Cincotta, R. 2009. "Half a Chance: Youth Bulges and Transitions to Liberal Democracy." *Environmental Change and Security Program Report* 13: 10-18.
- 13 United Nations High Commissioner for Refugees. "2010 UNHCR country operations profile – Uganda." <http://www.unhcr.org/cgi-bin/texis/vtx/page?page=49e483c06>. Accessed 18 February 2010.
- 14 Hepworth, N and M Goulden. 2008. "Climate Change in Uganda: Understanding the Implications and Appraising the Response." Edinburg: LTS International.
- 15 World Bank. 2008. "Yemen—Country Brief." <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/MENAEXT/YEMENEXTN/0,,menuPK:310174~pagePK:141132~piPK:141107~theSitePK:310165,00.html>. Accessed 19 December 2008.
- 16 Conflict analysis drawn from: Uppsala Conflict Data Program (UCDP) and Centre for the Study of Civil Wars, International Peace Research Institute (PRIO). 2008. *UCDP/PRIO Armed Conflict Dataset, Version 4-2008*; N P Gleditsch, P Wallensteen, M Eriksson, M Sollenberg and H Strand. 2002. "Armed Conflict 1946-2001: A New Dataset." *Journal of Peace Research* 39(5): 615-637.
- 17 Democracy ratings drawn from: Polity IV Project 2008.
- 18 United Nations. 2006. *United Nations Common Country Assessment: Republic of Yemen 2005*. <http://www.yemencg.org/library/common%20Country%20Assessment%20CCA.pdf>. Accessed 7 July 2008. p. ii., iv.
- 19 United Nations Population Division. 2008. *World Contraceptive Use 2007*. New York: United Nations Population Division. Unmet need for family planning is determined through survey data estimating the number of women who wish to have no children for at least the next two years, but are not using a contraceptive method.
- 20 Singh, S, J Darroch, L Ashford and M Vlassoff. 2009. *Adding It Up: The Costs and Benefits of Investing in Family Planning and Maternal and Newborn Health*. New York: Guttmacher Institute and United Nations Population Fund (UNFPA).