

## 8

# *Youth Bulges and Violence*

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**Y**OUTH OFTEN PLAY A PROMINENT ROLE IN POLITICAL violence, and the existence of a “youth bulge” has historically been associated with times of political crisis (Goldstone 1991, 2001b). Generally, it has been observed that young males are the main protagonists of criminal as well as political violence.

But are countries and areas with youthful age structures, or “youth bulges,” more likely to experience political violence? The issue has received increasing attention over the past decade following the more general debate over the security implications of population pressure and resource scarcity. In “The Coming Anarchy,” Robert Kaplan (1994) argued that anarchy and the crumbling of nation states will be attributed to demographic and environmental factors in the future. More recently, youth bulges have become a popular explanation for the current political upheavals in the Arab world and for recruitment to international terrorist networks. In a background article surveying the root

causes of the September 11, 2001, terrorist attacks on the United States, *Newsweek* editor Fareed Zakaria (2001) argued that youth bulges combined with slow economic and social change have provided a foundation for an Islamic resurgence in the Arab world.

Samuel Huntington qualified the “Clash of Civilization” by adding the dimension of age structure:

I don't think Islam is any more violent than any other religions [ ... ]. But the key factor is the demographic factor. Generally speaking, the people who go out and kill other people are males between the ages of 16 and 30. During the 1960s, 70s and 80s there were high birth rates in the Muslim world, and this has given rise to a huge youth bulge. But the bulge will fade. Muslim birth rates are going down; in fact, they have dropped dramatically in some countries. (2001).

This chapter presents and discusses the results from an empirical study of youth bulges and political violence identifying a general statistical relationship between age structure and political violence.<sup>1</sup> It is important to note, however, that this finding represents a probabilistic relationship. A young age structure does not make countries destined for violence; in fact, most countries with large youth bulges avoid armed conflict most of the time. But youth bulges represent a challenge that governments have to address by providing opportunities for youth to participate in education, in the labor market, and in governance. Where such opportunities exist, large youth bulges can be a blessing rather than a curse. Recent research suggests that in the context of declining fertility and thus lower dependency ratios large youth cohorts can be a vehicle for economic development, a so-called demographic dividend, rather than conflict (e.g., Kelley and Schmidt 2001).

### **Youth Bulges: Providing Opportunity and Motive for Conflict**

The literature on youth bulges has focused in particular on spontaneous and low-intensity unrest like nonviolent protest and rioting. However, youth bulges may also increase the risk of more organized forms of political violence, like internal armed conflict. This chapter first traces the youth bulge argument back to some early “generational” contributions, and then draws on two dominant and competing, albeit not mutually exclusive, theoretical traditions in the study of civil war; one focusing on opportunities and the other on motives for conflict.

Some theorists have proposed that youth cohorts may develop a generational consciousness, and especially so out of awareness of belonging to a genera-

tion of an extraordinary size and strength, enabling them to act collectively (Braungart 1984; Feuer 1969; Goldstone 1991). However, violent conflict between groups only divided by age is rare. The generational approach has some serious shortcomings with regard to the explanatory power of the relationship between youth bulges and violence. The development of generational consciousness may explain the formation of youth movements that can function as identity groups. Identity groups are necessary for collective violent action to take place. But it is not necessary that identity groups be generation-based for youth bulges to increase the likelihood of armed conflict. Furthermore, the generational approach does not offer explanations for the motives of youth rebellion nor does it provide a sufficient explanation for the opportunities of conflict. It is clear that if large youth bulges that hold a common generational consciousness would always produce conflict, we would have seen many more instances of violent youth revolts. Conditions that provide youth bulges with the necessary motives and opportunities for armed conflict are discussed below.

Both the opportunity and the motive perspectives are macro-level frameworks that attempt to explain events essentially consisting of a series of individual-level decisions associated with joining a rebel or terrorist organization or not, by focusing on economic, political, and social structural features. The opportunity literature, often coined the *greed perspective*, has its roots in economic theory and focuses on structural conditions that provide opportunities for a rebel group to wage war against a government (Collier 2000; Collier and Hoeffler 2004). These are conditions that provide the rebel group with the financial means to fight, or factors that reduce the cost of rebellion, such as unusually low recruitment costs for rebel soldiers. Former World Bank research director Paul Collier has suggested that relatively large youth cohorts may be a factor that reduces recruitment costs through the abundant supply of rebel labor with low opportunity cost, increasing the risk of armed conflict (Collier 2000, p. 94). According to the opportunity perspective, rebellion is feasible only when the potential gain from joining is so high and the expected costs so low that rebel recruits will favor joining over alternative income-earning opportunities.

The motive-oriented tradition, or *grievance perspective*, has its origins in relative deprivation theory and tends to see the eruption of political violence as a rational means to redress economic or political grievances (Gurr 1970; Sambanis 2002, p. 223).

Motives for committing political violence can be economic (like poverty, economic recession, or inequality), or political (like a lack of democracy, or the absence of minority representation or self-governance). Most of the literature on youth bulges and political violence arguably falls into this tradition. It

focuses on how large youth cohorts facing institutional crowding in the labor market or educational system, lack of political openness, and crowding in urban centers may be aggrieved, paving the way for political violence (e.g., Choucri 1974; Braungart 1984; Goldstone 1991, 2001b).

While useful as ideal models, the distinction between the motive and opportunity perspectives is sometimes overstated. First, in its simplest form, the motive perspective overpredicts political violence; the existence of serious grievances is not sufficient for collective violent action to erupt (Kahl 1998). The likelihood that motives are redressed through political violence increases when opportunity arises from the availability of financial means, low costs, or a weak state. Second, while opportunity factors may better explain why civil wars break out, this does not necessarily mean that actors cannot also have strong motives (Sambanis 2002, p. 224). Third, many factors may equally well be described as representing both opportunity and motive. A young impoverished person may be considered both a potential low-cost recruit, and at the same time an aggrieved individual motivated by economic and political exclusion. Below, the most relevant contextual factors suggested to affect the relationship between large youth cohorts and conflict are discussed.

## The Cohort Size Effect

The mere existence of an extraordinarily large pool of young people is a factor that lowers the cost of recruitment, since the opportunity cost for a young person generally is low (Collier 2000, p. 94). This is an assumption that hinges on the extent of alternative income-earning opportunities. If young people are left with no alternative but unemployment and poverty, they are increasingly likely to join a rebellion as an alternative way of generating an income.

New research in economic demography even suggests that the alternative costs of individuals belonging to larger youth cohorts are generally lower compared to members of smaller cohorts. According to the “cohort size” hypothesis, “other things being constant, the economic and social fortunes of a cohort (those born in a given year) tend to vary inversely with its relative size” (Easterlin 2000, p. 1). So not only do youth bulges provide an unusually high supply of individuals with low opportunity cost, but an individual belonging to a relatively large youth cohort generally also has a lower opportunity cost relative to a young person born into a smaller cohort.

The influence of the size of youth cohorts on unemployment is also emphasized in the motive-oriented literature on civil violence (e.g., Moller 1968; Choucri 1974; Goldstone 1991, 2001b; Cincotta et al 2003). If the labor

market cannot absorb a sudden surplus of young job seekers, a large pool of unemployed youths will generate strong frustration. In extreme cases, the challenge to employ large youth cohorts can appear overwhelming. In Saudi Arabia, approximately 4 million people will be added to the labor force over the current decade, equaling two-thirds of the current Saudi national workforce (Winckler 2002, p. 621). The socioeconomic problems associated with “youth bulges” have been argued to potentially provide fertile ground for recruitment to terrorist organizations (Lia 2005, p. 141).

## Demographic Dividend

Results from recent studies on population and economic growth suggest that the relationship between large youth cohorts and political violence could be muted if youth bulges precede significantly smaller cohorts. Generally, high growth rates in the nonworking, or dependent, age groups are associated with lower economic growth, while increases in the working-age population are positively associated with economic growth (Kelley and Schmidt 2001; Williamson 2001). Such a “demographic dividend,” flowing from increased savings as the relative number of dependents decreases, could have a generally pacifying effect. The rapid growth of East Asian economies since 1975 has been partially explained by a dividend from a lowered dependency burden. While the realization of the dividend largely depends on the social, economic, and political environment, we may expect that when countries experience declining dependency ratios that increase the potential for economic growth, the relationship between youth bulges and political violence will generally weaken.

## Economic Growth

The overall economic performance of a society is an important factor determining the income forgone by joining a rebel movement, and thus the opportunity for rebellion. Economic growth over a longer period may act as a proxy for new income opportunities (Collier and Hoeffler 2004, p. 569). For large youth cohorts, the economic climate at the time they enter into the labor market is particularly crucial. To the degree that income opportunities are determined by general economic performance, large youth cohorts are likely to be rendered particularly susceptible to lower income opportunities when economic conditions generally deteriorate, reducing the income they forgo by signing up as rebels. The motive-oriented literature also shares the concern over economic decline. Youth belonging to large cohorts will be especially vulnerable to

unemployment if their entry into the labor force coincides with periods of serious economic decline. Such coincidences may generate despair among young people that moves them towards the use of violence (Choucri 1974, p. 73).

## Education

A tool that countries can exploit to respond to youth bulges is the expansion of higher education. Can this serve as a strategy to reduce the risk of political violence? Higher levels of education among men may act to reduce the risk of political violence. Since educated men have better income-earning opportunities than the uneducated, they would have more to lose and hence be less likely to join a rebellion (Collier 2000). A recent study based on interviews with young soldiers presents strong micro-level support for the expectation that poverty, lack of schooling, and low alternative income opportunities are important reasons for joining a rebel group (Brett and Specht 2004).

Rebel recruitment is thus more costly and rebellion less likely the higher the level of education in a society (Collier and Hoeffler 2004). This is not inconsistent with the motive-oriented literature. However, it has been suggested that when countries respond to large youth cohorts by expanding opportunities for higher education, this may produce a much larger group of highly educated youths than can be accommodated in the normal economy. Unless the government is able and willing to absorb a surplus of university graduates into the public sector, prevailing unemployment among highly educated youth segments may cause frustration and grievances that could motivate political violence. It has been argued that high unemployment among educated youth is one of the most destabilizing and potentially violent sociopolitical phenomena in any regime (Choucri 1974, p. 73), and that a rapid increase in the number of educated youths has preceded historical episodes of political upheaval (Goldstone 2001b, p. 95). It has been argued that the expansion of higher education in many countries in the Middle East, producing large classes of educated youth that the labor market cannot absorb, has had a radicalizing effect and provided new recruits to militant organizations in the area (Lia 2005, pp. 145–146).

## Lack of Democracy

When being used to assess the role of democracy, the opportunity and motive perspectives yield opposite predictions. The opportunity literature suggests that the opportunity for political violence is greater the less autocratic a state is, while

the motive-oriented literature argues that the greater the political oppression and the lack of political rights, the greater the motive for political violence. Several empirical studies of regime type and civil conflict have found a curvilinear “inverted U” relationship between democracy and conflict, suggesting that starkly autocratic regimes and highly democratic societies are the most peaceful (Hegre et al. 2001). This relationship is assumed to arise as a result of both opportunity and motive, as semidemocratic regimes may have greater openings for conflict compared to autocratic states. At the same time, lack of political rights may also constitute a motive for conflict. It has been suggested by proponents of the motive perspective that when large youth groups aspiring to political positions are excluded from participation in the political process, they may engage in violent conflict behavior in an attempt to force democratic reform (Goldstone 2001b). The potential for radical mobilization for terrorist organizations is argued to be greater when large educated youth cohorts are barred from social mobility by autocratic and patriarchic forms of governance (Lia 2005, p. 147).

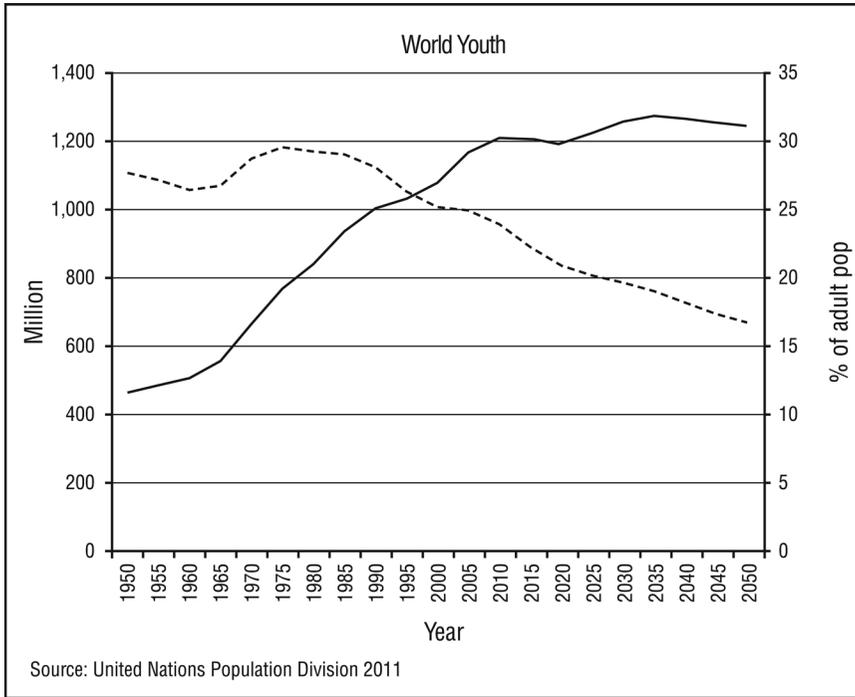
## Urbanization

While institutional crowding has been the major focus, geographic crowding has also been argued to generate motives for political violence (Brennan-Galvin 2002). Since terrorism is essentially an urban phenomenon, states undergoing rapid urbanization may be particularly likely to experience increased risks of terrorism (Lia 2005, p. 141). If youth are abundant in a relatively small geographical area, this may increase the likelihood that grievances caused by crowding in the labor market or educational institutions arise. Historically, the coincidence of youth bulges with rapid urbanization, especially in the context of unemployment and poverty, has been an important contributor to political violence (Goldstone 1991, 2001b). Youth often constitute a disproportionately large part of rural-to-urban migrants; hence, in the face of large youth cohorts, strong urbanization may be expected to lead to an extraordinary crowding of youth in urban centers, potentially increasing the risk of political violence.

## A Global Study of Youth Bulges and Internal Armed Conflict

### The Importance of Measurement

Acknowledging that the understanding of youth differs vastly between societies, here youth refers to those aged 15 to 24, which is also the definition employed



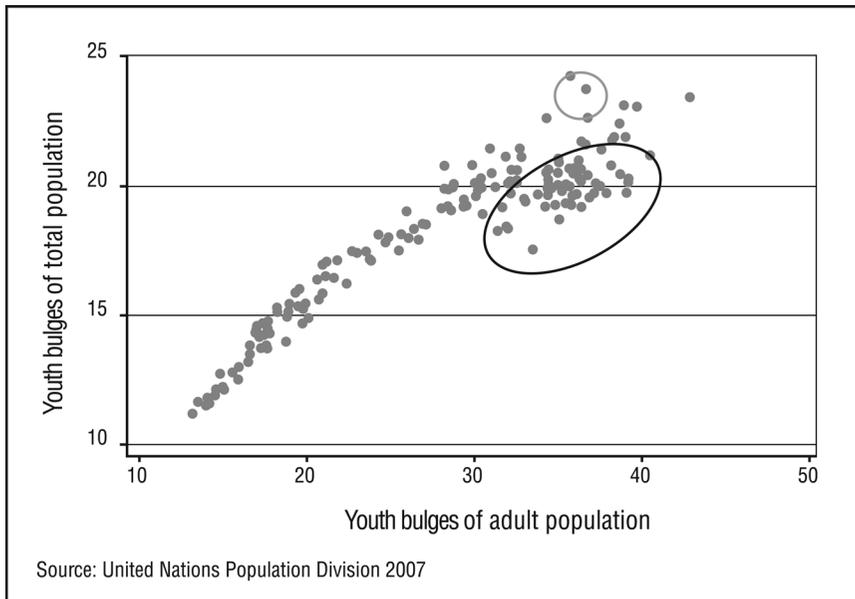
**Figure 8.1 World Youth Population, 1950–2050**

by the United Nations. While there is significant regional as well as local variation, the total number of youth in the world is now growing at a much lower rate than in the previous five decades, and is expected to remain relatively constant between 2010 and 2050 (See Figure 8.1, solid trend line measuring millions of youth globally). The dotted line in Figure 8.1 shows the size of the youth population aged 15 to 24 as a percentage of the total adult population of 15 and above, excluding those younger than 15 years.

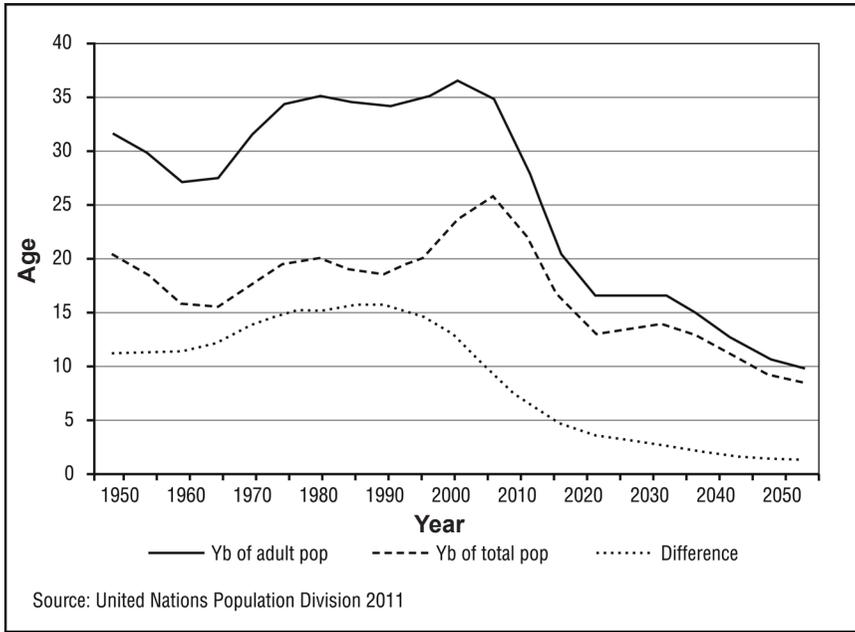
Two recent authoritative studies of civil war, by Paul Collier and Anke Hoeffler (2004), and James Fearon and David Laitin (2003), found no effect of youth bulges on the risk of war outbreak. However, both studies used a flawed measure of youth bulges, dividing those aged 15 to 24 years by the total population, including all cohorts under the age of 15 years in the denominator. Such a definition is highly problematic both theoretically and empirically. First, most theories about youth revolt assume that violence arises from competition between younger and older cohorts, or because youth cohorts

experience institutional “bottlenecks” due to their larger size compared to previous cohorts. Second, when using the total population in the denominator, youth bulges in countries with continued high fertility will be underestimated because the large under-15 populations deflate the youth bulge measure. At the same time, countries with declining fertility and relatively smaller under-15 populations—which are in a position to experience economic growth driven by age structural change—score relatively higher.

The implications of measuring youth bulges in different ways are illustrated in the scatterplot in Figure 8.2. Here, all countries are plotted according to their values on the two different youth bulge measures in year 2000. The horizontal  $x$ -axis shows the value on the recommended measure, where youth bulges are defined relative to the total adult population (YBAP), while the vertical  $y$ -axis represents the flawed measure of youth relative to the total population (YBTP). The deviations from a linear trend line increase as the relative size of youth cohorts grow. The observations marked by the larger, lower circle are countries that have large youth cohorts, but also very large populations under the age of 15. Many countries in sub-Saharan Africa belong in this category, as do countries like Guatemala, Nicaragua, Afghanistan, Laos, Iraq, Yemen,



**Figure 8.2** Age Structure by Different Definitions



**Figure 8.3** Age Structural Changes in Iran, 1950–2050

Maldives, and Papua New Guinea. In statistical models that assess the impact of youth bulges on conflict, this latter group of countries will have considerably less impact on the results when using the YBTP measure rather than the YBAP measure. The two outliers in the smaller circle are Libya and Iran, both of which experienced very steep declines in fertility in the 1990s and are now just starting to see an opportunity for a “demographic dividend.”

The difference between the measures is further illustrated in Figure 8.3, showing the age structural transition in Iran. The difference between the two measures is greatest in the initial phase of the youth-bulge peak, and declines rapidly along with reduced fertility levels. Again, this underscores the importance of using a measure that is not deflated by large under-15 populations.

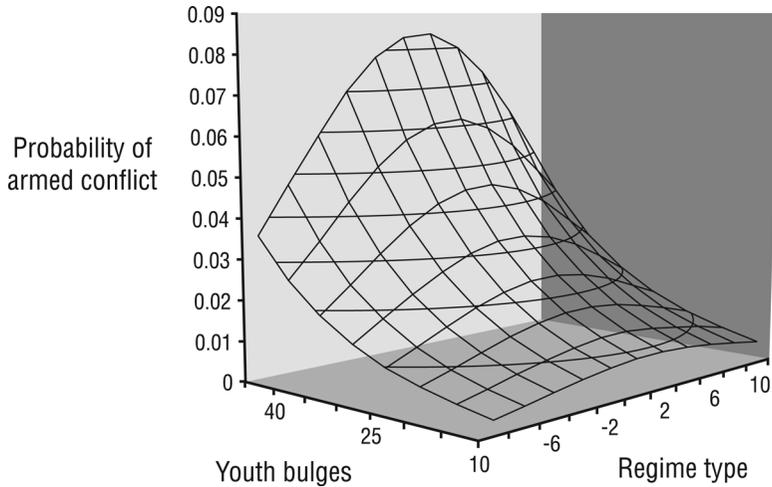
### A Cross-National Study of Youth Bulges and Violence

In a recent cross-national time-series study of the 1950–2000 period, I found that the presence of youth bulges increases the risk of conflict outbreak significantly.<sup>2</sup> The statistical relationship holds even when controlling for a number

of other factors, such as level of development, democracy, size of the country, and conflict history, and the results are also robust to a variety of technical specifications.<sup>3</sup> For each percentage point increase that youth make up of the adult population, the risk of conflict increases by more than 4 percent. When youth make up more than 35 percent of the adult population, as they do in many developing countries, the risk of armed conflict is 150 percent higher than in countries with an age structure similar to most developed countries. In 2000, 15- to 24-year-olds made up 17 percent or less of the total adult population in almost all developed countries, the median being 15 percent. The same year, 44 developing countries experienced youth bulges of 35 percent or above.<sup>4</sup> A claim that youth bulges are particularly volatile when they pass certain thresholds does not seem to be supported (Huntington 1996). There is evidence, on the other side, that youth bulges seem to be associated with a higher risk of conflict in countries with high dependency ratios, while countries that are well underway in their demographic transitions are likely to experience a “peace dividend.”

If youth bulges increase the likelihood of armed conflict, how and why do they matter? While the conflict risk does not seem to increase when youth bulges coincide with long-term per capita economic decline, high dependency ratios, expansions in higher education, or strong urban growth, the results suggest that the effect of youth bulges is greater in the most autocratic regimes as well as in the most democratic states. It could indicate that youth bulges provide greater opportunities in autocracies and greater motives in democracies. Beyond the youth-bulge measures, low development (measured as high infant mortality rates), semidemocracy (neither full democracies, nor stark autocracies), larger country size (measured as total population), and recent conflict history are all associated with a higher conflict risk. In Figure 8.4, the combined effects of youth bulges and regime type are shown in a three-dimensional graph. It shows that democracy is associated with conflict onset in an inverse U-shaped relationship, meaning that intermediary regimes are more conflict prone than both democracies and dictatorships. The curve is not perfectly symmetrical around the mean value 0; full-fledged democracies do have a slightly higher risk of conflict than stark autocracies. Countries with the value of +1 on the regime scale are most conflict prone. Compared to the most conflict-exposed regimes, fully developed democracies (+10) are almost 40 percent less likely to experience a conflict, while consistent autocracies (-10) are 60 percent less exposed, all other variables at their mean values.

Finally, there is support for the suspicion that a flawed measure is the reason why previous studies by Collier and Hoeffler and Fearon and Laitin have failed



**Figure 8.4 Youth Bulges, Regime Type and Armed Conflict**

to detect significant effects of youth bulges. If the measurement they suggest, the YBTP,<sup>5</sup> is applied to the conflict onset model, youth bulges are no longer statistically significantly associated with conflict. The measurement conceals the opposite effects that age structure may have under the different conditions of low and high fertility levels. Another reason why these studies do not find any effect of youth bulges is that they exclusively look at high-intensity wars and do not include minor conflicts. When the empirical study presented in this chapter is restricted to only onsets of civil wars with at least 1,000 battle-related deaths per year, the youth-bulge measure loses statistical significance in the basic model.<sup>6</sup> Thus, youth bulges appear to increase the risk of onset of minor conflict, but not of major wars.

### A Geriatric Peace?

By 2050, the world will have undergone a dramatic shift in the age structure of the adult population compared to 1950. During the 1950–1990 period, youth between 15 and 24 years made up more than 25 percent of the adult population in Asia, Africa, and America. By 2050, however, the United Nations Population Division (2011) predicts that only sub-Saharan Africa will still have young adult shares above 25 percent, while most other world regions will have young adult

shares below 15 percent. The main reason for this shift is the global decline in fertility that began in the 1960s and that has gained increasing momentum over the last decades. Will this aging world also become a more peaceful world, creating a “geriatric peace”?

What is clear from the demographic projections is that most developing countries will over the next decades experience age-structural transitions that represent a considerable potential for a demographic dividend. If governments are able to take advantage of this situation, by providing schooling and employment opportunities for young people, we might expect to see this turn into a “peace dividend.” Looking ahead using the U.N. population projections, it can be noted that the three world regions with the highest current risks—sub-Saharan Africa, Asia, and the Middle East and North Africa—can expect relatively rapid declines in the demographically determined risk levels after 2010. While the most rapid decline in risk levels will take place in sub-Saharan Africa, large parts of the Middle East and North Africa could, based on the demographic factors, face risk levels almost as low as in present-day Europe.

It is important to stress, however, that age-structural transitions only represent an opportunity for economic growth and a “peace dividend.” Where governments fail to provide opportunities for young people to participate in economic, social, and political life, instability may result even under more favorable demographic conditions. Both among countries that have entered the demographic “window of opportunity” and among countries that will experience high youth bulges for decades to come, is it necessary to monitor the situation of young people and implement appropriate policies. It has also been suggested that a particular focus should be on cases of “echo-booms,” that is, rapid increases in the youth population after periods of gradual decline (Jackson and Howe 2008).

It is interesting to note that two prominent international rogue states, Iran and Libya,<sup>7</sup> are both moving rapidly toward a demographic window of opportunity and a more mature population structure. It is, however, unclear whether the governments of the two countries might be able to seize this opportunity to achieve economic and social progress, not to say whether demographic maturing could contribute to moderate these states’ behavior in international politics. A recent review of youth exclusion in Iran suggests that overcrowding in educational institutions and a rigid labor market prohibit the full realization of the demographic dividend (Salehi-Isfahani and Egel 2008; Salehi-Isfahani and Dhillon 2008). Furthermore, due to past high fertility, Iran will experience an “echo-boom” amounting to a 30 percent increase in the population aged 15 to 24 years over the next decade (Jackson and Howe 2008). This will add considerable strain on Iranian educational institutions and labor markets.

In many countries with recent conflicts, large youth bulges combined with high levels of youth exclusion could fuel renewed conflicts and jeopardize fragile peace settlements. Providing opportunities for large youth cohorts in postconflict settings, not limited to former combatants, could significantly increase the likelihood of stability and sustainable peace. In some of the most severe conflicts in the world, large and growing youth populations and high levels of youth exclusion represent major challenges to conflict termination and settlement.<sup>8</sup> In Palestine and Afghanistan, the youth populations between the ages of 15 and 24 will increase by approximately 45 percent between 2005 and 2015 (United Nations Population Division 2011). If opportunities for young people are not improved in these countries, we could easily see increased recruitment to extremist movements like Hamas and the Taliban. Similarly, in many poor countries in sub-Saharan Africa the lack of opportunities for young people could fuel conflicts, in particular those involving resource rents. In the Democratic Republic of Congo the youth population 15 to 24 years old will increase by 38 percent from 2005 to 2015.

## Conclusion

Population growth and a young age structure can be both a blessing and a curse. From a more optimistic perspective, youth bulges can be regarded as an increased supply of labor that can boost an economy. This could further be expected to reduce conflict propensity—a “peace dividend.” While such development is certainly possible, structural aspects of the economy will probably determine the significance of this positive effect of age structural transitions. While the youth-bulge hypothesis in general is supported by empirical evidence, the ways that youth bulges influence conflict propensity still remain largely unexplored empirically. However, this study provides evidence that youth bulges, poor governance, and failing economic growth can be explosive. This represents a considerable security challenge to many developing countries, particularly in sub-Saharan Africa, Asia, and parts of the Arab world. However, states are to some extent able to reduce the risk through the provision of opportunities for young people, primarily by providing education and employment opportunities.

Generally, the importance of youth bulges in causing political violence is expected to fade in most parts of the world over the next few decades because of declining fertility. The general relationship between age structure and conflict is weakened as countries experience declining fertility rates and become positioned to take advantage of their young age structures to achieve demographic

dividends. Many countries are currently moving into this category. However, for states that will experience high fertility levels and great youth shares for years to come, especially in some countries in the Middle East, Africa, and parts of Asia, age composition still warrants some caution.

In order to avoid instability and violence in particular, states should focus on monitoring economic opportunities for young people, and particularly on providing both employment or educational opportunities for youth. While expanding opportunities for education generally pacify youth cohorts, it has also been suggested that as opportunities for higher education are expanded, lack of employment opportunities for highly educated youth may contribute to instability.

Limiting migration opportunities may increase the risk of violence in some countries with large youth bulges if not compensated for by increased domestic employment opportunities. Emigration may work as a safety valve in countries with large youth cohorts. In a recent survey, almost half of all Arab youth expressed a desire to emigrate resulting from concerns over job opportunities and education (United Nations Development Program 2002). If migration opportunities are increasingly restricted without domestic initiatives in place to provide opportunities for youth, developing countries that previously relied on exporting surplus youth may experience increased pressures from youth bulges accompanied by a higher risk of political violence.

Some areas stand out as particularly promising for further study of youth bulges and political violence. Additional disaggregated, subnational studies can provide better tests of some of the relationships concerning youth opportunities and violence. Disaggregated studies could also address the claim that differential age structures between identity groups contribute to explaining interethnic conflict dynamics. However, structural models are limited in the sense that they purportedly explain individual-level behavior while in reality we have very limited micro-level evidence explaining what motivates youth who engage in political violence. Hence, a promising next step in the study of youth and violence would be surveys of youth in both conflict and nonconflict settings aimed at explaining variations in perceptions and perpetration of violence.

## Notes

1. Two other studies reporting similar findings are Daniel C. Esty, Jack A. Goldstone, Ted Robert Gurr, Barbara Harff, Marc Levy, Geoffrey D. Dabelko, Pamela Surko, and Alan N. Unger (1998), and Richard P. Cincotta, Robert Engelman, and Daniele Anastasion (2003).

2. For conflict data, see the PRIO/Uppsala dataset: Nils Petter Gleditsch, Petter Wallensteen, Mikael Eriksson, Margareta Sollenberg, and Håvard Strand (2002). Conflicts are defined according to a set of specific criteria, of which at least 25 battle deaths per year is one.

3. For a full report of the results, see Urdal (2006).

4. The results were corroborated by similar effects of youth bulges on measures of terrorism and riots/demonstrations.

5. Fearon and Laitin (2003) and Collier and Hoeffler (2004) measure the male youth population over total population. Including both sexes, as applied here, produces only a marginally different measure.

6. However, this nonresult is sensitive to the model setup. When applying a slightly different way of modeling peace history, the term remains statistically significant.

7. Iran was among the three states named the “axis of evil” by former U.S. president George W. Bush, while Libya was included in the extended list by former U.S. ambassador to the U.N., John R. Bolton.

8. There are, however, no systematic large-N studies of youth bulges, conflict duration, and termination.