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Background papers for the Report are available either on the World Wide Web www.worldbank.org/wdr2007 or through the World Development Report office. The views expressed in these papers are not necessarily those of the World Bank or of this Report.

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**Background papers**


Behrman, Jere R., Alexis Murphy, Agnes Quisumbing, Usha Ramkrishna, and Kathryn Young. “What is the Real Impact of Education on Age of First Parenthood and Family Formation?”


Carneiro, Pedro, and Cristobal Ridao-Cano. “Heterogeneity and Uncertainty in Returns to High School: The Case of Indonesia.”

Carneiro, Pedro, and Cristobal Ridao-Cano. “The Role of Short Term Liquidity Constraints in Explaining Educational Investments in Indonesia.”


Fares, Jean, Claudio E. Montenegro, and Peter F. Orazem. “Variation in the Returns to Schooling Across and Within Developing Economies.”

Fares, Jean, and Dhushyanth Raju. “Child Labor across the Developing World: Patterns, Correlations and Determinants.”

Fares, Jean, and Erwin Tiongson. “Entering the Labor Market and Early Mobility of Youth: Evidence from Panel Estimates in Bosnia and Herzegovina.”

Galiani, Sebastian, Martin Rossi, and Ernesto Schargrodsky. “Conscription and Crime.”


Halewood, Naomi, and Charles Kenny. “Young People and Communications Technologies.”


Lam, David. “The Demography of Youth in Developing Countries and its Economic Implications.”


McKenzie, David J. “A Profile of the World’s Young Developing Country Migrants.”


**Background notes**

Arjona, Ana. “Understanding Recruitment in Civil Wars.”


Filmer, Deon, Emmanuel Jimenez, and Annette Richter. “Simulating the Returns to Youth Opportunity Agency and Second Chances.”

Graham, Carol and Matthew Hoover. “An Exploration of Civic Activity in Latin America.”


Ridao-Cano, Cristobal. “Vietnamese Youth: Managing Prosperity.”
Overview

1. This range encompasses those who are recognized officially by the UN as "youth," those ages 15–24, as well as those many classify as adolescents. The wider range is necessary to enable us to discuss transitions from puberty to full-time work.
8. World Bank (2004e). In a celebrated longitudinal study of Rio de Janeiro's slums (favelas), anthropologist Janice Perlman recounts that the youth there had more education than their parents but without perceptibly better jobs. In the late 1960s, parents would warn their children that if they did not stay in school they would end up as garbage collectors. In July 2003, the city opened competition for 400 garbage collector jobs and 12,000 people applied. A high school diploma was the prerequisite (Perlman (2005)).
10. By 2050, 4 of every 10 people will come from today's cohort of those ages 12–24, their children, or their grandchildren. See Lam (2006).
12. See World Bank (1993a). Precise estimates vary, but about a third of the growth rate of the East Asian tigers over 1960 to 1985 was attributed in this study to sound investments in primary education alone.
17. See box 2.1 for a fuller discussion.
19. Examples are the Trends in International Mathematics and Science Study and Progress in International Reading Literacy Study tests.
23. Policies to sustain growth are studied at great length in other work and are not discussed here. For a recent review, see World Bank (2005e).
38. While most of this research has been done in developed countries such as Germany, the experimental result is robust across a number of settings. See Dohmen and others (2005).

Chapter 1

2. World Bank (1990); World Bank (2001d); and World Bank (2005r).
4. It has proven difficult to convincingly establish causality from education to lower fertility. However, the role of maternal schooling in improving child health has been extensively documented. Grossman (2005a); Knowles and Behrman (2005); Schultz (2002); and World Bank (2001c) are some recent installments to this literature.
11. Estimates are from a wide range of modeling approaches including computable general equilibrium simulations and various growth models. See Bell, Devarajan, and Gersbach (2006), table 1.
13. Barro (1999) analyzing panel data from 100 countries during 1960–95 finds growth to be positively related to the starting level of
secondary schooling. Pritchett (2001), however, finds no impact of education growth on growth of GDP per capita or growth of total factor productivity using data on 90 countries over the period 1960–85. Neither Barro nor Pritchett take account of schooling quality.

32. There is a long literature going back to the classic work of Coale and Hoover (1958) and Leff (1969) on how countries with high population growth rates suffered from low savings rates because of the high ratio of children and youth to the working-age population.

33. Bloom and Sachs (1998); Bloom and Williamson (1998); Bloom, Canning, and Malaney (2000); and Mason (2001). The literature largely focuses on Japan, Hong Kong (China), Singapore, and Korea. Bloom and Williamson also include China and Taiwan (China).

34. Deaton and Paxson (1997).


36. Countries where dependency ratios are rising are a subset of the ones where relative cohort size is rising. They are Chad, Equatorial Guinea, Guinea-Bissau, Liberia, Niger, Republic of Congo, and Sierra Leone.
ence of “best practice” countries are adopted universally. If lower secondary is about half as long as upper secondary, an annual tab of $11–14 billion may not be far from the mark. Cohen and Bloom (2005) conclude that these amounts are affordable.


14. Studies show that in most countries, the rate of human capital accumulation, measured by its effect on productivity and wages, is at its highest during youth and decreases by more than a third (half) by the age of 30 (40). See chapter 4.


22. UNDP (1995) estimates that two-thirds of women’s work is unpaid and outside national accounts.


26. This definition of “agency” is used by Kabeer (1999). The concept has been popular among social scientists for some time, but it has been given great impetus by Sen (1985).

27. Arnett (2000). Social psychologists have distinguished two contexts. Broad socialization, characteristic of many Western industrial societies, is consistent with emphasizing independence, individualism, and self-expression. Narrow socialization emphasizes conformity to expectations (Shanahan and others (2005).

28. These findings are consistent with an earlier UNICEF (2001) survey of East Asian countries, not comparable with the one above.


34. World Bank (2006g).


41. See Shanahan and others (2005) for evidence from the United States.

42. Ali and others (2006) p. 11.


44. De Ferranti and others (2003).


46. Mathur, Greene, and Jamhotra (2003). This kind of “entrapment” limits social mobility of young brides by forcing them to be apprentices for domestic labor.


60. Calculated from figures obtained from Economic Research and Consulting, Swiss Reinsurance Company, Zurich.

61. Knowles and Behrman (2003) pp. 39–40 show that a $1,000 investment in adult basic education and literacy could produce about 10.23 trainees They compare the benefits of this as equivalent to one year of primary schooling (lower bound) or four years of primary schooling (upper bound). If one were to use the unit cost of education in Bangladesh (about $31, seeWorld Bank, Unesco Institute for Statistics (UIS), and OECD (2006)), a similar investment would yield 32.3 primary school students. Thus, the bounds are roughly 0.8 to 3 times the cost, without opportunity costs.

62. See, for example, Goldscheider (2000).


64. Hanushek and Wößmann (2005).

65. Philippine News online.


**Spotlight on gender**

1. In Muslim societies restrictions take the form of purdah, in others early curfews or prohibitions against traveling alone. See World Bank (2004b) and World Bank (2005a).


10. Enrollment rates for primary school have decreased for boys in 24 countries: Azerbaijan, China, Gabon, Georgia, Indonesia, the Islamic Republic of Iran, Jamaica, Jordan, Latvia, Macedonia, Malaysia, Maldives, Mauritius, Mexico, Moldova, Myanmar, Namibia, Oman, Peru, the Slovak Republic, Sri Lanka, St. Lucia, West Bank and Gaza, and Zimbabwe. This trend is repeated for secondary school in 12 countries: Albania, Armenia, Belarus, Georgia, Kazakhstan, the Kyrgyz Republic, Moldova, Niger, Romania, Seychelles, Ukraine, and Uzbekistan. Calculations based on UNESCO Institute of Statistics database.

11. The percentages of idle girls in the other countries are 10 percent in Brazil, 23 percent in Cameroon, 27 percent in Turkey, and 28 percent in Guatemala.


Chapter 3

5. See Alderman, Hoddinott, and Kinsey (forthcoming); Paxson and Schady (forthcoming); and Carneiro and Heckman (2003) for reviews of the literature in developed and developing countries.
7. Experimental studies in India and Indonesia found large impacts on cognitive development and school performance of iron supplementation among anemic children (Soewondo, Husaini, and Pollitt (1989) and Seshadri and Gopaldas (1989)). For programs in Jamaica, Argentina, and the Philippines, see, respectively Walker and others (2005); Berlinsky, Galiani, and Gertler (2006); and Armecina and others (2006).
8. UIS-UNESCO data: http://stats UIS.unesco.org/.
9. Canals-Cerda and Ridao-Cano (2004). This effect works mainly by increasing the probability of working during primary and secondary school. The effect of grade repetition is only defined for secondary school completion.
10. These tests include the Anti-Social Behavior, Rosenberg Self-Esteem, and Rotter Locus of Control indexes.
12. Compulsory school laws have been found to increase educational attainment (Lochner and Moretti (2004)), adult earnings (Patrinos and Sakellariou (2005)), and health and employment (Oreopoulos (2005)); and to lower crime (Lochner and Moretti (2004)) and teenage pregnancy (Black, Devereaux, and Salvanes (2004)).
15. Filmer (forthcoming).
18. Most private schools in tertiary education are independent (91 percent) relative to government-dependent private schools, whereas in secondary education there is a fairly even split. UNESCO Institute for Statistics (2005).
22. For example, the California higher education system combines selective admissions to centers of excellence with more open admissions to other two- and four-year tertiary institutions. See http://www cpec.ca.gov/.
29. After experimenting with other nontraditional teaching methods, England implemented a structured teaching model in the 1990s. In addition, some of the worst performing schools in the United States have implemented it with great success. The successful Balsakhi remedial education program in India also uses similar methods. For review see Gauthier and Dembélé (2004).
30. BRAC’s Non-Formal Primary Education Schools in Bangladesh are one example of combining interactive pedagogy with routine assessments of student progress, teaching methods, and curricula that invite the input of students and teachers themselves (see box 3.11). An experiment in the Philippines that provided pedagogical materials and training to teachers improved learning outcomes. See Tan, Lane, and Lassibille (1999).
31. This can be achieved by reducing the time allocated to low priority subject areas or increasing instructional time. See UNESCO (2004b) for a detailed discussion of time use.
32. World Bank (2003b). Empirical studies in developed countries show strong wage premiums associated with computer use (Autor, Katz, and Krueger (1998)). Studies that control for unobserved heterogeneity find positive but smaller effects and show that what really matters is computer skills (Pabilonia and Zoghi (forthcoming)).
33. Kuku, Orazem, and Singh (2005) use data from nine transition economies to show that English proficiency is positively associated with computer use. Worker-firm matched data for Malaysia show that English language proficiency is the skill that workers feel they lack the most (48 percent), followed by information and technology skills. There is a labor market premium associated with languages of international commerce (Munshi and Rosenweig (2003)). See UNESCO (2004b) on literacy and local languages.
34. Evidence on these programs from the United States suggests that financial literacy education improves young people’s financial knowledge and behaviors, by making money go further (Varcoe and others (2005)).
40. For teacher absence, see Chaudhury and others (2006). Teacher shortages are particularly a problem in mathematics, science, and technology as well as in rural areas. World Bank (2005f).
41. See, for example, Jacob and Lefgren (2002).
42. For more on teacher training, see UNESCO (2004b) and World Bank (2005k).
43. See Vegas and Umansky (2005) for evidence in Latin American and Caribbean countries.
44. Banerjee and Duflo (2006) and Vegas and Umansky (2005). One of the challenges of implementing beneficiary control programs with parents has been low demand for education, but involving young people in holding teachers accountable has yet to be tried (except at the tertiary level), and in some cases they may have a higher demand for education than their parents.
46. “Basti” is Bangla for shantytown.
47. World Bank (2003b).
49. World Bank (2005k). This project also included provision of textbooks and facilities improvements.
50. See, for example, Caldwell, Levacic, and Ross (1999).
52. World Bank (2006d) and Reinkikka and Svensson (2002). However, the rule-based nature of formula funding does not make it immune to capture. Appropriate control and monitoring mechanisms need to be put in place. School grants need to include a fixed component to account for the fixed cost of running a school. Also, indivisible inputs, such as teachers, are better handled through other funding channels.
54. Woessmann (2003); Woessmann and Hanushek (forthcoming).
62. Sacerdote (2001) and Kremer and Levy (2003). Establishing the causal effect of peer groups on the behavior of individuals has been a challenge, particularly because peer group formation is often endogenous.
63. See Lazear (2001) and Fertig (2003) for how optimal class size or composition can vary with heterogeneity. See Fryer and Torelli (2005) and Akerlof and Kranton (2005b) for the effects of student heterogeneity at the school level.
64. Ding and Lehrer (forthcoming).
70. OECD (2005b).
74. de Jong and others (2001).
76. See both UNESCO (2004a) and National Research Council and Institute of Medicine (2005) for extensive reviews.
77. See Hoff and Pandey (2004) and Drèze and Gazdar (1997) on caste in India; National Research Council and Institute of Medicine (2005) on girls in many countries; Akerlof and Kranton (2002) for several different groups in the United States.
78. Lloyd, Mensch, and Clark (2000). The study controls for a variety of factors that typically predict drop-out including parental characteristics and typical school quality variables such as parent-teacher ratios.
80. Davies, Williams, and Yamashita (2006). In one study from England, 12 schools with higher participation had higher outcomes than would be predicted by student characteristics (Hannam (2001)).
83. Pro-Rector for Student Affairs at the Plekhanov Academy of Moscow, Professor Oleg Cherkov, March 13th, 2006 seminar.
84. Main portal: www.aimhigher.ac.uk, with a parallel site for those ages 14–16 called “Don’t Stop” (http://www.aimhigher.ac.uk/dontstop/home/). The evaluation is based on one year exposure to it among 16-year-old individuals (Emmerson and others (2005)). A more comprehensive evaluation of the program is under way.
85. Carneiro and Ridao-Cano (2005). The same is being done for Mexico. Also see Aakvik, Salvanes, and Vaage (2003) for Norway. However, expected returns are just one factor in determining education attainment (see Carneiro and Lee (2005) for the United States and Fleisher and others (2004) for China.
86. This was a randomized experiment in urban areas (Jensen (2006)).
87. These costs can offset the effect of certainty on risk-averse individuals, which would tend to increase educational investments. There is robust experimental evidence showing that individuals from poor family backgrounds are more risk averse than those from better-off families (Dohmen and others (2005)). Thus, the poor would tend to underinvest in education as a result of greater uncertainty, higher risk aversion, lower aspirations, and greater liquidity constraints.
88. This is because repayment of income-contingent loans is contingent on the ex post realization of earnings. Income-contingent loans are covered later in this chapter.
89. Carneiro and Heckman (2002). However, credit constraints may be more important than suggested by the authors, for two reasons. Individuals may be credit constrained even when their families are not but are not willing to finance their education. Also, the result is conditional on a given policy environment: part of the reason for the small role of short-run credit constraints may be the success of policies to address them.
90. See, for example, Lillard and Willis (1994), who find an insignificant association between income and the transition to secondary and tertiary, and Behrman and Knowles (1999) who find strong income effects for children ages 6–17 in Vietnam. Behrman and Knowles (1999) summarize the findings of 42 studies in 21 countries. Estimates of the relationship between household income and schooling are significant but small in most cases.
92. The extent to which working children are able to combine work with school depends on household demand factors (poverty), job opportunities for children, and the institutional differences in education systems (length of the school day).
97. Greene and Merrick (2005); Singh (1998); and National Research Council and Institute of Medicine (2005).
100. See Rawlings and Rubio (2005) and Morley and Coady (2003) for reviews.

104. Sadoulet and de Janvry (2006) show that efficiency gains in the program could be achieved by selecting among the poor those children induced to go to school with the scholarship and calibrating the size of the transfer so that it is just sufficient to induce children to go to school.

105. Skoufias and Parker (2001). A similar program in Nicaragua was also found to increase the incidence of work among 12- to 13-year-olds (Maluccio (forthcoming)). Ravallion and Wodon (2000) found that the Food for Education program in Bangladesh reduced child labor but the effect only accounted for 25 percent of the increase in the enrollment of boys. See de Janvry and others (2006) for shocks.


108. Angrist and others (2002); Angrist, Bettinger, and Kremer (forthcoming).

109. The impact evaluation of the means-tested scholarship program in Indonesia (Sparrow (2004)) shows no impact on upper secondary school enrollment.

110. The program was discontinued, and it was not emulated when Bolsa Escola was adopted as a national program. Lavinias, Barbosa, and Tourinho (2001).


112. This is partly due to the brain development process. Different skills have different critical stages in the learning process, and when these are missed later remedy is not possible.


116. For a series of studies on emotional connections to school and dropout rates, see Blum and Libbey (2004); World Bank (2006d) for the Philippines; and CRECE (2005) for Colombia.


**Spotlight on Vietnam**

1. This spotlight is based on material in Asian Development Bank (2005); Nguyen Anh, Duong, and Hai Van (2005); Nguyen Anh (2005); Parliamentary Committee for Social Affairs (2005); Vietnam Ministry of Health and General Statistics Office, UNICEF, and WHO (2005); Lautréodou (2005); World Bank (2003c); and World Bank (2005a).


**Chapter 4**


2. ILO (2006). In this chapter child labor and economically active children are used interchangeably. Economically active children are defined as those who performed at least one hour of work in the reference week during the regular school year. Work comprises paid and unpaid work in home-owned enterprises. The ILO has a precise definition of child labor that is a subset of economically active children, depending on age and hours-of-work thresholds.

3. Durryea and others (forthcoming).


9. These estimates were obtained from a simple Mincer type earnings model using data from 61 household surveys (Fares, Montenegro, and Orazem (2006b)).


33. See Rosati (forthcoming).


36. The index includes measures of trade; fiscal, monetary, labor, and regulatory policies; state ownership; government intervention in finance and capital flows; property rights; and the importance of the gray economy.


38. See spotlight on baby booms following chapter 4 and Lazear (1983); Bentolila and Bertola (1990); and Bertola, Blau, and Kahn (2002).
41. Heckman and Pagés (2000). Jimeno and Rodriguez-Palenzuela (2002), using a panel of OECD countries, also found that institutional settings (including employment protection laws) that increase labor market rigidity tend to increase the youth unemployment rate.
42. Cunningham and Siga (2006) for Brazil; Montenegro and Pagés (2004) for Chile; and Neumark and Wascher (1999) for cross-country comparison for OECD.
48. Paniza (2000) shows that the public wage premium is positive for low-skilled and negative for high-skilled male workers, with the opposite trend for females. Filmer and Lindauer (2001) show that low-skilled workers in Indonesia have a higher public wage premium, but the differences were not statistically significant.
51. O’Higgins (2003) for cross-country comparison; Fares and Montenegro (2006) for Brazil and Chile; Rosati (forthcoming).
52. All figures above come from authors’ calculation using Investment Climate Surveys for Brazil, Indonesia, and Vietnam.
54. Sánchez-Páramo and Schady (2003). Other results from East Asia and Sub-Saharan Africa also show these effects.
60. World Bank (2004e).
64. OECD (2005a).
70. Hagglade, Hazell, and Reardon (forthcoming).
73. Hagglade, Hazell, and Reardon (forthcoming).
74. Otsuka (forthcoming).
76. Authors’ calculation based on Probit models for employment, unemployment, and labor force participation. The models were estimated for those 15–24 years old. The specifications include education, gender indicator, and country-specific effects. The data were pooled from 29 country household surveys.
77. World Bank (2005n).
8. Blanchard and Wolfers (2000); Nickell and Layard (1999); and Blau and Kahn (1999) provide comprehensive reviews of the literature on how labor market institutions affect the labor market.
10. Neumark and Wascher (1999) found that minimum wages had the most severe effects when imposed in combination with other employment protection rules.

Chapter 5
2. WHO (2002a). The survival probabilities for girls are generally higher, but the cross-country comparisons are similar.
22. Bateman (2001); Chandra, Jairam, and Jacob (2004); and Visinntini and others (1996).
24. Singh and others (2000). Trend analysis based on MEASURE Demographic and Health Survey data from African countries where surveys were carried out between 2000 and 2004.
27. Demographic and Health Surveys.
32. Dunkle and others (2004).
33. Jejeebhoy and Bott (2003). Note that researchers and young people may differ in their definition of transactional sex. Focus group discussions among young people in Durban, South Africa, found that gift-giving among same-age adolescents is common in sexual relationships. Adolescents view the exchange of cash for sex as prostitution but do not consider noncash gifts in the same way (Kaufman and Stavrrou (2004)).
41. Parry and others (2000).
42. Gajakshimi and others (2000).
47. UNICEF, UNAIDS, and WHO (2002).
49. Gluckman and others (2005) and Sawaya and others (2003).
52. Fernald and others (2004).
54. World Bank (1993b); Reddy (2002); Department of Health Services Sri Lanka (2002); and FAO (2006).
57. Bloom (2005a) and Blum and Ireland (2004).
59. Lansdown and others (2002).
60. Cárceles and others (1994); Eggleston and others (2000); and Boyer and Shafer (1997).
64. Abaunza (2002).
69. Estimates of transmission probabilities per act vary from 0.0001 to 0.0014 in U.S. and European studies, 0.002 in Thailand, and 0.0001 to 0.004 in Uganda. Higher transmission probabilities (up to 0.10) have been reported among men who had contacts with prostitutes in Thailand and Kenya (Gray and others (2001)).
77. Brückner and Bearman (2005); Bearman and Brückner (2001); and Fortenberry (2005).
78. WHO (2003b).
79. Evidence of the impact of sport participation on empowerment and criminal or delinquent activity among youth is extremely weak Coakley (2002). See chapter 7 of this Report.
81. Smith, Bogin, and Bishai (2005).
82. Erulkar and others (2004).
84. Cáceres and others (1994); Eggleston and others (2000); and Boyer and Shafer (1997).
85. Eggleston, Leitch, and Jackson (2000).
86. James-Traore and others (2002).
88. Mensch, Hewett, and Erulkar (1997); Erulkar and Mensch (1997); and James-Traore and others (2002).
95. World Bank (1999b).
96. See Townsend, Roderick, and Cooper (1994) for evidence from the United Kingdom.
100. World Bank (1999b).
102. World Bank (1999b) and Fiore and others (2000).
104. UNDCP (2003).
108. See, for example, Grosskurth and others (1995).
112. Temin and others (1999).
118. Teixeira, Vitória, and Barcarolo (2003).
119. There is evidence that continuing drug use is a behavioral deterrent to ART adherence (Lucas and others (2001)).
120. UNAIDS and UNODCCP (2000).
130. Rowlands and others (2000).
131. See Over and others (2004) and the papers cited therein.

**Spotlight on Brazil**

1. All figures in bullets come from World Bank (2006i). The country’s high levels of inequality, based on Gini coefficients, is second only to South Africa.
6. Some states paid per child, others paid if all children went to school, to prevent parent’s choosing between children. World Bank (2001a).
7. By merging cash-transfer programs that promoted schooling, health, food consumption, and compensation for adjustment, the government seeks to increase the efficiency and effectiveness of the many transfer programs.
9. The program has also dramatically reduced the rates of suicide, theft, drug use, sexual aggression, and armed robbery by students.
10. A program analysis conducted in 2002 compared schools under the Programa Abrindo Espaços and those that were not and found that schools that participated in the program had a lower violence index (sum of violent acts, weighted by their severity) than those that did not, by 16 percent in Rio and by 14 percent in Pernambuco (Waizelfisz and Maciel (2003)).
12. The target population is men 14- to 25-years-old and the mean age of participants in the three evaluation sites, Bangu, Maré, and Morro dos Macacos, was 17.
13. The scale is a composite of qualitative questions that reflect whether a respondent disagrees with “traditional” gender norms, such as, “there are times that a woman deserves to be beaten.”

**Chapter 6**

2. In this chapter, the term “marriage” captures actual marriages and consensual unions.
4. Calculations of first birth intervals for ever-married girls’ (ages 20–24) using birth histories and age at marriage drawn from Demographic and Health Surveys conducted between 1998 and 2004. For these countries, the average first birth interval was 1.5 years.
10. International Institute for Population Sciences (IIPS) and ORC Macro (2000).
11. Based on 2004 round of Demographic and Health Survey for Chad.
28. Based on data from Measure DHS surveys in which questions were asked about components of antenatal care.
33. Based on data from Measure DHS surveys in which questions were asked about components of antenatal care.
41. See National Research Council and Institute of Medicine (2005).
43. Based on data from Measure DHS surveys in which questions were asked about components of antenatal care.
44. Calculated using data from the Kenya Demographic and Health Survey, 2003.
52. Delisle, Chandra-Mouli, and de Benoist (2000).
57. Lloyd and Grant (2004).
60. Reported in Alford, Cheetham, and Hauser (2005).
64. Delisle, Chandra-Mouli, and de Benoist (2000).
68. Grantham-Mcgregor and others (1991) and Paxson and Schady (forthcoming).
70. Institute for Health Management-Pachod (IHMP) and International Center for Research On Women (ICRW) (2003).
73. Singh and Darroch (2000).
75. Hoffeth and Reid (2001).
77. Program description based on WHO (2003a).
78. WHO (2003c).
27. Ehtesaab used by permission of Salman Ahmad. To learn more about Junoon, visit http://www.junoon.com.
30. Stockard and O’Brien (2002) define relative cohort size as the ratio of the size of the younger generation (ages 15–29) to the size of the older generation (ages 30–65). A cohort effect is distinct from age or period effects in that it reflects influences unique to a particular group of people, such as those born between 1950 and 1954 or young men who came of age between 1940 and 1944.
32. Stockard and O’Brien (2002) find that birth cohorts that are relatively less socially integrated and regulated have higher suicide rates. However, collective institutions such as those that support families and children can moderate the effect. Jacobson (2004) finds evidence that larger cohorts increase marijuana use by lowering the risk of a sales arrest and by generating informational economies. Jacobson (2004) and Levitt (1999) find little evidence of the effect of relative cohort size on murder, violent crime, and property crime rates. The effects of cohort size and educational and labor markets are analyzed elsewhere in this report.
33. See Cincotta, Engleman, and Anastasion (2003) on these demographic stress factors and how they interact. Mesquida and Wiener (1999) point out that while a high proportion of young males is a necessary condition for the emergence of violent conflict, it is not a sufficient one.
35. For an exception, see Hudson and den Boer (2004) on China and India.
40. La Cava and others (2006).
41. Diamond (2003), citing Freedom House data.
42. Rodriguez-Pose and Gill (2003).
43. For country-specific youth voter turnout rates, see Pinto and Gratschew (2002) and Franklin (2004).
44. Franklin (2004).
47. Franklin (2004).
55. Edmunds, Forster, and Cottee (2002); Hirsch and Mehay (2003); and WDR 2007 InterMedia surveys.
56. Although national service is ostensibly universal in Scandinavian countries, budget cuts have meant that less than one-third of the eligible population actually serves.
57. Angrist (1990); Galiani, Rossi, and Schargrodsky (2006); Imbens and Van Der Klauw (1995); Lokshin and Yemtsov (2005).
58. In a study of women who served in the U.S. military during the Vietnam era, 30 percent reported having been raped, and 35 percent reported being otherwise physically assaulted (Sadler, Booth, and Doebbeling (2005)). Another survey of more than 1,500 female veterans applying for posttraumatic stress disorder disability benefits found that 71 percent had experienced some form of sexual assault while in service (Murdoch and others (2004)).
73. Finkel and Strumbas (2000).
78. Bay and Blekesaune (2002); Durham (forthcoming); Fougère, Kramarz, and Pouget (2006); and Reiss and Roth (1993).
80. Furlong and others (1997).
82. Elliot and Tolan (2005).
94. Authors’ observations from the Ecuador Law and Justice for the Poor Program.
97. Krug and others (2002); Llorente and Rivas (2005); Sheley and Wright (1993); and Villaveces and others (2000).
106. Akpokodje, Bowles, and Tigere (2002); Chen and Shapiro (2004); and Levitt (1998).
115. Latimer, Dowden, and Muise (2001); Akpokodje, Bowles, and Tigere (2002); and Roche (2006).
117. APF (2001); Arjona (2006); BBC (2001); Brown (1990); Coalition to Stop the Use of Child Soldiers (2000) in Singer (2005); Coalition to Stop the Use of Child Soldiers (2002); Coalition to Stop the Use of Child Soldiers (2003); Coalition to Stop the Use of Child Soldiers (2004); Human Rights Watch (2002a); Leopold (2000); McGirk (2001); Seyboldt (2000); and Singer (2005).
118. Arjona (2006); Humphreys and Richards (2005); Humphreys and Weinstein (2003); and Singer (2005).
120. Humphreys and Richards (2005).

**Spotlight on Sierra Leone**

5. Based on Sierra Leone Integrated Household Survey, 2004
7. World Bank (forthcoming) Education Sector Review.

**Chapter 8**

2. World Bank staff calculations from Global Trade Analysis Project (GTAP) database of Parsons and others (2005).
3. The United Nations High Commissioner for Refugees (UNHCR (2005)) reports that 34 percent of refugees are ages 5 to 17 and 47 percent 18 to 59. In the United Kingdom, 15- to 24-year-olds make up 32 percent of female asylum seekers and 38 percent of male asylum seekers (Heath and Jeffries (2005)).
5. World Bank staff calculations from the 2000 United States Census public use sample.
7. See McKenzie, Gibson, and Stillman (2006) for recent evidence of how large the gain in income can be, based on a migration lottery.
8. See Dustmann (2001) for a review of these older studies and Reyes (1997) for Mexico.
19. World Bank Staff calculations from OECD (2005c) and OECD (2003).
Note that in these countries migrants are more likely to be tested for HIV/AIDS than nonmigrants, as part of the health tests needed for employment abroad. As a result, their share of diagnosed cases probably exceeds their share of all cases.

30. Fidrmuc and Doyle (2005) include measures of inequality and regional controls to try to isolate the political socialization effect of migration from the self-selection effect.
33. “Trafficking in persons” shall mean the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation (United Nations, Palermo Protocol 2000)
35. Omelaniuk (2005) for the IOM data; Clert and others (2005) for the study in Southeastern Europe.
37. Holzmann (2005), table A.2., based on UN medium variant projections.
41. Borjas (2003) finds a 0.3–0.4 reduction in wages from a 1 percent increase in immigration, while the more recent studies by Card (2005) and Dustmann, Fabbri, and Preston (2005) find less effect.
42. Angrist and Kugler (2003).
44. Portes and French (2005).
45. However, in March 2006 the United Kingdom home office announced plans to eliminate these programs as part of the introduction of a points system.
46. Maclellan and Mares (2005) nicely summarize this program and the lessons for other countries.
48. See World Bank (2005i) for a thorough discussion and examples.
51. In Malaysia, a scheme targeting the 250,000 skilled workers overseas with tax exemptions and other incentives to return only led to the return of 104 expatriates in the first two years of operation; whereas South Korea and Taiwan (China) have seen more substantial return, helped in large part by their booming economies (International Organization for Migration (IOM) (2005b)).
52. El-Cherkeh, Stirbu, and Tolciu (2006). Romania does not have a mutually agreed convention with the United States or Germany as it does with several other countries, but students can have their diplomas recognized through a special office.
54. World Bank staff calculations from Spain 2001 Census public use sample.
56. Average over 1993–2000 based on the Survey on Overseas Filipinos of the National Statistics Office of the Philippines. Data was kindly supplied by Dean Yang for this purpose.
57. Gebrekristos and others (2005).
64. Special tabulations for youth provided by Guo Liang. See Liang (2005) for full details of the survey.
68. ILO (2001).
70. Instituto Nacional para la Evaluación de la Educación de Mexico (2005).
73. Halewood and Kenny (2006). The discretionary budget covers all costs apart from teacher salaries, including supplies, teaching equipment, utility bills, building maintenance, and other classroom needs.
75. Banerjee and others (2005).
78. Geary and others (2005).
82. See Jorgenson (forthcoming) for a recent review.
83. See World Bank (2006c) for an assessment of the growth impact.
86. Neto and others (2005).
90. Note that although these point systems typically give more points to young migrants than to older migrants, the other skill
criteria needed to obtain points typically disadvantage youth. As a result, most developing country youth are not provided an opportunity to migrate under the existing points systems.

**Spotlight on donors**

1. The most significant international commitments for youth include the 1989 UN Convention on the Rights of the Child, the 1999 ILO Convention on Child Labor, and the 2000 UN Program of Action on Youth updated in 2005. In addition, there are regional commitments such as that of the Council of Europe and the Ibero-American Convention on Youth Rights.

2. In Timor Leste, in the first two years after conflict about half of government spending on education was financed by external sources, allowing many children and young teenagers to attend school. See World Bank (2004d).

**Chapter 9**

1. Instituto Mexicano de la Juventud (IMJ) and Organización Iberoamericana de la Juventud (OIJ) (2006).

2. Although the stage of the demographic transition is correlated with income, there is enormous diversity among both low- and middle-income countries. Chad and Tajikistan are at very similar levels of income per capita, but in Chad fertility is approximately 6.0 births per woman, while in Tajikistan it is 3.5.

3. The discussion in this paragraph is based on special surveys commissioned for this Report from InterMedia (WDR 2007 InterMedia surveys). See methodological note at the beginning of the Report. Also, figure 2.4.


7. In addition to this Report, see National Research Council and Institute of Medicine (2005), and Knowles and Behrman (2005) for a discussion of this point. There is a large developed-country literature; however, the very different circumstances of developed-country youth and differences in capacity for implementation limit the applicability of these studies.


10. It should be borne in mind that some youth movements may not articulate strong demand for policies supporting youth because it is a transitory phase. By the time such policies would be implemented, many of the leaders of these movements would no longer be young. This lack of a permanent interest group can weaken political support for youth-focused policy.

11. German Technical Cooperation and German Technical Cooperation and International Council on National Youth Policy (2005). This is not to detract from the fact that many regional organizations play an important role promoting dialogue across countries on issues of common regional concern, including issues with implications beyond a member country’s immediate borders.

12. Instituto Mexicano de la Juventud (IMJ) and Organización Iberoamericana de la Juventud (OIJ) (2006).


17. For a list of all indicators on youth that are collected by the UN system, see http://www.un.org/esa/socdev/unyin/documents/youthindicatorsexist.pdf. Also, for the status of discussions on which indicators should be used as a part of a worldwide effort to monitor youth outcomes, see http://www.un.org/esa/socdev/unyin/documents/youthindicatorsreport.pdf.

18. For example, questions on the citizenship block could be obtained from more detailed criminal justice records, the inclusion of questions on legal identity and citizenship in household surveys and censuses, and the incorporation of modules on political and social participation and knowledge in existing surveys.

19. See, for example, Summers (1992); Summers (1994); and Van der Gaag and Tan (1998).


21. Discriminant analysis was used on census data in the initial stages to identify target communities and households within those communities. See Knowles and Behrman (2005).

**Spotlight on youth action**

1. Two such sources are "Youth and the Millennium Development Goals" (Ad Hoc Working Group for Youth and the MDGs (2005)) and Kinkade and Macy (2005).


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