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September 2004 Understanding the Demographic Dividend By John Ross A fresh reason for attending to fertility dynamics has emerged—the “demographic dividend.” As fertility rates fall during the demographic transition, if countries act wisely before and during the transition, a special window opens up for faster economic growth and human development.

WHAT IS THE DEMOGRAPHIC DIVIDEND? Simply stated, the demographic dividend occurs when a falling birth rate changes the age distribution, so that fewer investments are needed to meet the needs of the youngest age groups and resources are released for investment in economic development and family welfare. That is, a falling birth rate makes for a smaller population at young, dependent ages and for relatively more people in the adult age groups—who comprise the productive labor force. It improves the ratio of productive workers to child dependents in the population. That makes for faster economic growth and fewer burdens on families. The Republic of Korea serves as an example: as its birth rate fell in the mid-1960s, elementary school enrolments declined and funds previously allocated for elementary education were used to improve the quality of education at higher levels. Population pyramids for Korea and Nigeria in 2000 (presented in Figures 1 and 2) demonstrate the different population dynamics that are at work. In Korea the bulge is at the working ages whereas in Nigeria the young dependent ages stand out, with all the burdens that they represent in that poor country. The demographic module in the POLICY Project’s SPECTRUM Suite of Models can be used to project the changing age structure of the population and indicate the timing and magnitude of the potential demographic dividend. Figure 1. Population Pyramid for the Republic of

Korea, 2000 Figure 2. Population Pyramid for Nigeria, 2000 The demographic dividend, however, does not last forever. There is a limited window of opportunity. In time, the age distribution changes again, as the large adult population moves into the older, less-productive age brackets and is followed by the smaller cohorts born during the fertility decline. When this occurs, the dependency ratio rises again, this time involving the need to care for the elderly, rather than the need to take care of the young. In addition, the dividend is not automatic. While demographic pressures are eased wherever fertility falls, some countries will take better advantage of that than others. Some countries will act to capitalize upon the released resources and use them effectively, but others will not. Then, in time, when the window of opportunity closes, those that do not take advantage of the demographic dividend will face renewed pressures in a position that is weaker than ever.

2 HOW DOES THE DEMOGRAPHIC DIVIDEND HELP?

The demographic dividend is delivered through several mechanisms.

2 Labor Supply

The generations of children born during periods of high fertility finally leave the dependent years and can become workers (but good policies, preferably in place before the demographic transition, are required to educate and train them so they are not just unemployed). Women now have fewer children than before and are released to take jobs outside of the home; also they tend to be better educated than older cohorts and are therefore more productive in the labor force. This assumes wise policies by government to create more jobs and seize upon the “dividends” of the changed age distribution—if they fail to do this, countries may struggle with the social unrest of millions of unemployed citizens. Savings Working-age adults tend to earn more and can save more

money than the very young. The shift away from a very young age distribution favors greater personal and national savings. The ability to save money is even greater when individuals born during periods of high fertility move into their 40s, when their own children are mainly on their own and require less support. Personal savings grow and serve as a partial resource for industrial investments that fuel economic growth. Human Capital Having fewer children enhances the health of women. Their participation in the labor force, in turn, enhances their social status and personal independence. They tend to have more energy to contribute both to their families and to the society. Parents are under less strain to provide for many children. In surveys both men and women often cite economic pressures as their reason for using contraception. Family income can be focused more upon better food for infants, including girls, who are often given less to eat. Incomes can go toward prolonged education for girls, and for teenagers of both sexes to improve their life prospects. The primary source for these sections is Bloom, Canning, and Sevilla, 2003. Useful additional materials are available on the web; search under “ demographic dividend. ” 2 3 Thus, there are many interactions that increase benefits from the demographic dividend, always assuming that government policies are constructed to build upon the dividend during the window. One careful estimate is that as much as one third of growth in the “ East Asia Miracles ” came from demographic dividends. 3 Figure 3 below illustrates the vast differences between countries in terms of their demographic pressures from 1950—2050. Beginning in 1950, East Asian countries moved quickly through falling fertility rates that resulted in a change in the percentage of their populations in the working

age group. Their dividend opportunity rose quickly during the next fifty years. It is peaking just now and will fade steadily as their populations age. Their window of opportunity is beginning to close. 4 Sub-Saharan Africa, on the other hand, is just now starting to enter its window, under the assumption of declining fertility rates over the next several decades. If those declines come to pass, and if the governments involved take actions that follow, to some extent, those of East Asia, the dividends may become real rather than potential. Figure 3. Working Age Population (Ages 15—59) as a Percentage of Total Population 70 65 Percent of Total Population 60 East Asia Sub-Saharan Africa 55 50 45 Figure 4 enlarges the picture to show the contrasting prospects for developing and developed regions. The three major developed regions (three dotted lines) have already peaked (in 2000), while Asia and Latin America have until 2020 to enjoy a rising percentage of the population in the labor force. Sub-Saharan Africa (bottom line) is the extreme case—if fertility continues to fall it will experience gains well past 2040. 3 4 Bloom and Williamson, 1998. See also Bloom, Canning, and Malaney, 2000. Source of figure: United Nations, 2000. 19 50 19 55 19 60 19 65 19 70 19 75 19 80 19 85 19 90 19 95 20 00 20 05 20 10 20 15 20 20 20 25 20 30 20 35 20 40 20 45 20 50 4 Figure 4. Trends for Working Age Populations in Six Regions 65 60 Percent of Total Population Africa 55 Asia Latin Am. Europe North America 50 Oceania 45 1960 1980 2000 2020 2040 The complementary changes in the two age groups (0—14 and 15—59) are shown in Figure 5. The sharp decline in the percentage of the population below age 15 is contrasted with the sharp rise in the share held by the working ages (15—59). Notice also the smaller gains to date in the “ least

developed" regions: the top curve, for the share of the working ages, lies at a lower level and rises less than elsewhere, and the share for youth is rather high. Figure 5. Percent in Young and Middle Age Groups, 1950—2000

65
 DEVELOPING REGIONS 60 DEVELOPING REGIONS EXCLUDING CHINA LEAST
 DEVELOPED REGIONS 55 Percent of Total Population 50 45 40 35 %0-14 30
 %15-59 25 19 60 19 70 19 70 19 90 19 60 19 80 19 90 19 50 20 00 19 90 20
 00 19 60 19 80 19 50 5 19 80 19 50 19 70 20 00 POLICIES NEEDED TO TAKE
 ADVANTAGE OF THE DEMOGRAPHIC DIVIDEND⁵ For Better Health Evidence
 suggests that better health facilitates improved economic production, ⁶ and
 it points to the importance of policies to promote health during the
 demographic dividend. Some examples include: Insuring that infants receive
 good medical care. Protecting women's reproductive health (and enhancing
 their health knowledge, since they play the central role in the health of their
 families). Stressing the health of children and teenagers, to improve
 educational performance. Focusing especially on low-income populations,
 with strong public sector programs. Poor health is an important cause of
 losses in household income. ⁷ For Reducing Unwanted Pregnancies Given
 that ... About one fourth of all births in the developing world outside China
 are unwanted or ill-timed, ⁸ About 20 million unsafe abortions occur there
 annually, ⁹ and About half of the world's 175 million pregnancies annually
 are unwanted or mistimed, ¹⁰ ... there is ample room for improvement in
 contraceptive provision and education. Governments should do all they can
 to extend services for family planning, with the public sector targeting
 services and resources to the poor while, at the same time, releasing the
 energies of the private sector to meet the needs of those who can afford to

pay for family planning and other health services. Reducing unwanted pregnancies benefits maternal health and family welfare; it also hastens the changes in age structure that advance development. Adapted from Bloom, Canning, and Malaney, 2000. Ch. 4. World Health Organization Commission on Macroeconomics and Health; statement by J. Sachs, Chairman of the Commission. (Taken from Bloom, Canning, and Malaney, 2000, p. 70). 7 “ When households become poorer, the most common reason is illness, injury, or death. ” From World Bank Group, 2002, cited in Bloom, Canning, and Sevilla, p. 71. 8 Bongaarts, 1999. 9 Henshaw, Singh, and Haas, 1999. 10 United Nations Population Fund, 1999. 6 5 6 For Labor, Financial Markets, and Human Capital A few examples follow from this complex field, in three major areas: Policies to improve human resource capabilities and create jobs are essential, to absorb the large numbers of teenagers coming of age. Open trade policies, with open economies, can drive faster growth during the window period. If Latin America’s economies had been as open as East Asia’s were from 1965—1990, its per capita income might have grown to be one third higher. 11 Policies to generate capital are needed to fuel growth. In East Asia, personal savings were encouraged and helped greatly; other sources of capital are government and business savings as well as foreign investments and development assistance. All these are responsive to favorable government actions. CONCLUSION The opportunities now present will not last long and will not be repeated. The window begins to close in all regions, except sub-Saharan Africa, in the next 10—20 years, and favorable policies take time to establish and take effect. Investments in education, health, and job creation are vital, as are policies that favor the fertility

declines that have created and sustained the window. " A failure to act on these issues could have a damaging effect on future prospects, as unemployment rises, the social fabric crumbles, and rising numbers of old people begin to overwhelm available resources. ...Embracing and understanding demographic challenges must therefore be a priority for all governments..."^{12 11 12} Bloom, Canning, and Sevilla, p. 74. Bloom, Canning, and Sevilla, 2003. 7 REFERENCES Bloom, D., D. Canning, and P. Malaney. 2000. " Demographic Change and Economic Growth in Asia. " *Population and Development Review* 26 (Suppl.): 257—290. Bloom, D., D. Canning, and J. Sevilla. 2003. " The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change. " *Population Matters Series*. Santa Monica, California: Rand. (Useful additional materials are available on the web; search under " demographic dividend. ") Bloom, D. and J. Williamson. 1998. " Demographic Transitions and Economic Miracles in Emerging Asia. " *World Bank Economic Review* 12: 419—456 . Bongaarts, J. 1999. " Future Population Growth and Policy Options. " In A. Mason, T. Merrick, and R. P. Shaw (Eds.), *Population Economics, Demographic Transition, and Development: Research and Policy Implications*. Washington, DC: World Bank. Henshaw, S., S. Singh, and T. Haas. 1999. " The Incidence of Abortion Worldwide. " *International Family Planning Perspectives* 25 (Suppl.): 1—17. United Nations. 2001. *World Population Prospects: The 2000 Revision*. New York: United Nations. United Nations Population Fund. 1999. " Six Billion — A Time for Choices: The State of World Population. " Geneva: United Nations Population Fund. World Bank Group. 2002. " *Voices of the Poor*. " Available at <http://www.worldbank.org/wbp/voices/listen-findings.htm>

[accessed January 24, 2002]. POLICY Project, Futures Group One Thomas Circle, NW, Suite 200 Washington, DC 20005 Tel: 202-775-9680 Fax: 202-775-9694 policyinfo@futuresgroup.com The POLICY Project is funded by the U. S. Agency for International Development (USAID) under Contract No. HRN-C-00-00-00006-00, beginning July 7, 2000. POLICY is implemented by the Futures Group in collaboration with the Centre for Development and Population Activities (CEDPA) and Research Triangle Institute (RTI). The views expressed in this paper do not necessarily reflect those of USAID. 8