

## GLOBAL POPULATION AGING

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### Summary

Population aging has occurred as a global phenomenon with heterogeneous consequences across countries, having started first in developed countries and occurring in the future with faster pace in developing countries. Before the rapid aging occurs in developing nations, there will be a period of time in which societies could prepare their economic and political infrastructure to meet the needs of their aging populations. Old-age income and health are two powerful determinants of well-being, and societies are considering reforms to their systems of provision of old-age pensions and health care. In both cases, institutional care may be insufficient or unfeasible in poor societies, thus the family gains particular importance as a provider of individual welfare during old age. Labor practices such as youth and male preference as well as early retirement may have to be changed to attract or retain workers that become scarce in aging societies. Immigration is another potential global solution, with important social implications that such temporary or permanent movements may bring about.

### 1. Introduction

Although individuals age every minute, population aging refers to the phenomenon by which the proportion of the elderly, as part of the total population of a society, grows at a disproportionate rate with respect to the growth in the numbers of other age groups. Using the United Nations moderate population projections from 1998, the percent of the global population under 15 years of age will decline from 31% to 17% in the period 1995 to 2150. During the same period, the share of the world population aged 60 or

older will increase from 9% to 30%. Another manifestation of aging of the population over time is an increasing median age. The global median age will rise from 25.4 years in 1995 to 36.5 years in 2050 and to 42.9 years by 2150. The causes of the phenomenon are clear; it results from the sustained fall in mortality and fertility that occurred throughout the world in the second half of the twentieth century.

The purpose of this article is to describe the phenomenon, to illustrate its heterogeneity across countries and societies, and to point out that the likely consequences may differ vastly. The article will highlight the main areas in which population aging can have important consequences, the possible ways in which societies may transform, and the type of policies that can be adopted to address the phenomenon.

It is impossible to predict the kind of demographic adjustment that the world will experience next, or the pace of further aging beyond the one that we can foresee for the next 30 to 50 years. Nevertheless, the patterns of demographic growth will most likely depend on the transformation that social norms and economic systems undergo as a result of the population aging that we can observe or foresee already. The global population-aging phenomenon has no precedent in the history of humankind, and its consequences are quite unknown. Because of this uncertainty in its consequences and its global nature, the phenomenon has gained much scientific interest in the last decade, and it will figure prominently in the agenda of population students and researchers for decades to come.

## **2. Global Trends in Population Aging: Inequality of Aging Pace, Timing, and Initial Social and Economic Conditions**

The global trend is clearly towards population aging, since most societies are undergoing or have undergone fertility declines as well as drops in mortality. By definition, this produces an increase in the proportions that the adult, and eventually the elderly, represent in the total population. Though this is a general trend, the nature of the phenomenon varies widely across nations. In some countries, aging started decades ago and thus the elderly represent a much higher proportion of the total population already. In other countries, even though the base numbers of the elderly may be relatively small, the speed at which the aging process is occurring is much higher. And finally, the stage of socio-economic and cultural conditions in which the process started varied greatly across nations. For developed countries, the process of population aging started later in their epidemiological transition, that is, when the prevalence of infectious diseases was quite low. In many developing countries that are undergoing the process of aging, their populations still exhibit high prevalence of infectious diseases, creating peculiar conditions for those in the elderly groups. These individuals are survivors of an era in which infectious diseases were prevalent, and could experience higher disability consequences than in other developed societies that aged in the past.

The heterogeneity of the aging process currently underway can also be illustrated with statistics showing that in developing countries, the elderly dependency ratio (the number of elderly divided by the non-elderly population) is 8.1 for 1999 and is projected to be 13 in the year 2025. For developed countries, however, these dependency ratios are 21.2 and 33.2 respectively. These figures represent a rate of growth in the dependency ratio

of 61% for developing countries and 56.9% for developed countries between 1999 and 2025. The regional differences are also evident by the growth in the elderly dependency ratio between 1999 and 2025, which is projected to be 101% for Sub-Saharan Africa, 129% for Asia, and 143% for Latin America and the Caribbean (see Figure 1).

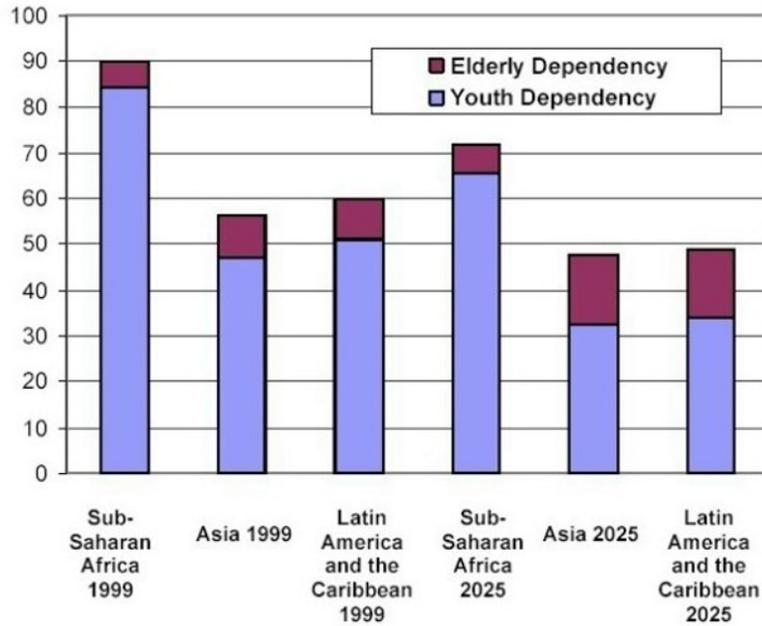


Figure 1: Dependency Ratios for Selected Regions

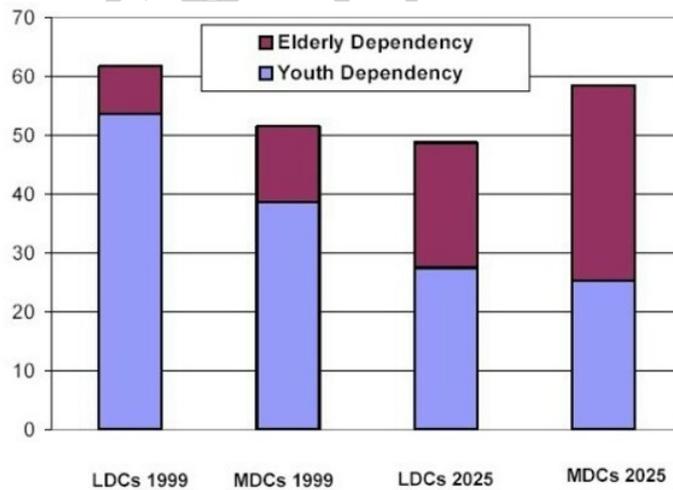


Figure 2: Dependency Ratios in Less Developed Countries and More Developed Countries

The rates of growth of the elderly population may be alarming to some scholars, mostly because the composition of the population increasingly in favor of the elderly can have undesirable implications. For example, in the labor market, an older labor force may be

less innovative or slower to adopt new technology. For the retirement pension systems, an increasing number of elderly will be demanding old age security payments for a longer period of time. In social sectors such as health, an aging population may require rapidly increasing medical services because of extended longevity and critical care needed at old age. Many scholars remark, however, that at the same time that the proportion of the elderly increases, another group of dependents (the young) is decreasing, thus the total dependency ratio (defined as the number of children and elderly divided by the number in other groups) is falling overall. Thus countries have moved through or will move towards a lower overall dependency regime by the year 2025 (see Figure 2). Some of the counter-arguments are that, even if the overall dependency ratio may be lower, the composition of the dependents is quite different under a population-aging regime. The social per-capita expenditures on a child-dependent may be lower than the per-capita expenditures on the average elderly-dependent. In addition, on average, the period of time that an elderly may spend as dependent may be longer than the period of time that a child spends as dependent.

### **3. Consequences of Population Aging: Adjusting to “the Crisis”**

The trends of below-replacement fertility and steadily declining mortality that have produced aging of the population will also bring about a decline in the total population in many developed countries. Japan and most countries of Europe are projected to decrease their population size over the first half of the twenty-first century. According to the United Nations (medium variant) projections, Italy will decline from a total of 57 million in the year 2000 to 41 million by 2050. In Japan, the population would decline from 127 to 105 million. On the other hand, in developing countries, the demographic trends indicate that, for a period of two to three decades, the demographic dependency ratio will fall first as the current children become adults, and then rise again when aging accelerates. The period of time of low dependency can be approached as an opportunity to prepare for the new demographic regime. During this period, economies could prepare infrastructure support systems that can sustain the rapid growth in the elderly. In particular, financial markets that support the need to transfer assets from one point in time to another, that is, to facilitate accumulation of assets and savings throughout an individual's lifetime could be revamped. Health and social services sectors could be strengthened, and new human resources can be trained to meet the health services and personal care needs of an older population.

Economic policies at the national levels may need to be modified as well. For example, the past declines in fertility and mortality that produced the new age structure of the population in developed countries were accompanied by social and economic transformations, including many in the labor market. These transformations included increasing participation of women, better or more job benefits offered to workers, and widespread protection of workers rights. Higher accumulated wealth and job benefits, including old age security provided by pensions, enabled retirement at younger ages in virtually all countries as development occurred. As companies used early retirement as a mechanism to reduce labor costs, countries used it to fight unemployment.

The global trend toward earlier retirement is particularly well documented for men. Among eleven industrialized countries from Europe, the U.S., Canada and Japan, for

example, it is found that in the 1960s at least 70 percent of men of ages 60 to 64 were still working. By the 1990s the rate had fallen to under 20 percent in Belgium, Italy, France and the Netherlands, and it was only 35 percent in Germany. This magnitude of a drop in labor force participation is quite dramatic, in particular when health conditions for the age group have been improving. The conclusion that researchers draw is that the benefit structures of the social security systems of these countries have created incentives to retire early. In other Asian countries, for example, the percentage of older men who are still working has decreased sharply in the last four decades, and the estimated median retirement age for men dropped from 67 to 63. Earlier retirement ages combined with longer life expectancies result in the need for more resources to finance old age well-being. Thus the period of opportunity offered by the decades of low dependency in developing countries can be used to reverse changes that have historically taken a long time to implement and that may in fact represent gains of the labor force. In some cases, the policies are no longer justified; for example, legislated retirement ages at relatively early ages may reflect the fact that life expectancies used to be much lower, and in some countries having a lower retirement age for women than for men may be a residual of cultural differences in the treatment of men and women and may represent past attempts to keep women out of the labor force.

Modifications to laws and cultural norms may be needed through the introduction of gradual variations over a number of years instead of sudden changes. In the 1990s Sweden enacted innovations in the pension system to encourage workers to stay active in the labor force, by reducing the benefit level of those retiring at age 65 but leaving them constant for those waiting until age 67. In order to produce incentives for firms to keep old employees in the labor force, paying wages that depend on productivity as opposed to seniority may be needed. Part-time work with benefits, which has been accessible for younger workers in some countries, for example in the Netherlands, may be another way to accommodate older workers.

There is evidence regarding the countries of Asia that have already moved through the period of a favorable age dependency ratio, finding that societies benefited from the opportunity provided by the temporary low dependency ratios. Analyses performed using country-level data for several points in time indicate that changes in the age structure of the populations provided favorable conditions for economic and social development in the region of South East Asia.

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### **Biographical Sketch**

**Rebeca Wong**, a Ph.D. economist, is Research Scientist and Faculty Associate of the Center on Population, Gender, and Social Inequality at the University of Maryland. Previously she was on the faculty of Georgetown University and Johns Hopkins University. Her long-term research agenda includes the economic consequences of population aging at the micro level. Dr. Wong currently is co-investigator in the Mexican Health and Aging Study, a multidisciplinary project that includes a national longitudinal survey in Mexico.

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