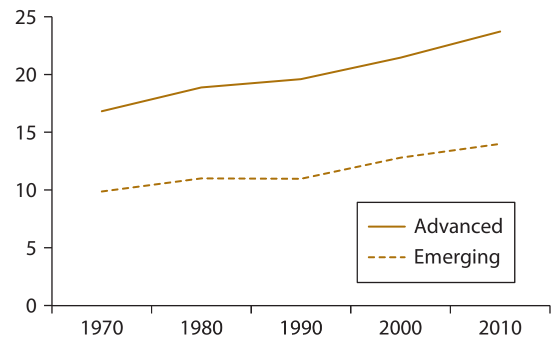
Historical Trends in Public Pension Expenditures

This chapter analyzes historical trends in public pension spending in advanced and emerging market economies. These trends must be observed against the backdrop of gradual population aging. During 1970–2010 the old-age dependency ratio—that is the number of people ages 65 and older divided by the number of people ages 16 to 64 (the "working age")—increased from 17 percent to close to 25 percent in advanced economies and from 10 percent to nearly 14 percent in emerging markets (Figure 3.1). In other words, for every person 65 and over there are currently four people of working age in advanced economies and just more than six in emerging market economies. In most countries the gradual increase in part reflects increases in life expectancy but mainly the decline in fertility rates since the 1950s. As a result of the latter, the working-age population has been growing less rapidly. Migration is the other key demographic variable that can affect the old-age dependency ratio. In many countries, though, its impact on the overall population structure and hence the age distribution is not significant.

Figure 3.1. Old-Age Dependency Ratio in Advanced and Emerging Market Economies



Source: United Nations (2010).

Pension Spending Has Risen in Advanced Economies, Albeit at a Slower Pace Recently

In advanced economies, although public pension spending has increased sharply over the past 40 years, reforms enacted over the past two decades have helped slow spending growth. Expenditures increased from 5 percent of GDP in 1970 to 9 percent in 2010 (Figure 3.2).

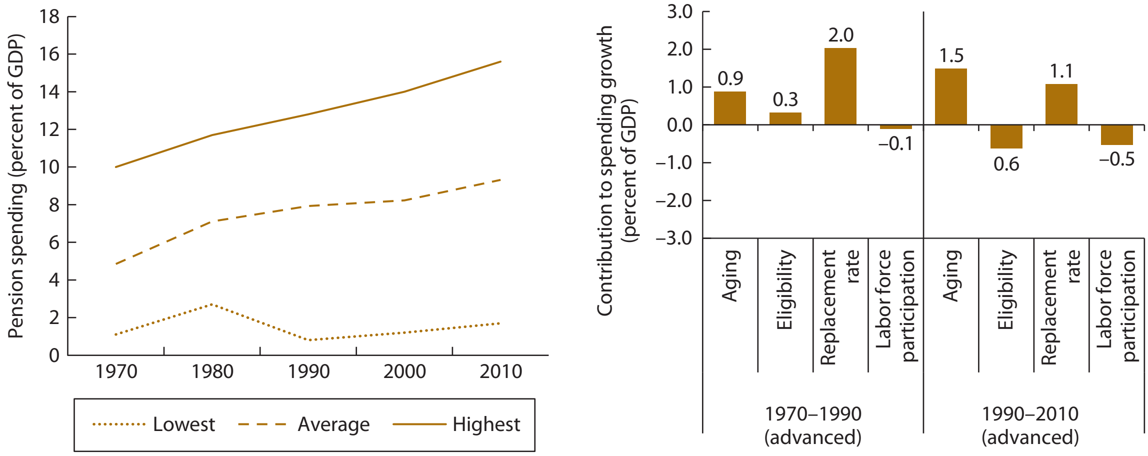
Figure 3.2 shows that the four drivers behind the change in public pension spending as a share of GDP are aging, eligibility rates (the number of pensioners as a proportion of the population 65 and older), replacement rates (the ratio of average pension to average wages), and labor force participation rates.

- During 1970–90, increases in spending in advanced economies reflected a combination of higher replacement rates, aging, and increased eligibility—the average statutory retirement age declined by one year over this period. This increase in the generosity of systems during 1960–80 reflects in part the more general expansion of the welfare state (Lindert, 2004; Tanzi and Schuknecht, 2000). Increased female labor force participation offset some of the increase in spending.
- Pension spending growth was more contained over the past two decades. The impact of aging and benefit increases was partly offset by both tighter pension eligibility rules (including a higher retirement age in the Czech Republic, France, Germany, Italy, Korea, New Zealand, the Slovak Republic, and the United States) and further increases in labor force participation rates.

Public Pension Spending Has Also Increased in Emerging Market Economies, but from a Lower Base

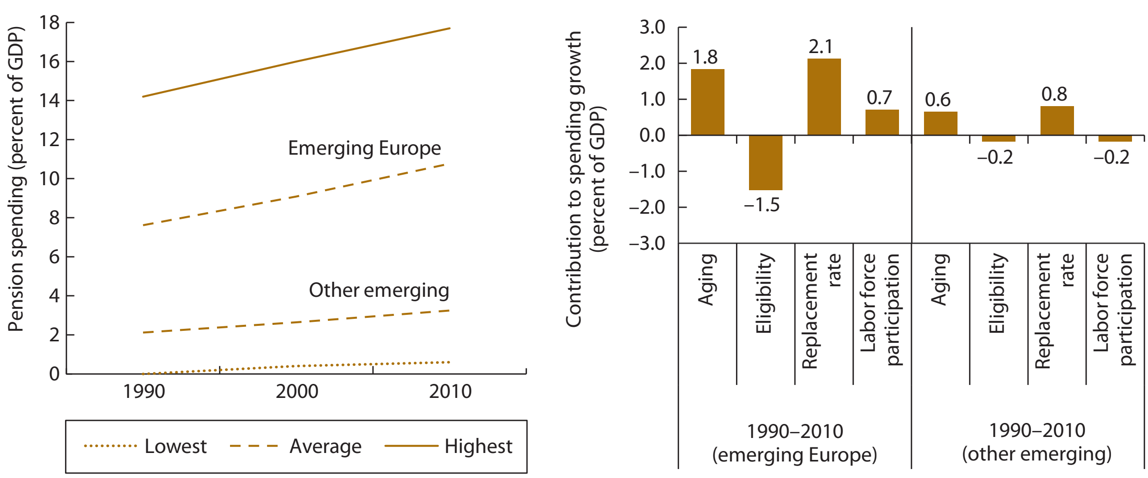
Over the past two decades, increases in public pension spending in emerging market economies have been larger than those in advanced economies, but from a much lower level in emerging market economies outside Europe. Between 1990 and 2010, spending in all emerging market

Figure 3.2. Evolution of Public Pension Expenditures in Advanced Economies



Sources: Eurostat; International Labour Organization; Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: The averages for these figures include only economies with consistent data for 1970–2010 (see Table A5.3). However, the averages reported in the text and Table A5.2 include all countries in the sample.

Figure 3.3. Evolution of Public Pension Expenditures in Emerging Market Economies



Sources: Eurostat; International Labour Organization; Organisation for Economic Co-operation and Development; United Nations; and IMF staff estimates.
Note: The averages for these figures include only economies with consistent data for 1990–2010 (see Table A5.3).

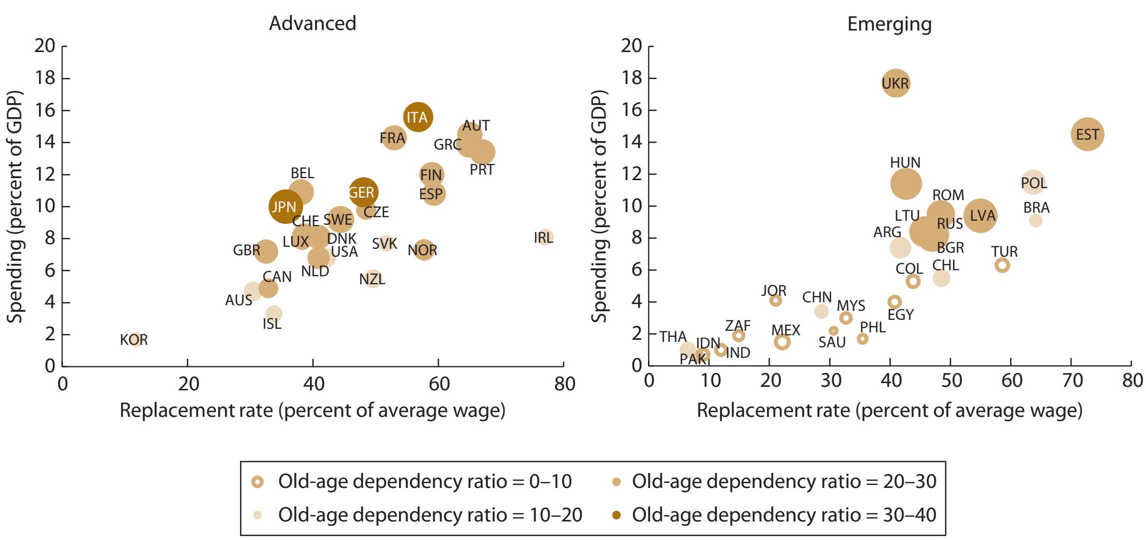
economies increased on average by 2 percentage points of GDP.[1] In emerging Europe, spending has increased from about 7½ percent of GDP in 1990 to 10½ percent today, with rapid increases during the 1990s in Poland, Romania, Turkey, and Ukraine. This increase has been due mainly to higher replacement rates (average pensions increased relative to wages during the 1990s) and population aging. Declining labor force participation rates have also played a role (Figure 3.3). In other emerging market economies, spending has increased from 2½ to 3½ percent of GDP over the same period, owing to increases in replacement rates, albeit from relatively low initial levels.

On average, spending is lower in advanced economies than in emerging Europe—at 9 and

[1]Not enough data are available to conduct the analysis for 1970–90.

10½ percent of GDP, respectively—but is substantially lower in other emerging market economies, at 3½ percent. However, there is considerable variation in spending among advanced economies, ranging from less than 5 percent of GDP in countries with relatively young populations and low replacement rates (Australia, Canada, Iceland, Korea) to more than 12 percent in countries with relatively high replacement rates and older populations (Austria, Finland, France, Greece, Italy, Portugal; see Figure 3.4). In contrast, no European emerging market economy spends less than 6 percent of GDP. Most European advanced and emerging market economies have replacement rates of between 40 and 60 percent, old-age dependency ratios above 20 percent, and nearly universal coverage. The relatively low spending in emerging market economies outside Europe reflects a combination of relatively low coverage (generally only those in the formal sector are eligible and receive pensions that are high relative to the average wage) and younger populations.

Figure 3.4. Pension Spending, Replacement Rates, and Aging, 2010



Sources: Eurostat; International Labour Organization; Organisation for Economic Co-operation and Development; United Nations; and IMF staff estimates.

Note: The size and shading of the bubbles represent aging—larger and darker bubbles denote higher old-age dependency ratios. See Appendix 1 for details on the sources for spending and the calculation of replacement rates. See page xi for a list of country abbreviations.