market risks and how to manage them may help people to make decisions about their wealth management. Life-time saving just to find that only half is remaining at the retirement age is painful. The chapter also mentions that 71 percent of population aged twenty and over have no knowledge about investment in equities and bonds and 57 percent have no knowledge about financial products.

Contemporary young Japanese are, in general, not happy with being in an aging society. However, the last part of the chapter shows a positive impact of elderly on younger generation. People in early retirement (sixty to seventy-five years old) actually make net intrainfamly transfers to other age groups (figure 4.13). Their large portions of consumption are from labor income and income from assets (figure 4.15).

Why do older people decide to make a transfer to their offspring, knowing that pension benefits would fall short of their living expenses from age sixty? It could be altruism or intrainfamly old age insurance. Once they retire, they live in a quiet and lonely environment. Any accident could happen easily to an elderly person at home. If they live with their children, those incidents will be mitigated. Should they live alone, they have to make some contribution in exchange of the visits from their children and grandchildren. The visits have some cost. Transfers from the elderly, therefore, could be a reward for their tender-loving care to their parents.

References
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Comment Alejandro N. Herrin

While providing an interesting account of Japan’s experiences in population aging, the chapter also provides insights for analyzing policy issues related to economic-demographic and social changes in developing countries currently undergoing age structure change of varying timing and speed, and at varying stage of socioeconomic development. I focus my comments on these insights for developing countries.

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Effect of Economic, Social and Policy Changes on the Age Pattern of Consumption and Production

The chapter describes Japan’s changing age profiles of per capita consumption and per capita production (figure 4.7) as influenced by a number of interacting factors. These factors include patterns of economic growth, labor and social security policies, and social change. The last factor involves value shifts in family support for the elderly, and preferences for composition of assets; for example, land versus others forms. While one could speculate on what would have happened to the profiles of Japan’s per capita consumption and production over the past twenty years had these factors been different in timing and speed, of practical interest is the effectiveness of recent policy reforms in the areas of, for example, mandatory retirement age, public pension schemes, long-term care insurance schemes, and medical insurance schemes.

Broadly, the analysis provides insights into possible factors to consider in macro-demographic simulations to test out various scenarios for other countries. For example, what would be the profile of consumption and production in countries characterized by slow and uneven economic growth, high poverty rates, slow demographic transition, and limited coverage of institutional mechanisms for public transfers? In these countries, high and low income groups are likely to have different demographic profiles, capacities for human and capital formation and patterns of transfers. What is the impact on overall poverty and income distribution over the longer term for such diverging economic and demographic profiles among major social groups within the country?

The analysis of Japan’s experience provided by the chapter also points to some policy insights for developing countries trying to catch up economically, demographically, and institutionally with the developed world. For example, on economic policies, in the face of rapid growth of the absolute size of the labor force, would emphasis on achieving full employment first, rather than focusing on labor policies to protect the workers through social security and pension schemes (which tend to raise the cost of labor relative to capital, and reduce labor absorption), have more far reaching impacts on overall patterns of consumption and production and economic growth?

Effect of Age Structure on Economic Growth Given Age Patterns of Consumption and Labor Income

The chapter estimates the first and second demographic dividend in Japan. The authors find that the magnitude of the positive first demographic dividend (annual growth rate of the economic support ratio, which measures the change in output per effective consumer due solely to changes in age structure) was large, adding just over 1 percentage point per year to economic growth during the 1960s and 1970s (figure 4.8). However, since
the mid-1990s, the economic support ratio has been declining, and the first dividend has become negative.

The estimate of the second demographic dividend (i.e., the growth rate of productivity or output per labor income that arises because of an increase in the demand for assets as a consequence of population aging) is made over the period from 1960 to 2035. In the 1980s, the second demographic dividend generated almost 1.5 percentage points of additional economic growth (figure 4.9). Beginning from the 1990s, the second demographic dividend has declined to around 0.5 percentage point, with the prospect of maintaining this lower rate up to 2035.

Figure 4.16 shows estimates of the first demographic dividend for selected Asian countries. Following Japan's experience in rapid demographic transition, South Korea, Thailand, and China added another 1.0 to 1.5 percentage points to their economic growth solely due to age structure change. The pace of fertility decline was relatively much slower in Indonesia, Philippines, and India. As a result, the first demographic dividend added only less than 1 percentage point to economic growth. For the latter three countries, and similarly situated countries, an immediate goal is how to reap the full benefits of the first demographic dividend both in an accounting sense—through a more rapid decline in fertility—and, in a behavioral sense through better economic policies and stronger institutions. While age structure change through fertility decline can add to economic growth, other factors, such as continued rapid total population growth because of slower fertility decline, misguided economic policies, and weak institutions, could easily negate the contribution of age structure change to economic growth. The resulting overall slower economic growth and development would have implications for the pattern of consumption and production, asset accumulation, and the age reallocations, and, in turn, on the capacity to generate the second demographic dividend.

**Changing Patterns of Age Reallocations**

The third part of the chapter describes the effect of aging on the changing pattern of age reallocations for 1984 to 2004. The reallocations are made through assets, net public transfers, and net private transfers.

The chapter shows important changes in age reallocations resulting from the rapid growth of the elderly population (figure 4.12, panels A to C). In general, over this period, net total transfers increased by three times, with the increase coming mainly from public transfers, while net familial transfers have declined. Furthermore, asset-based reallocations have become important, increasing ten times during the period, although net public transfers still dominate in 2004.

How well an aging population can support the consumption of the elderly depends on how well the demand for life cycle pension wealth is accumulated. The authors note that for countries which rely on capital accumulation
to meet the retirement needs of the elderly, population aging would provide an incentive to accumulate capital and other assets, and thus usher in the second demographic dividend.

Countries lagging behind the demographic transition would nonetheless undergo an aging process. But the slow demographic transition carries with it lost opportunities for faster economic growth and poverty reduction. Moreover, countries with slow demographic transition and limited coverage of the institutions for public saving (e.g., social security schemes and social health insurance)—such as the Philippines—are likely to also experience limited capacity in the future for age reallocations either in the form of transfer wealth (public and private) or in the form of asset accumulation to support the aging population and reap the second demographic dividend.

Putting Interrelationships Together: Policy Simulation Modeling

The chapter examined three different aspects of Japan’s postwar economic-demographic experience: (a) the role of economic, social, and policy changes on the age pattern of consumption and production, (b) given an average age pattern of consumption and production, the effect of age structure on economic growth, and (c) depending on the nature of the age reallocations, the emergence of the second demographic dividend. For policy simulation, it might be instructive to put economic, social, and policy parameters to interact with age structure change that could simultaneously produce different levels and shapes of the age pattern of consumption and production, different patterns of the first demographic dividend, and different age reallocations. The empirical analysis for Japan described in the chapter provides building blocks for such policy discussions in developing countries.