

## Introduction to the Special Issue on Population, Aging, and the Economy<sup>†</sup>

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This special issue centers on the economic implications of two powerful demographic trends: falling birth rates and longer life spans. While many advanced economies face these shifts, South Korea's experience is unique in its speed and intensity. It serves as an urgent case study for the rest of the world. In just a few decades, Korea transformed from a young society with high fertility into one with the lowest birth rates globally and a rapidly aging population. Korea's total fertility rate dropped to a record low of 0.72 in 2023. At the same time, life expectancy has risen so fast that Korea's old-age dependency ratio is expected to pass Japan's by 2050. These changes create massive challenges for government budgets, labor markets, and family structures.

Economists have long tried to explain why fertility falls as countries get richer. Early theories, like the "quantity-quality" trade-off, argued that as income rises, parents choose to have fewer children but invest more in each one. This framework, often associated with the transition from Malthusian stagnation to modern growth (Galor and Weil, 2000), helped explain why birth rates dropped during industrialization. However, the relationship between money and family size is more complicated today. As Doepke *et al.* (2023) point out, we are in a new era where fertility depends on how easily women can combine a career with a family. Furthermore, Kearney *et al.* (2022) suggest that shifting life priorities and the rising opportunity cost of time have fundamentally altered the calculus of family formation, decoupling income and fertility in recent years. In many wealthy countries, places with higher female employment now actually have higher birth rates, which suggests that support for working mothers is key to keeping fertility from collapsing.

In East Asia, however, society has been slower to adapt. Goldin (2025) describes a "downside of fertility" that comes from a clash between women's new economic freedom and old social norms. Korea fits into a group of nations that grew rich very quickly in the late 20th century. In these countries, the economy modernized faster than traditions could change. While women gained access to education and jobs, men largely kept their traditional roles, leading to conflict between the genders and

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generations. You can see this clearly in the home. The gap in unpaid household work between men and women remains much wider in Korea than in countries like Sweden or the U.S. Because the cost of having children, especially in high-intensity careers that demand long and inflexible hours, has gone up, many women are delaying marriage or choosing not to have children at all.

The economic risks are serious. A shrinking workforce can pull down productivity and growth, a danger Jones (2022) calls the “empty planet” scenario. Quantifying this drag, Maestas *et al.* (2023) estimate that substantial increases in the older population significantly decrease growth in GDP per capita, primarily through reduced labor productivity. Also, an older population puts huge pressure on safety nets. The Economic Report of the President (2024) warns that without big gains in productivity or more immigration, having fewer workers to support more retirees threatens programs like Social Security in the U.S. Seminal analyses of this transition, such as Lee (2002), highlight that population aging will drive substantial long-term increases in public spending on entitlement programs, necessitating difficult trade-offs between tax hikes and benefit cuts.

But there is some hope. Better health, or “healthy aging,” allows people to work longer. Additionally, technology may offer a buffer. Acemoglu and Restrepo (2022) find that countries undergoing rapid aging tend to adopt robotics and automation more aggressively, potentially offsetting labor shortages. Finally, demographic shifts can sometimes lead to a “second demographic dividend” if people save more money to support their longer lives (Lee and Mason, 2006).

This issue collects five papers that look closely at these dynamics in Korea. They cover the fiscal costs of aging, whether better health can solve labor shortages, the career penalties women face for having children, how marriage markets are changing, and how living arrangements affect inequality.

First, **Daniel Carroll, Sewon Hur, Selahattin Imrohoroglu, and Braden Strackman** (“Addressing the Demographic Decline in South Korea”) looks at the fiscal problems using a model where people choose when to retire. By fitting the model to Korean data, they measure the trade-offs between two main policy choices: raising taxes or cutting pension benefits. The analysis shows that cutting benefits pushes people to work longer and save more, which helps the economy grow in the long run. However, it hurts retirees who rely on that money. On the other hand, raising taxes protects retirees but discourages younger people from working. The paper points out a difficult political reality. A majority of voters would likely choose to raise taxes to protect their benefits, even if it hurts the overall economy.

Facing these headwinds, the second paper looks at a positive factor that older people are getting healthier. **Bertrand Gruss, Eric Huang, Andresa Lagerborg, Daa Noureldin, and Galip Kemal Ozhan** (“Can Healthy Aging Boost the Labor Supply? Evidence from Korea”) present new evidence on “healthy aging.” Using survey data, they show that older Koreans today are physically stronger than people of the same age in the past. For example, the average 70-year-old today has the grip strength of a 60-year-old from 2006. By linking health data with chronic diseases, the authors show that better health directly causes people to stay in the workforce longer. They estimate that healthy aging added about 1.9 percentage points to the labor supply every year between 2006 and 2020, which acts as a buffer against the shrinking workforce.

The next two papers look at the root causes of low fertility: marriage and jobs. **MinSub Kim** (“Marriage and Child Penalties: Evidence from South Korea”) studies the career costs women face when they start families. Using data on individual career paths, Kim separates the “marriage penalty” from the “child penalty.” Unlike in many Western countries where the marriage penalty has mostly disappeared, Korea still has a distinct penalty just for getting married. While the marriage penalty has decreased for younger women, the penalty for having a child remains high. Crucially, this penalty shows up almost entirely as women leaving the workforce rather than just working fewer hours or earning less. This implies that the Korean job market is too rigid, forcing mothers to choose between working full-time or quitting altogether.

Complementing this, **Minhee Chae** (“Recent Socioeconomic Differentials in Marriage Rates in Korea and China: A Comparative Study”) looks at marriage trends. Chae finds that marriage rates are falling for everyone, but the drop is sharpest among men with less education and income. This is a change from the past, when lower-income people often married earlier. The results suggest that financial problems, like housing costs and unstable income, are stopping more people from starting families. This makes the fertility crisis worse.

Finally, **Sang-Hyop Lee, Andrew Mason, and Hyun Kyung Kim** (“Population Aging and Living Arrangements: Implications on Inequality”) look at how living together in multi-generational households pools income and, in doing so, holds down inequality. Their model separates this pooling effect from the standard compositional effect of an aging population, and shows that the two work differently depending on whether aging comes from fewer births or longer lives. The Korean data line up with the theory. Fertility decline has pushed more people into extended households, and the shared income that results has acted as a quiet equalizer. But as rising incomes let more elderly Koreans live on their own, this cushion is wearing thin.

Together, these papers offer a detailed view of Korea’s demographic changes. They break down the complex mix of macro-level budget pressures and micro-level personal choices from deciding to marry or work to choosing when to retire or who to live with. The findings show that fixing the “downside of fertility” needs more than just cash handouts. It requires deep structural changes in job markets, pension systems, and social norms to fit the new economic reality.

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