Age and sex structure: low fertility and population ageing

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P25 LAT3072-1 Demography

January 31, 2025

1   Population Aging: Key Insights and Implications

Population aging refers to the shift in a population's age distribution towards older ages. This phenomenon is characterized by a decline in the proportion of children and an increase in the proportion of the elderly. Although population aging is widespread globally, it is most advanced in highly developed countries. However, less developed regions are experiencing faster growth in their elderly populations, leading to a concentration of older individuals in these regions in absolute terms. Some key points are next.

- Current Trends and Regional Impacts: The Oxford Institute of Population Ageing notes that while population aging has slowed in Europe, it is expected to have the greatest future impact in Asia. This is particularly significant as some Asian countries are in stage five of the demographic transition model, characterized by very low birth and death rates.

- Future Projections and Health Considerations: The rate of population aging is anticipated to accelerate over the next three to four decades. However, it remains uncertain whether the older population will experience these additional years in good or poor health. The concept of "compression of morbidity" suggests a reduction in disability in old age, whereas "expansion of morbidity" indicates an increase in poor health with longer lifespans. Policymakers need to consider these aspects to plan effectively for the future.

- Regional Challenges: The rapid growth of the older population poses significant challenges, particularly for regions like Asia and Africa. Within 20 years, many countries in these regions will face a demographic shift where those over 65 will constitute the largest population cohort, with the average age approaching 50. According to the University of Washington, by 2100, there will be 2.4 billion people over the age of 65 compared to 1.7 billion under 20.

- Economic and Social Implications: Most developed countries are experiencing sub-replacement fertility levels, making population growth reliant on immigration and the momentum from previous large generations with increased life expectancy. Currently, approximately two-thirds of

the 150,000 global daily deaths are age-related, with this proportion rising to 90% in industrialized nations.

- Challenges and Policy Implications: The aging population presents unprecedented challenges, including changes in disease burden, increased health and long-term care costs, labor shortages, insufficient savings, and potential issues with social security and pensions. Although a longer life expectancy is generally positive, existing institutional and social structures are inadequate for addressing the needs of an aging population. Policymakers and planners will need to rethink and adapt current systems to meet these new demographic realities.

1.1 Definition of some indicators of population ageing

To effectively measure and understand population aging, it is essential to define and utilize various demographic indicators. The following list includes some of the most common measures used to assess population aging:

- A. **Ageing Index**. The ageing index is calculated as the number of persons 60+ per hundred persons under age 15.

- B. **Dependency Ratio**. The total dependency ratio is the number of persons under age 15 plus persons aged 65+ per one hundred persons 15 to 64. It is the sum of the youth dependency ratio and the old-age dependency ratio.

    - B.1. The youth dependency ratio is the number of persons 0 to 14 years per one hundred persons 15 to 64 years.

    - B.2. The old-age dependency ratio is the number of persons 65+ per one hundred persons 15 to 64 years.

- C. **The median age** of a population is that age that divides a population into two groups of the same size, such that half the total population is younger than this age, and the other half older.

- D. **The parent support ratio** is the number of persons 85 years old and over per one hundred persons 50 to 64 years.

- E. **The potential support ratio** is the number of persons aged 15 to 64 per every person aged 65 or older.

1.2 References

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2 Demographic Challenges in Japan and South Korea

Japan and South Korea are facing significant demographic challenges, marked by declining birth rates and aging populations. These issues pose serious long-term risks to their economic stability, social structures, and overall quality of life.

2.1 Japan's Demographic Challenges

- Aging Population: Japan has one of the oldest populations globally, with a median age approaching 50 years. Approximately 28% of its population is over 65, a figure that is expected to rise. This aging demographic results from a combination of very low birth rates and high life expectancy.

- Low Fertility Rates: Japan's fertility rate has consistently been below the replacement level of 2.1 children per woman, hovering around 1.3. This low fertility rate has led to a shrinking younger population, which exacerbates the imbalance between working-age individuals and retirees.

- Economic and Social Impacts: The aging population has led to a shrinking workforce, increased healthcare and pension costs, and a decline in consumer spending. With fewer young people to support the elderly, the economic burden on the working population has intensified, affecting Japan's economic growth and social stability.

Other countries facing similar challenges to Japan include Italy and Germany. Both nations have low fertility rates and rapidly aging populations, leading to comparable issues with workforce shortages and rising social welfare costs.

2.2 South Korea's Demographic Challenges

- Rapid Aging and Declining Birth Rates: South Korea is experiencing similarly low fertility rates, with a rate of about 0.8 children per woman, one of the lowest in the world. The country's population is aging rapidly, with the proportion of individuals aged 65 and older expected to increase significantly in the coming decades.

- Societal and Economic Strain: The declining birth rate and aging population are leading to a decrease in the working-age population, which puts pressure on the economy and social systems. South Korea faces challenges such as labor shortages, increased social welfare costs, and potential declines in economic productivity.

- Policy Responses and Future Outlook: Both Japan and South Korea have implemented various policies to address these issues, such as promoting higher birth rates through incentives for families and increasing support for elderly care. However, the effectiveness of these measures remains to be seen. Long-term solutions will require comprehensive strategies to balance population dynamics, sustain economic growth, and ensure social cohesion.

Countries experiencing challenges similar to South Korea include Taiwan and Singapore. These nations also face extremely low fertility rates and rapid aging, resulting in comparable concerns about labor shortages and social support systems.

Japan and South Korea are at the forefront of addressing the challenges posed by aging populations and low fertility rates. Their experiences highlight the urgent need for innovative policies and solutions to manage demographic shifts and their implications for society. As these countries navigate their demographic transitions, they offer valuable insights into the broader challenges faced by other nations with similar population trends.

2.3   References

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