

Forum: Economic and Social Council

Issue: Addressing the causes and consequences of “demographic graying” in More Economically Developed Countries (MEDCs)

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Introduction



Figure 1: A photo of elderly citizens in line for food vouchers in Hong Kong (Yik Fei)

Populations are going gray—the world is witnessing an unprecedented demographic change towards older ages as more economically developed countries (MEDCs) reach advanced stages of development. The share of older persons as a proportion of the global population is increasing worldwide, while the proportion of working-age people and children is declining, presenting both complex challenges and potential opportunities that governments and societies must anticipate and prepare for. At the forefront of this demographic trend are MEDCs in Europe and North America, such as Germany, Italy, Finland, Portugal, and many others, as well as in East Asia, namely Japan, China, and South Korea, but all countries must be adequately prepared to manage demographic graying in the future.

Demographic graying is a natural component of development as fertility rates drop and life expectancies extend with improvements in education, healthcare, equality, and infrastructure. The factors shaping this trend and the socioeconomic changes it brings are these forces as well as changes in cultural norms, cohort effects, migration of the working-age population, and the level and dimensions of support provided for older populations. The consequences of a larger portion of older people will reverberate through nearly all dimensions of countries' economies and societies. Governments face challenges with declines in labor forces and overall populations. A dwindling workforce may strain to support increasing numbers of retirees, slowing economic growth, creating a larger tax burden, and lowering fiscal revenue. Expansion of healthcare and social support systems is often also necessary to support higher consumption at older ages and greater demand for long-term care. Gender disparities and changes in traditional family structures also put the growing older population at risk for poverty, discrimination, and isolation. On the other hand, with appropriate planning, demographic graying may present opportunities for raising productivity and capital per worker, accumulating assets and realizing a second demographic dividend, and easing the demand of the population on the environment.

Many MEDCs currently experiencing demographic graying have taken a number of measures to combat it, such as implementing pronatalist policies, increasing pension ages and decreasing benefits, encouraging older people to continue contributing to economies and societies, and investing in productivity. As all populations across the globe will generally undergo this demographic transition towards longevity, lower birth rates, and greater shares of the older population, all member states should adapt their policies to protect older persons' security and wellbeing and ensure economic sustainability and productivity. With appropriate foresight and decisive, multifaceted action, MEDCs and other member states can manage the challenges of demographic graying while taking full advantage of its opportunities, ensuring that no one is left behind.

Definition of Key Terms

Demographic graying

The demographic trend of increase in the number and proportion of older people in a population.

Demographic dividend

An increase in per capita economic growth due to an increasing share of the working-age population that occurs in the initial stages of population aging.

Pensions

Payments provided to some or all people above a specific age; may be tax-financed from government revenues, mandatory contributory from salaries and employers, or voluntary private contributory from individual savings or employers.

Total fertility rate

Average number of children born per woman over a lifetime.

Crude birth rate

Ratio of annual live births in a population to total population typically expressed in births per 1,000 individuals at the midpoint of the observation period.

Crude death rate

Ratio of annual deaths in a population to total population typically expressed in deaths per 1,000 individuals at the midpoint of the observation period.

Life expectancy at birth

Average number of years a newborn can expect to live given a population's current mortality rate.

Old-age dependency ratio (OADR)

Number of individuals in a population aged 65 and over per 100 individuals 20-64 years old, implicitly assuming that all older persons are net recipients of economic transfers financed the income of younger groups; measures welfare demands based on chronological age.

Prospective old-age dependency ratio (POADR)

Number of individuals in a population above the age for which remaining life expectancy is closest to 15 years per 100 individuals from age 20 to that age.

Economic old-age dependency ratio (EOADR)

Effective number of consumers in a population above 65 years of age divided by effective number of workers at all ages; measures economic dependency at older ages.

Labor force participation rate

Percentage of the working-age population above 16 years of age that is employed or actively looking for employment.

Background**An Overview of the Demographic Transition Model**

Before MEDCs experience population aging, they generally first undergo a series of demographic transitions that occur as countries develop. To understand the basic forces underlying the current trend of aging and often declining populations in MEDCs, it is necessary to first understand the demographic fluctuations that have led to the development of this trend.

Stages of Demographic Transition

The demographic transition model predicts the general transition from high birth and death rates to low birth and death rates as countries move from pre-industrial to industrialized and socioeconomically advanced systems. No country is presently in stage one, which is characterized by high birth and death rates, high fluctuations, low life expectancies, and low total population in rural, agricultural societies plagued by war, disease, and famine. Some lowest income economically developing countries are still in stage two, in which the population experiences rapid growth due to industrialization, education, and healthcare improvements and birth rates remain high. In stage three, which most developing countries are undergoing, birth rates fall due to contraception and expansion of education, death rates remain low due to further improvements in healthcare, and total populations continue to rise. Populations stabilize with low birth and death rates in stage four due to more advanced birth control, family planning, and technological advancements. The majority of MEDCs are in stage four. However, many are now moving into stage five, which is characterized by declining populations, fertility rates below the replacement level, low death rates, and—as many countries must now face—demographic graying.

Implications for Current and Prospective Populations

About half of countries (124 out of 236) have completed or are in a late stage of transition with fertility rates below the replacement level of 2.1 and life expectancies at birth of at least 75 years. Demographic graying is a looming issue that is increasingly visible for 47 of these countries with fertility levels below 1.5. While population aging to some extent is an inevitable consequence of demographic transition, population decline and the consequences of graying are not. The demographic transition model is a simple predictor of global patterns of changes in demography, but it is in no respect a sealed fate and does not account for the actions countries take to shape their development. The future of population growth cannot be determined with certainty because only some countries have reached stage five; the timing and extent of preparation and mitigation have decisive impacts. What is certain is that demographic graying must be addressed for MEDCs currently facing this issue.

Population distribution by age and sex, crude birth and death rates, and total population size at different stages of the demographic transition

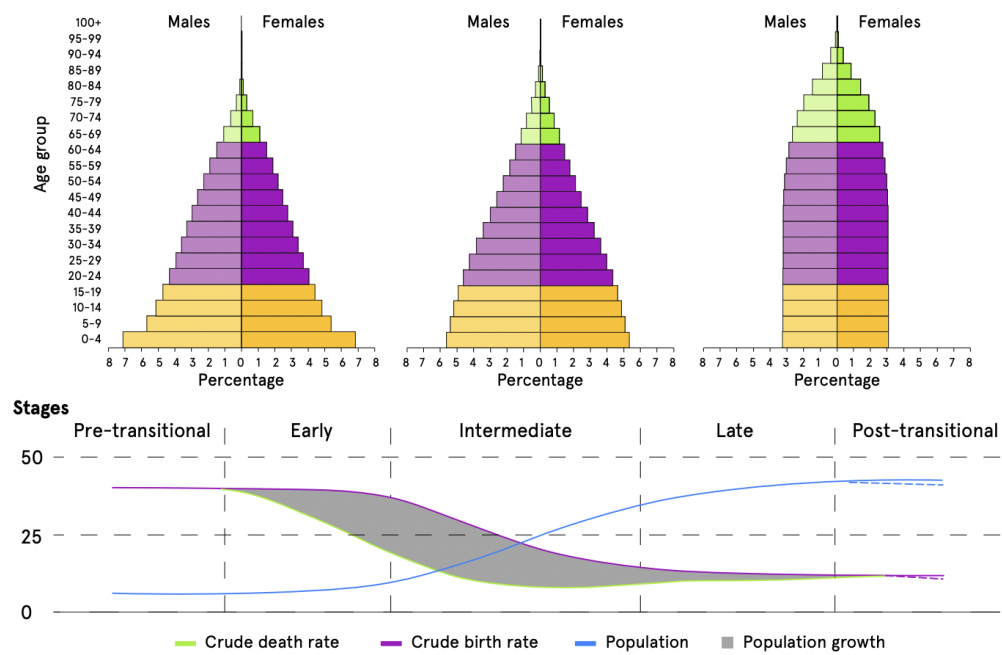


Figure 2: A graph showing the stages of the demographic transition model and population pyramids at each stage (United Nations)

Going Gray: The Current Demographic Trend for MEDCs

Patterns in Global Population Aging

The world is experiencing an unprecedented, sustained upwards shift in the age structure of the global population. In 2022, there were 761 million people aged 65 and older worldwide; this number will rise to 1.6 billion by 2050. The older population is growing globally both in numbers and share in the total population; it is rising faster than all other age groups, and by 2050, one in six persons worldwide will be aged 65 or older compared to one in ten in 2021. In Europe and North America, the 2050 projection is one in four, which will deeply affect the socioeconomic functioning and sustainability of developed societies due to the high proportion of consumers to producers. The old age dependency ratio (OADR), which chronologically measures welfare demands, is expected to rise in all regions from 0.17 globally in 2021 to 0.29 by 2050. The economic old-age dependency ratio (EOADR) will also rise from 0.21 in 2020 to 0.35 in 2050. Though there is an increase in the older population on average worldwide, demographic trends vary considerably across regions and income groups.

Percentage of people aged 65 years or over, world and regions, estimates for 1950–2021 and projections for 2022–2050

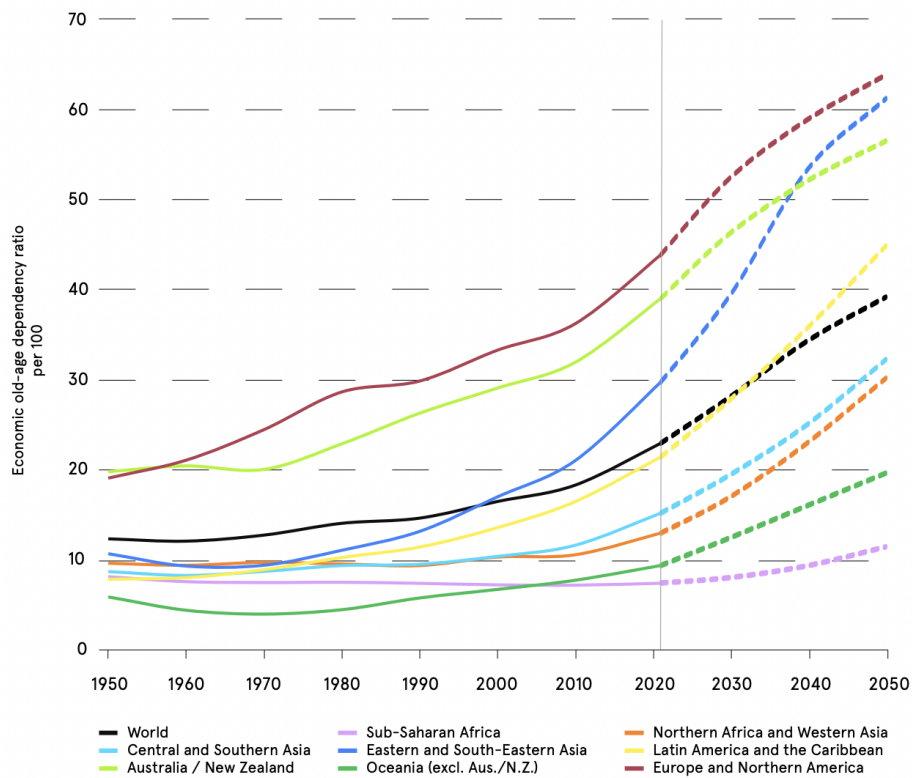


Figure 3: A graph showing the trend over time and projections of the percentage of people aged 65 years or over in different regions (United Nations)

Geographic Distribution of Graying

The prevalence of graying is much higher among MEDCs such as many European, North American, and East Asian countries and much lower among less developed countries such as those in Sub-Saharan Africa, South Asia, and Latin America. The world’s oldest regions are shifting from Europe to Eastern and South-Eastern Asia, with Japan on the forefront of this trend as the country with the world’s oldest population. China and South Korea will likely surpass it before 2050, and many European countries such as Germany and Italy are also close behind. Though the MEDCs currently have much older populations, population aging is now progressing more rapidly in developing countries than it did historically in more developed countries.

Countries and areas with the largest shares of people aged 65 years or over, 1980, 2021 and 2050

RANK	1980		2021		2050	
	COUNTRY OR AREA	PERCENTAGE AGED 65 YEARS OR OVER	COUNTRY OR AREA	PERCENTAGE AGED 65 YEARS OR OVER	COUNTRY OR AREA	PERCENTAGE AGED 65 YEARS OR OVER
1	Sweden	16.3	Japan	29.8	China, Hong Kong, SAR of China	40.6
2	Germany	15.7	Italy	23.7	Republic of Korea	39.4
3	Austria	15.4	Finland	22.9	Japan	37.5
4	United Kingdom	14.9	Portugal	22.6	Italy	37.1
5	Norway	14.8	Greece	22.5	Spain	36.6
6	Belgium	14.4	Bulgaria	22.4	China, Taiwan, Province of China	35.3
7	Denmark	14.4	Puerto Rico	22.4	Greece	34.8
8	France	14.0	Germany	22.2	Portugal	34.5
9	Switzerland	13.8	Martinique	22.1	Singapore	34.2
10	Luxembourg	13.6	Croatia	22.0	Kuwait	33.6

Figure 4: A chart of the current and projected countries with the highest percentage of people aged 65 years or over (United Nations)

The Causes

The primary causes of demographic graying in MEDCs are declining fertility and increasing longevity. Decreases in fertility rates are generally the result of expansion of education and healthcare systems, increased access to quality birth control methods, increased family planning, and greater participation of women in the workforce in more developed societies. Policies such as China’s one-child policy, changes in cultural norms such as later marriages, and inadequate support systems for pregnancy and childcare can also have significant influences in declining fertility rates. Longer life expectancies due to advancements in healthcare, hygiene, and infrastructure also increase the share of older people in MEDCs. Moreover, the larger share of people in MEDCs entering old age compared to earlier generations contributes to demographic graying, creating a cohort effect stemming from past high fertility rates, declines in infant mortality, and/or historical inflows of migrants.

In addition to demographic graying itself, a substantial share of the large older population is often left behind socially and economically due to changes in family structures and migration. Intergenerational co-residence has dramatically declined across cultures, making it more difficult for the elderly to find social support and wellbeing. Sizes of families also decrease as a society urbanizes, creating fewer opportunities for younger generations to care for the increasingly large cohort of older people. This group must also bear the consequences of increased rural-to-urban and international migration of younger generations for economic opportunities, which can lead to isolation of groups of older people in rural areas in states with already dwindling populations. These factors—societal advancements, declining fertility rates, increasing life expectancies, cohort effects, changes in cultural norms, and migration of the working-age population—shape demographic graying and the quality of life of an increasing group of older people.

The Consequences

Challenges to Address

Demographic graying in MEDCs poses several obstacles to protecting economic security, sustaining government support, and preserving the wellbeing of the older population. An increasing older population comes in tandem with a dwindling workforce of younger adults. This may slow economic growth as a limited workforce strains to support increasing numbers of retirees; GDP growth slows approximately one to one with labor force and population declines, and sustaining the elderly population may place a large tax burden on the working-age population. Without sufficient measures to ensure fiscal sustainability, countries in advanced stages of aging are and will be experiencing declines in fiscal revenue. A recent Organization for Economic Cooperation and Development (OECD) simulation found that if policies are not put in place to offset increased age-related expenditures, over the next 40 years, public debt levels in developed economies may increase dramatically and unsustainably.

Furthermore, because the labor force participation rate generally decreases with age, lower supply of labor in regions with shrinking working-age populations leads to higher labor prices. The effects of lower labor force participation in the elderly are especially prevalent in MEDCs where early retirement is relatively common, creating a greater strain on governments and working-age individuals to support pension costs. Larger older populations also lead to increased total healthcare costs and greater demand for limited social and medical services, facilities, and resources, such as hospital beds. This need for long-term care for a larger population results in increased government and private spendings on healthcare. A shrinking population of able-bodied, working-age individuals also results in shrinking military power, meaning countries may need to seek alternative ways to maintain robust forces.

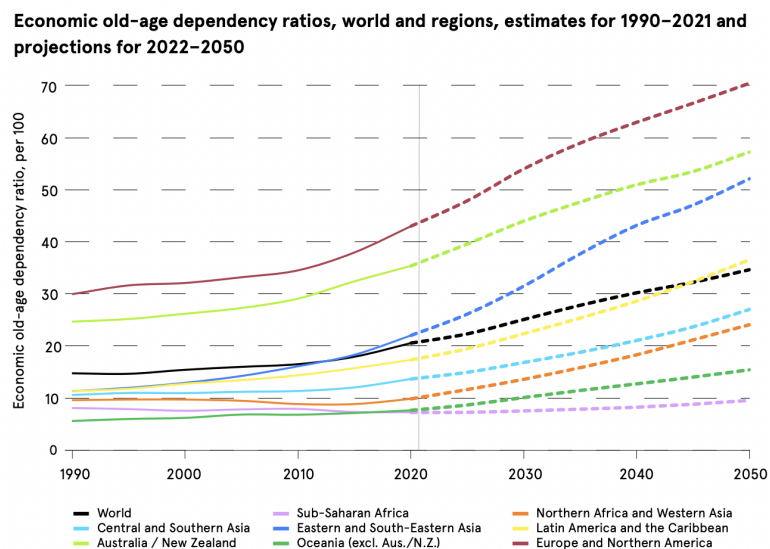


Figure 5: A graph showing the economic old-age dependency ratios in different regions over time (United Nations)

Additionally, demographic graying necessitates increased support for the wellbeing, quality of life, and security of the older population. In many MEDCs, there has been an increase in the number of elderly

persons living alone; most older persons now live in single-person households, with only one other person, or with unmarried children. As couples have fewer children and move farther from home for work, elderly parents are often left behind and lack adequate social and emotional support and life satisfaction. Older people also face higher risks of falling into poverty, especially when life expectancies are extended and the effects of relatively lower incomes and fewer opportunities to participate in the labor market are compounded. Gender disparities put older women at greater risk due to often shorter and more limited working lives, lower wages, and greater likelihoods of being widowed. The growing population of older people is therefore socially and economically more vulnerable, so additional support and expansion of access in these areas is necessary.



Figure 6: Qin Taixiao and Sun Sherong, an elderly couple in a rural village in China who live alone and whose children work in cities (Thomas)

Potential Opportunities

Demographic graying could potentially open doors of opportunity if countries make adequate preparations. Standard growth models show that slower population growth may open job opportunities, boost productivity and wages, and raise the amount of capital per worker. Whether the trend of population decline and/or graying translates into higher income per capita is dependent on the extent to which increased productivity can offset the increase in the number of dependents per worker. As life expectancies continue to extend, this trend also presents the opportunity for older people to be more active participants in the economy and society rather than dependents by default.

Countries may also experience a second demographic dividend if they respond proactively to demographic graying. The first demographic dividend occurs when the working-age population increases, freeing up resources for consumption or investment in development. The second may occur at later stages of development driven by increased capital intensity and increased savings of the working-age population for retirement. The need to accumulate assets before retirement can create increased productivity, higher

national income, and further economic growth. However, this dividend can only be realized when the savings are invested productively in innovation and physical, human, and environmental capital.

Additionally, demographic graying can positively influence the environment; because demographic graying generally implies population decline, it can reduce the collective demand for resources, energy, and food production. As the human population in the last half century has doubled, wildlife populations have fallen by 69% on average, resulting in loss of biodiversity and natural resources. By 2030, ecosystem collapse could cost the world \$2.7 trillion annually. Population decline and aging could therefore result in long-term economic benefits in some respects and lower global emission levels.

Major Parties Involved

Japan

Japan is now the most aged society in the world with 29% of its population aged 65 years or older. With Japan's declining birth rates and high life expectancies, this number is projected to exceed 36% by 2050, and over 1 in 10 persons in Japan are aged 80 years or older. The projected population decline to 126 to 100 million people between 2020 and 2050 could shrink the workforce by 20 percent in the next two decades. Healthcare and social support systems are straining to support the surging demand from the aging population; hospital beds, for example, are becoming increasingly scarce with a projected shortfall of over 470,000 beds by 2030. Unclaimed urns containing ashes of the dead are piling up by the thousands as more members of the elderly population are dying alone and managing death costs is increasingly burdensome with barely growing wages and a dwindling workforce.

The root of this issue is the post-World War II baby boom that aged as the nation developed and the decline in population since the economic boom it experienced in the 1980s. Since then, the fertility rate dropped from 2.1 to 1.3. To cope with the socioeconomic implications of this issue, the government has raised taxes to contribute to pension spendings and encouraged more seniors and mothers to re-enter the workforce. The elderly employment rate in Japan is now among the highest across MEDCs. To increase the workforce's productivity and fill in gaps in jobs, Japan has also accelerated technological innovation and digitalization. The implementation of new agricultural technologies such as vertical farming has also contributed to more efficient use of natural resources in response to the increasing proportion of older farmers. Though Japan has made large steps to combat the socioeconomic impacts of demographic graying, it is still far from solving the issue and must place it at the forefront of policymaking for a secure and sustainable future.

Other East Asian Countries

Other East Asian countries such as China, South Korea, and Singapore are facing challenges similar to Japan's. For China, this is the result of the one-child policy introduced in the 1980s, the expenses of raising children, and changes in cultural attitudes of the youth towards families and marriages. The government has attempted to combat this by reversing the policy, but this has yet to see significant results. In South Korea, the fertility rate is at a record low of 0.79. Aside from the economic factors such as the cost of education and parenting

and high real estate prices, there are complex social pressures such as the disproportionate sacrifices a woman must shoulder in marriage, childbirth, and childcare and the business culture that is far from lenient to working parents. This renders current policies of continually increasing financial support, for which over \$200 billion has already been spent in the last 16 years, much less effective. Singapore is close behind in this trend with a fertility rate of just 1.1.

Europe

Many countries in Eastern Europe are currently experiencing a demographic crisis of aging and declining populations, with Germany and Italy leading this trend. In the next 50 years, the old-age dependency ratio in the region is projected to more than double. Many countries and the European Union have responded through managed legal migration to fill job vacancies due to the shrinking workforce. Countries such as Germany also place an emphasis on empowering older people to remain active in the workforce for longer as lifespans extend and reducing age-related discrimination and inequality to allow them to do so.

Previous Attempts to Resolve the Issue

2021 to 2030 is the United Nations' Decade of Healthy Aging. Since 1983, when the General Assembly convened the First World Assembly on Aging in Vienna, the United Nations has made much progress related to preparing for and addressing demographic graying. At the First World Assembly on Aging, a 62-point Vienna International Plan of Action on Aging was created to promote regional and international cooperation for strengthening capacities for aging populations. In 1991, the General Assembly adopted the United Nations Principles for Older Persons, and in 2002, the Second World Assembly on Aging was held in Madrid. At this assembly, the Madrid International Plan of Action on Aging was adopted, which is the first global agreement that recognizes older people contributors of societies and commits governments to include aging in all development policies and poverty reduction programs. In 2015, the United Nations created the 2030 Agenda for Sustainable Development, through which governments pledged that no one, including the elderly, will be left behind. This vision is further realized in the General Assembly's 2020 proclamation of the UN Decade of Healthy Aging, efforts for which are led by the World Health Organization (WHO) in collaborations with the UN Department of Economic and Social Affairs (UN-DESA), the United Nations Population Fund (UNPF), and other relevant international and regional organizations. The "United Nations World Social Report 2023: Leaving No One Behind in an Aging World" was published this year, which provides a thorough overview of the dimensions of the issue as well as recommendations going forward. These include promoting labor market participation and increased productivity through equal access to education and healthcare from birth, upholding good health, investing in support for childcare and domestic care, and reducing poverty in old age through adequate pensions.

In terms of the actions taken by individual governments to address demographic graying, many governments are raising taxes to support increases in fiscal and social welfare spending. Most MEDCs already allow working beyond the retirement age and restrict early retirement, and some are raising pension and retirement ages or cutting down on early retirement benefits to protect fiscal sustainability. There have been 57 cases of

reforms to reduce pension benefits from 2018-2020; if not balanced with other forms of support, these reforms may pose the risk of disproportionately affecting the economic security of low-income older people. To cope with labor shortages and fill the need for expanded elder care, some countries such as Japan are also increasing investment into technological advancements, especially for use in elder care facilities and hospitals.

Another approach to reducing demographic graying has been attempting to raise the fertility rate through pronatalist policies, which has achieved mixed results. Some high-income countries such as Japan, France, Hungary, South Korea, and Singapore have adopted explicit policies to raise fertility levels. Some offer monetary support such as the maternity capital program in Russia and the speed premium in Sweden; others offer benefits such as Norway's high-quality childcare facilities, Estonia's generous universal parental leave, and national paid maternal leave employed by all low-fertility countries apart from the United States.

Possible Solutions

In considering the approach member states take in solving demographic graying going forward, member states must emphasize a balance between economic sustainability and adequate care and support for the elderly. Resolutions could call upon and collaborate with relevant international organizations that have existing frameworks for preparing for an aging population, such as the WHO, UN-DESA, and UNPF. Every country who faces demographic graying has a different set of causes and consequences of low fertility and high life expectancy to consider in the context of their unique cultures, economies, and societies, so a one-size-fits-all solution should be avoided.

To socioeconomically support and protect the growing elderly population, member states should consider improvements in living arrangements, healthcare, accessibility, and equality. Encouraging co-residence of older people with adult children can reduce mortality risks at older ages and promote economic and psychosocial health and life satisfaction. Member states should also consider the macroeconomic implications of a growing portion of older people in terms of demands for social services, energy, housing, and other resources. To reduce vulnerability to poverty, governments should recognize the continuing contributions that older persons make to their families, communities, and societies and explore ways to ease the burden on older persons supporting other family members as well. Though changes to pension systems may be necessary for fiscal sustainability, member states should ensure that functional government pension systems can still meet the needs of the older population in combination with other types of pension and retirement savings. MEDC member states should also commit to supporting healthy aging to reduce associated healthcare costs and extend the time for older people to remain productive members of society; this could be accomplished through encouraging healthier lifestyles, implementing early disease prevention and detection programs, and promoting increased productivity and efficiency of healthcare systems. To make societies and economies more accessible for older people, member states can focus on creating ease of access for the mobility-constrained, supportive environments, and elimination of age-related discrimination and barriers to formal employment.

To address the root cause of the issue, member states can also provide high quality childcare and maternity benefits to combat low fertility rates with a focus on lifting the disproportionate burden that having children places on women's health, careers, and personal finances. Member states can also consider human capital investment initiatives aiming to sustain per capita economic growth and productivity regardless of declines in the percentage of the working-age population. This could be achieved on increased training programs, support for innovation, and investment in technology and care industries. Additionally, migration can be an outlet for balancing labor markets; member states can organize increased migration from countries with surpluses of young people in need of employment to countries with older populations lacking in their labor forces, though this may pose the risk of draining talent and skilled workers from developing countries.

Overall, MEDCs should seek to maintain a balance between maintaining the poverty and inequality-reducing effects of pensions and elderly support while being fiscally sustainable as their economies and societies must support a growing number of the older population. Member-states should take different approaches to supporting the wellbeing of the increasing older population while ensuring economic security for the population as a whole based on their own needs, support systems, cultures, and demographic trends.

Bibliography

- Agree, Emily M. "Demography of Aging and the Family." *Future Directions for the Demography of Aging: Proceedings of a Workshop*, National Academies of Sciences, Engineering, and Medicine, 2018, *National Library of Medicine*. www.ncbi.nlm.nih.gov/books/NBK513078/.
- Bloom, David E., and Leo M. Zucker. "Aging is the Real Population Bomb." *International Monetary Fund*, June 2023, www.imf.org/en/Publications/fandd/issues/Series/Analytical-Series/aging-is-the-real-population-bomb-bloom-zucker.
- Feldstein, Stephanie. "Population Decline Will Change the World for the Better." *Scientific American*, 4 May 2023, scientificamerican.com/article/population-decline-will-change-the-world-for-the-better/.
- Freeland, Chrystia. "The Problems of a Graying Population." *The New York Times*, 29 July 2011, www.nytimes.com/2011/07/29/world/americas/29iht-letter29.html.
- Hancocks, Paula. "South Korea Spent \$200 Billion, but It Can't Pay People Enough to Have a Baby." *CNN*, Cable News Network, 4 Dec. 2022, edition.cnn.com/2022/12/03/asia/south-korea-worlds-lowest-fertility-rate-intl-hnk-dst/index.html.
- Jackson, Richard, and Neil Howe. *The Graying of the Great Powers: Demography and Geopolitics in the 21st Century*. CSIS, 2008.
- Lee, Ronald, and Andrew Mason. "Cost of Aging." *International Monetary Fund*, Mar. 2017, www.imf.org/external/pubs/ft/fandd/2017/03/lee.htm.
- "Life Expectancy at Birth." *The World Factbook*, Central Intelligence Agency, www.cia.gov/the-world

factbook/field/life-expectancy-at-birth/country-comparison/. Accessed 3 Dec. 2023.

Oros, Andrew L. "The Rising Security Challenge of East Asia's "Dual Graying": Implications for U.S.-Led Security Architecture in the Indo-Pacific." *Asia Policy*, vol. 18, no. 2, 2023, pp. 75-100.

Rivers, Matt, and Lily Lee. "Isolated and Abandoned: The Heartbreaking Reality of Old Age in Rural China." *CNN*, Cable News Network, 8 Feb. 2019, edition.cnn.com/2019/02/07/asia/china-elderly-people-new-year-intl/index.html.

Scarr, Simon, et al. "Going Gray." *Reuters*, 1 May 2019, www.reuters.com/graphics/JAPAN-AGING/010091PB2LH/index.html.

Searing, Linda. "More than 1 in 6 Americans now 65 or older as U.S. continues graying." *The Washington Post*, 14 Feb. 2023, www.washingtonpost.com/wellness/2023/02/14/aging-boomers-more-older-americans/.

United Nations. "Ageing." *United Nations*, www.un.org/en/global-issues/ageing.

United Nations Department of Economic and Social Affairs. *Leaving No One Behind In An Ageing World: World Social Report 2023*. 2023.

Yik Fei, Lam. *Seniors lining up for food aid vouchers in Hong Kong*. 19 Feb. 2023. *The New York Times*, <https://www.nytimes.com/2023/02/19/briefing/asia-aging-population.html>. Accessed 3 Dec. 2023.