NAVIGATING THE "SILVER TSUNAMI": JAPAN'S SYSTEMIC RESPONSE AND IMPLICATIONS FOR ASIA

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As an ageing Japan navigates the "Silver Tsunami", it has pioneered a comprehensive, systemic response that integrates healthcare, pension reform, fertility, workforce initiatives, technology, immigration and age-friendly cities. While these initiatives have yielded significant successes, they have also come with major trade-offs, including rising fiscal costs, widening socioeconomic inequalities for low-income groups, limited fertility-policy impact and a persistent gap between technological innovation and practical implementation. Therefore, the critical implication for other Asian nations is not to simply replicate Japan's model, but to emulate its proactive spirit while strategically designing policies that are fiscally sustainable, economically adaptive and socially equitable from the outset to avoid the "pioneer's burden".

(Click on the link to read the above in Chinese, French, Japanese and Spanish)

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***Chinese*:**
应对“银发海啸”：日本的系统性对策及其对亚洲的启示

在应对“银发海啸”的过程中，日本开创了一套全面且系统性的应对方案，整合了医疗保健、养老金改革、生育政策、劳动力举措、技术应用、移民管理以及老龄友好城市建设。这些举措成果显著，但其负面影响也不容忽视：财政成本上升，低收入群体的社会不公加剧，生育政策效果不彰，以及技术与应用脱节。因此，对其他亚洲国家而言，其关键启示并非简单地复制日本的模式，而是要效仿其积极主动的精神，并从一开始就战略性地设计出在财政上可持续、在经济上具适应性、在社会上更公平的政策，从而避免重蹈先行者的覆辙。

***French*:**
NAVIGUER A TRAVERS LE « TSUNAMI DES SENIORS » : LA RÉPONSE SYSTÉMIQUE DU JAPON ET SES IMPLICATIONS POUR L’ASIE

Le Japon, dont la population vieillissante affronte le « tsunami des seniors », a inauguré une réponse globale et systémique intégrant la santé, la réforme des retraites, la natalité, des initiatives pour la main-d’œuvre, la technologie, l’immigration et des villes adaptées aux personnes âgées. Si ces initiatives ont produit des succès significatifs, elles s’accompagnent également de compromis majeurs, notamment une hausse des coûts budgétaires, un creusement des inégalités socioéconomiques pour les ménages à faibles revenus, un impact limité des politiques de natalité et un décalage persistant entre l’innovation technologique et sa mise en œuvre. Une des leçons clés pour les autres pays asiatiques n’est donc pas de simplement reproduire le modèle japonais, mais d’en adopter l’esprit proactif tout en concevant, de manière stratégique dès le départ, des politiques financièrement soutenables, économiquement adaptables et socialement équitables afin d’éviter le « fardeau du pionnier ».

***Japanese*:**
「シルバー津波」への対応：日本の体系的対応とアジアへの示唆

日本は「シルバー津波」に直面する中で、医療、年金改革、少子化対策、労働力政策、テクノロジー、移民政策、そして高齢者に優しい都市設計を統合した、包括的かつ体系的な対応策を先駆けて打ち出してきた。これらの取り組みは大きな成功を収めましたが、その一方で、重大な代償も払っています。例えば、財政負担の増加、低所得者層の格差拡大、出生率向上政策の限定的な影響、そして技術革新と実用化との間の埋まらないギャップなどです。したがって、他のアジア諸国にとっての重要な示唆は、日本のモデルを単に模倣するのではなく、その積極的な精神に倣い、先駆者の高くついた過ちを避けるために、当初から財政的に持

続可能で、経済的に適応力があり、社会的に公正な政策を戦略的に設計することである。

***Spanish*:**

NAVEGAR LA "TSUNAMI PLATEADA": LA RESPUESTA SISTÉMICA DE JAPÓN Y SUS IMPLICACIONES PARA ASIA

A medida que una Japón envejecida navega la "Tsunami Plateada", ha sido pionera en una respuesta integral y sistémica que integra atención sanitaria, reforma de pensiones, natalidad, iniciativas para la fuerza laboral, tecnología, inmigración y ciudades amigables con las personas mayores. Si bien estas iniciativas han logrado éxitos significativos, también han implicado importantes compensaciones, como el aumento de los costos fiscales, el ensanchamiento de las desigualdades socioeconómicas para los grupos de bajos ingresos, un impacto limitado de las políticas de fomento de la natalidad y una brecha persistente entre la innovación tecnológica y su implementación práctica. Por lo tanto, la implicación clave para otros países asiáticos no es simplemente replicar el modelo japonés, sino emular su espíritu proactivo diseñando estratégicamente, desde el inicio, políticas que sean fiscalmente sostenibles, económicamente adaptables y socialmente equitativas, a fin de evitar la "carga del pionero".

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From Theory to Reality: Japan's Ageing As Asia's Ageing Blueprint

1. **Population ageing's socioeconomic consequences are contested across competing theoretical lenses** (see Appendix 1). The "life-cycle hypothesis" posits that ageing reduces national savings and capital accumulation as retirees dissave, while secular stagnation "savings glut" perspectives argue the opposite: longer lifespans may raise precautionary savings and when investment demand shrinks, it suppresses interest rates and aggregate demand. The demographic dividend/drag framework charts the transition from a growth-boosting workforce to a growth-impeding "drag" caused by a shrinking labour pool and rising social outlays. At the workforce level, "human capital theory" weighs older workers' experiences against skill obsolescence and health declines. The "structural change hypothesis" stresses that ageing's impact is not deterministic, hinging on reallocation to higher-productivity sectors and technology adoption like automation. Finally, "intergenerational transfers" theory examines how ageing reshapes public and private resources towards the elderly, straining state budgets and household finances, and potentially crowding out investments in youth.

2. **Japan, the world's most-aged nation, is the strongest real-world test case.** Its 65+ share rose from 17.4% in 2000 to 30% today, implying that one in every three residents is a senior citizen. With the highest share of residents aged 65 and older globally—a trend projected to intensify—Japan faces significant challenges to its labour supply and economic growth, providing a living laboratory to observe the practical impacts of the theories aforementioned.

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3. **Recent empirical evidence from Japan confirms "demographic drag": an ageing workforce directly depresses labour productivity.** International Monetary Fund (IMF) analysis[1] corroborates prior findings,[2] showing statistically significant negative correlation between an ageing workforce and productivity growth and proof that headwinds are binding, not just theoretical. Japan now sits at a critical juncture, shaped by ageing and technological disruption. Advances in AI can alleviate labour shortages and boost productivity, though they could also risk displacements.

4. **Japan's demographic trajectory is characterised by population shrinkage and super-ageing.** By 2023, the elderly share reached nearly 30%, or one in three residents (Table 1). Looking ahead, projections for 2030–2060 show that total population is falling from 114 million to 80 million, while the elderly share surges from 32% to 43% (Tables 2 and 3), driving a severe dependency ratio. The most extreme manifestation is the centenarian surge to nearly 99,763 by September 2025,[3] creating a "double-care" dilemma as elderly children also require support. This dynamic erodes traditional family care and amplifies fiscal pressures across healthcare, pensions and long-term care.

5. **Japan offers an accelerated preview for Asian nations facing faster demographic transitions.** The United Nations delineates ageing thresholds at 7%+ to 14%+ (aged) to 21%+ (super-aged).[4] Japan crossed these thresholds in 1970, 1994 and 2007. By contrast, latecomers like China and South Korea are ageing at a much more dramatic pace. China, which became an "ageing society" in 2000, is projected to have 400 million elderly citizens by 2035. South Korea, which became an "aged society" in 2018, is on track to become one of the most hyper-aged nations

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[1] Kohei Asao, Haruki Seitani, Ara Stepanyan and TengTeng Xu, 2025. The Impact of Aging and AI on Japan's Labor Market: Challenges and Opportunities, IMF Working Paper.

[2] N Maestas, K J Mullen and D Powell, 2023. The Effect of Population Aging on Economic Growth, the Labor Force and Productivity, *American Economic Journal: Macroeconomics* 15 (2): 306–332.

[3] BBC. 2025. Japan Sets Record of Nearly 100,000 People Aged Over 100. https://www.bbc.com/news/articles/cd07nljlyv0o, accessed November 2025.

[4] World Economic Forum. 2015. What Are the Economic Consequences of Rapidly Ageing Populations? https://www.weforum.org/stories/2015/08/what-are-the-economic-consequences-of-rapidly-ageing-populations/, accessed April 2025.

globally, with its 65+ cohort projected to comprise 46.4% of the population by 2070. This stark divergence in timing and scale underscores the urgency for the region to critically assess Japan's policy innovations and trade-offs, from pensions to intergenerational equity, while adapting them to local contexts.

TABLE 1 JAPAN'S POPULATION AGED 65 AND ABOVE (%, 2002–2023)

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Population aged 65 and above, Japan	18.6	19.1	19.6	20.3	21.0	21.6	22.3	22.8	23.1	23.7	24.5
Year	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Population aged 65 and above, Japan	25.4	26.2	26.9	27.5	28.0	28.3	28.6	28.9	29.2	29.4	29.6

Source: World Development Indicators, World Bank.

TABLE 2 PROJECTION OF JAPAN'S POPULATION (2030–2060)

	Total Population (million)
2030	114.2
2040	103.6
2050	91.9
2060	80.0

Source: National Institute of Population and Social Security Research of Japan.

TABLE 3 PROJECTION OF ELDERLY POPULATION (2030–2060)

	Population Aged 65+ (million)	% of Population Aged 65+
2030	36.8	32%
2040	38.7	37%
2050	37.7	41%
2060	34.6	43%

Source: National Institute of Population and Social Security Research of Japan.

Japan's Multi-Pronged Strategy for Its "Silver Tsunami": Critical Lessons for Asia

Meeting the Demographic Challenge Through Proactive Healthcare and Welfare Reforms

6. **Japan's early, ageing-related policies demonstrate notable institutional foresight, with major legislation preceding United Nations demographic thresholds (Table 4)**. Universal healthcare and elderly welfare were in place in the 1960s, a full decade before reaching the "ageing society" benchmark (7% over-65 population) in 1970; the 1989 Gold Plan expanded long-term care five years before

the 14% "aged society" threshold (14%) in 1994. This anticipatory governance reflects the extended lead times required for system reforms amid intergenerational norms and politically sensitive elder care. Yet early expansive commitments brought hard trade-offs: structural fiscal constraints that compounded over decades—evident in public debt above 200% of GDP and workforce shortages tied to seniority-based employment. Paradoxically, protections for older citizens have entrenched age hierarchies, as seen in mandatory retirement age of above 65 and promotion systems favouring tenure over productivity. Japan's experience underscores the difficulty of balancing demographic preparedness with economic adaptability—a cautionary dimension that enriches, rather than diminishes, its pioneering role.

TABLE 4 JAPAN'S MULTI-PRONGED STRATEGY FOR ADDRESSING THE SILVER TSUNAMI

Focus	Key Initiatives	Impacts
Healthcare and Elderly Welfare	• 1961, universal health insurance • 1963, Elderly Welfare Act • 1973, Free Medical Care for 70+ (co-payments reintroduced 1983) • 1989, Gold Plan and 1994 New Gold Plan • 1995, Basic Law on Ageing	• Early healthcare and welfare reforms ahead of demographic shifts • Established universal health care system
Long-Term Care Insurance System	• 2000, Long-term Care Insurance (municipal-run, 10% co-pay) • Reforms (2005/2015) expanding preventive care and coverage	• Enhanced elder independence • Reduced family caregiving burden
Pensions and Social Security	• 2004, Reform ("Macroeconomic Slide" pension adjustments) • Gradual retirement age rise, private pensions (corporate/iDeCo/NISA) • 2022, Pension Deferral (to age 75)	• Pension sustainability • Encouraged prolonged employment and income diversification
Fertility	• Launched the "Angel Plan" in 1994 and evolved it through numerous subsequent initiatives	• Provided material support to families • Improved childcare facility
Workforce Participation	• Silver HR Centres (part-time/flexible jobs) • Womenomics (childcare, gender equality) • Work Style Reform (telework, flexible hours)	• Higher senior and female workforce participation • Inclusive, flexible employment
Technology Integration	• Society 5.0 (telemedicine, remote care, robotics) • Local ICT, robotics, digital integration pilots • AI and big data in diagnostics	• Efficient healthcare, reduced caregiving load • Improved elder independence
Immigration	• 2019, Immigration Reform (visas targeting elder care) • Local recruitment/training programmes	• Eased labour shortages
Age-friendly city	• 2006, Barrier-Free Act (mandatory accessibility) • Local ramps, tactile paving, elevators, buses	• Improved mobility, independence, inclusive urban living

Note: ICT represents information and communication technology.
Sources: Ministry of Health, Labour and Welfare; Japan Pension Service; Cabinet Office; Immigration Services Agency of Japan; and Ministry of Land, Infrastructure, Transport and Tourism.

7. **For Asia's fast-ageing societies, Japan offers a critical, two-sided lesson: act early and plan long-term, yet avoid fiscal overreach and labour rigidities.** The imperative is to balance demographic preparedness with economic adaptability through fiscally sustainable welfare design, flexible and productivity-oriented labour markets and intergenerational equity, learning from Japan's pioneering role while avoiding its costly trade-offs.

Formalising Care and Reducing Family Burden through Long-Term Care Insurance

8. **The Japanese Long-term Care Insurance (LTCI, 介護保険制度), launched in 2000, formalises elderly care and reduces the caregiving burden on families (Table 4).** Designed for rapid ageing amid smaller families and rising female labour participation,[5] LTCI covers 65+ (primary group) and 40–64 with age-related diseases (secondary group). Funding is roughly half premiums, half public finance shared across national, prefectural and municipal governments,[6] with standardised municipal assessments assigning support-care levels. Services include home care, outpatient rehabilitation, temporary residential care and institutional support.[7] Importantly, LTCI transitions long-term care from welfare to insurance, enhancing the dignity and independence of elderly individuals.

9. **Over the past two decades, LTCI expanded formal access, professionalised providers and introduced market mechanisms that lifted service quality and innovation**. Certified long-term care users increased from 2.18 million in 2000 to over 6.77 million in 2020,[8] demonstrating the system's capacity to meet rising demand. A key gain is community-integrated care, enabling independence beyond institutions. Yet Japan's rising elderly dependency is straining fiscal and workforce

[5] Ministry of Health, Labour and Welfare (MHLW). Outline of the Long-Term Care Insurance System. https://www.mhlw.go.jp/english/topics/elderly/care/2.html, accessed April 2025.

[6] MHLW. Long-Term Care Insurance System of Japan. https://www.mhlw.go.jp/english/policy/care-welfare/care-welfare-elderly/dl/ltcisj_e.pdf, accessed April 2025.

[7] MHLW. Overview of Long-Term Care Insurance Services. https://www.mhlw.go.jp/content/12300000/000614772.pdf, accessed April 2025.

[8] MHLW. Annual Health, Labour and Welfare Report 2020. https://www.mhlw.go.jp/english/wp/wp-hw13/dl/summary.pdf, accessed April 2025.

resources: regional disparities and labour shortages now test system sustainability, highlighting the importance of ongoing, targeted reforms.[9]

10. **Japan's LTCI is a transferable blueprint for Asia:** build balanced, sustainable funding structure, combining public finance with individual premiums, rather than narrow streams that miss large cohorts. Emulate standardised assessments and preventive care to formalise needs and contain future costs through early intervention. However, Japan's experience is also cautionary: market-driven elements to be paired with strong oversight to safeguard quality and equity, a holistic lesson in ambition with implementation.

Ensuring Fiscal Solvency Through Adaptive Pension Reform

11. **Japan's pension reforms combine eligibility adjustments, fiscal safeguards and work-extension incentives (Table 4).** Rising pension/health outlays drive up public debt near 250% of GDP, while a shrinking workforce reduces revenue, crowding out pro-natalist investment. In response, after crossing the super-aged society threshold in 2007 (again, ≥ 21% of the population aged 65+), policymakers moved more decisively to align benefits with longevity and contain costs. The phased retirement-age hikes, completed for the National Pension by 2013 and ongoing for Employees' Pension Insurance through 2025,[10] ease labour shortages and reduce fiscal strain by shortening benefit periods.

12. **The 2004 *macroeconomic slide mechanism*[11] links pension growth based on demographics and wages.** It stabilised reserves—expected to remain solvent until at least 2115[12]—but erodes low-income retirees' purchasing power. Japan also allows pension deferral to age 75, boosting monthly benefit 0.7% (up to 84% for

[9] MHLW. Efforts to Secure Long-Term Care Workforce. https://www.mhlw.go.jp/content/10500000/000591805.pdf, accessed April 2025.

[10] International Monetary Fund, 2012. Pension Reforms in Japan. https://www.imf.org/external/pubs/ft/wp/2012/wp12285.pdf, accessed June 2025.

[11] Nippon Communications Foundation, 2023. Japan and the Lost Generation's Looming Pension Crisis. https://www.nippon.com/en/in-depth/a08702/#top, accessed June 2025.

[12] MHLW. Overview of Japanese Public Pension System. https://www.mhlw.go.jp/english/org/policy/dl/150407-01.pdf, accessed June 2025.

full deferral);[13] uptake is low among lower-income groups who rely on immediate income. Yet, the policy smooths fiscal pressures from the postwar cohort's generation.

13. **Beyond public pensions, Japan diversifies retirement income sources.** Corporate pensions and the individual scheme iDeCo[14] supplement public pensions, with iDeCo also covering nonregular workers. NISA[15] fosters long-term household asset accumulation (not a pension substitute nor a fix for regular-non-regular coverage gaps). Persistent disparities, particularly among Japan's "Lost Generation" with irregular employment and limited retirement security, remain. Consumption tax hike to 10% in 2019 and direct budget transfers bolster pensions and preserve intergenerational equity.[16] However, structural vulnerabilities of nonregular workers remain unaddressed. Japan's approach is pragmatic but incomplete.

14. **Japan's pension reforms are pragmatic but cautionary: balancing long-term fiscal sustainability with social equity.** A multi-pronged approach, which combines eligibility adjustments like raising the retirement age with reforms like the *macroeconomic slide mechanism*, is essential for ensuring solvency, but can disproportionately burden low-income retirees and fail to address the structural vulnerabilities of non-regular workers, as seen with its "Lost Generation". The implication for other Asian nations is to diversify retirement income sources and contain costs, while embedding robust safeguards to protect the most vulnerable, ensuring that pension systems are both sustainable and socially adequate.

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13 Social Security Administration. 2020. International Update, accessed June 2025.

14 National Pension Fund Association. What is iDeCo? https://www.ideco-koushiki.jp/english/, accessed June 2025.

15 T Katauke, M S R Khan, Y Kadoya. 2025. What Determines Investment in the Nippon Individual Savings Account? An Investigation of Japan's Tax-Exempt Investment Account. PLoS ONE 20 (2): e0313433. https://doi.org/10.1371/journal.pone.0313433.

16 East Asia Forum. 2019. Japan Finally Raises Its Consumption Tax. https://eastasiaforum.org/2019/11/21/japan-finally-raises-its-consumption-tax/, accessed June 2025.

Boosting Fertility and Supporting Families Through Pronatalist Policies

15. **In response to a severe and prolonged demographic crisis, Japan rolled out pronatalist policies to lift fertility (Table 4), beginning with the "Angel Plan" in 1994 and evolving through successive initiatives**. Measures target structural barriers: direct child allowances and lump-sum childbirth grants, a massive expansion of public and private childcare facilities to reduce long waiting lists and workplace reforms promoting parental leave for both parents to mitigate career-related penalties associated with child-rearing. These efforts represent a shift in active state engineering a more "child-rearing-friendly" society to counteract economic and social pressures that have suppressed birth rates for decades.

16. **The impact of Japan's fertility policies remains limited, highlighting a policy-income gap**. Achievements include a higher total fertility rate than South Korea, Singapore and Taiwan (see Table 5) and rising paternal leave uptake. However, deeply entrenched constraints dominate: a chronic shortage of affordable childcare, particularly in metropolitan areas, persists despite investment due to high infrastructure costs and staffing difficulties; job insecurity and stagnant wages further deter childbearing. Reflecting these challenges, Japan's fertility rate stood at 1.15 in 2024.

TABLE 5 TOTAL FERTILITY RATE, 2024

	Japan	South Korea	Singapore	Taiwan
Total fertility rate	1.15	0.75	0.97	0.89

Sources: Ministry of Health, Labour and Welfare, Japan. Statistics Korea, KOSTAT. Singapore Department of Statistics. National Development Council, Taiwan.

17. **Japan's decades-long fertility struggle offers two critical lessons for Asia.** Multi-faceted policy responses that go beyond simple financial incentives are essential; Japan's model demonstrates that expanding childcare infrastructure and promoting parental leave are necessary components for creating a supportive environment for families. The Japanese experience, however, also reveals a critical limitation: structural reforms must be paired with deeper socioeconomic and cultural changes. Without counteracting pervasive job insecurity and gender norms that place a heavy burden on women, fertility gains will remain marginal. This provides a crucial lesson for the region: ambitious pronatalism works best when deeply integrated with

broader economic and cultural reforms, giving policies a meaningful chance of success.

Retaining Seniors and Empowering Women to Strengthen the Workforce

18. **Japan became super-aged in 2007 (65+ ≥21%), sharpening the urgency of labour-market reform.** Faced with both a shrinking workforce and increasing social security burdens, Japan adopted a multi-pronged strategy to activate underutilised labour segments: seniors and women.

19. **To mitigate workforce shortages and the projected loss of 11 million workers by 2040, Japan blends national legislation with local initiatives that keep older adults economically active (Table 4).** The *Elderly Employment Stabilization Law* mandates reemployment options up to age 65, with incentives like wage subsidies and deferred pension bonuses extending to 70,[17] advancing a "*lifelong active society"* and pushing 65+ participation to a record 25.2% in 2022. Corporations such as Canon run mid-career reskilling for employees in their 50s, complementing Prime Minister Kishida's broader ¥1 trillion national reskilling initiative aimed at high-value employment.[18]

20. **Silver Human Resource Centres connect retirees to flexible, part-time work across childcare, agriculture and public services, bridging local shortages while reducing social isolation**. In Obihiro city, 251 seniors were placed into jobs within six months,[19] demonstrating how national frameworks and grassroots implementation can reinforce each other.

21. **In parallel, Japan's *Womenomics* tackles female underrepresentation via extended parental leave, requirements of gender-diversity disclosures and**

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[17] Japanese Law Translation. Act on Stabilization of Employment of Elderly Persons. https://www.japaneselawtranslation.go.jp/en/laws/view/4516/en, accessed June 2025.

[18] Canon Global. Hiring and Treatment of Human Resources Initiatives. https://global.canon/en/sustainability/society/employ/initiatives/, accessed June 2025.

[19] S Kabe 2025. 【Challenge 2 】Addressing Anticipated Labor Shortages, Japan. In *High-Income Asia: Lessons in Population and Economy*. SpringerBriefs in Population Studies. Springer, Singapore. https://doi.org/10.1007/978-981-96-6199-2_4.

heavy daycare investment. These measures reversed a historic trend where 70% of women left work after childbirth: female labour participation rose from 63% in 2012 to 74% (2022).[20] The 2018 *Work Style Reform Law* addresses work-life balance,[21] especially for caregivers, by capping overtime and promoting remote work, accelerated during the COVID-19 pandemic.

22. **Japan's reforms show that a shrinking workforce is manageable when unlocking seniors and women.** This includes a comprehensive, multi-pronged strategy that extends employment mandates, invest in childcare and deploy local centres to match retirees to work. For Asia, moving beyond birth rate fixes to a broader vision of a "lifelong active society" incentivises work, scale reskilling and promote flexible work styles to dismantle the structural barriers that sideline experienced seniors and capable women out of the workforce.

Leveraging Technology to Tackle Labour Shortages and Boost Care Efficiency

23. **Japan's ageing policies elevate robotics and digital health as core levers to mitigate labour shortages and enhance care efficiency (Table 4).** The *Ageing Society Policy Outline* (2018)[22] prioritises technological innovation, subsidising eldercare robotics from Paro companion robots to exoskeletons to reduce caregiver strain and workplace injuries. Ministry of Health, Labour and Welfare-funded pilots show robotic lifts cutting physical workloads by 30% and lowering staff injury rates.[23] In parallel, telemedicine and internet of things-enabled remote monitoring systems are being scaled nationally, with emphasis on rural access.

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[20] The World Bank Group. Labor force participation rate, female (% of female population ages 15-64) (modelled ILO estimate) – Japan. https://data.worldbank.org/indicator/SL.TLF.ACTI.FE.ZS?locations=JP, accessed June 2025.

[21] The In-House Lawyer. The New Style of Working in Japan – 'Work Style Reform' and Teleworking. https://www.inhouselawyer.co.uk/legal-briefing/the-new-style-of-working-in-japan-work-style-reform-and-teleworking/, accessed June 2025.

[22] Cabinet Office, Government of Japan. 2018. Annual Report on the Ageing Society: 2018 (Summary). https://www8.cao.go.jp/kourei/english/annualreport/2018/2018pdf_e.html, accessed June 2025.

[23] K Eggleston, Y S Lee and T Iizuka, 2021, Robots and Labor in the Service Sector: Evidence from Nursing Homes (No. w28322), National Bureau of Economic Research.

24. **Yet implementation lags innovation.** Despite subsidies, robot adoption in private facilities lag at 22%, constrained by high maintenance costs and gaps in staff training.[24] Telemedicine pilots face interoperability issues; only 40% of rural clinics are fully integrated with national platforms.[25] The Cabinet Office's 2021 AI strategy[26] notes progress in data integration but persistent municipal-national silos, limiting the policy impact of predictive analytics. Nevertheless, Japan's public-private R&D partnerships, such as Toyota's mobility-as-a-service projects,[27] offer a unique model where demographic urgency catalyses iterative technological refinement rather than disruptive innovation.

25. **For Asia, Japan's technology-driven approach is two-sided:** while innovation is a policy pillar, via robotics and digital health infrastructure to mitigate labour shortages, it recognises that innovation alone is insufficient. Low adoption—constrained by high maintenance costs, inadequate staff training and persistent data interoperability issues—shows that the bottleneck is operational readiness. Therefore, the key lesson for Asia: pair ambitious R&D with a pragmatic, ground-up focus on dismantling the financial and logistical barriers that prevent new technologies from being effectively integrated into real-world care settings.

Attracting Foreign Workers Through Immigration Reform

26. **Japan has implemented comprehensive national and local policies to address population ageing with foreign-worker programmes evolving alongside demographic pressures (Table 4).** Early programmes drew heavily on Chinese workers due to geographic proximity and cultural ties, but since the 2010s recruitment has increasingly shifted to Southeast Asia. Under the second

[24] E Zhang. 2022. Understanding Differential Adoption Rates of Care Robots in Japan and the United States: A Structural Analysis, Doctoral dissertation, Wellesley College.

[25] Y Araki, A Nakamura, M Yamauchi, M Hirata and K Kotani. 2025. The Use of Telemedicine and Drones in Rural Clinics on Remote Japanese Islands. Cureus. 17 (2): e79078. doi: 10.7759/cureus.79078. PMID: 40104455; PMCID: PMC11915187.

[26] EU-Japan.AI, 2022. Recent Updates on Japan's National Strategy on AI. 20 July. https://www.eu-japan.ai/recent-updates-on-japans-national-strategy-on-ai/, accessed June 2025.

[27] Toyota Mobility Foundation. Ensuring a Healthy and Mobile Lifestyle for Seniors. https://toyotamobilityfoundation.org/en/projects/asuke/, accessed June 2025.

administration of Prime Minister Shinzo Abe from 2012, the number of foreign workers rose markedly. National reforms culminated in the 2019 Specified Skilled Worker visa designated to alleviate acute shortages in eldercare and other sectors.[28] Concurrently, Economic Partnership Agreements with countries like the Philippines, Indonesia and Vietnam have channelled care workers through the Technical Intern Training Programmes,[29] which requires Japanese-language proficiency (e.g. JLPT N3/N4) and sector-specific training, creating pathways for foreign workers to fill critical roles in nursing homes and healthcare facilities.[30] This transition underscores Japan's dual strategy of addressing immediate labour gaps while fostering long-term international partnerships to sustain its eldercare capacity. As of October 2024, foreign workers reached a record 2.3 million, a 12.4% year-on-year increase (Table 6). Yet by international standards[31]—relative to Western Europe or the United States—this remains modest. The disparity highlights Japan's enduring caution towards large-scale immigration, even in the face of its low total fertility rate (TFR) and super-aged society, rooted in political caution[32] and a strong preference for social homogeneity. Consequently, policy continues to favour controlled, temporary "side doors" for sector-specific "guest workers" over a comprehensive, long-term immigration framework.

TABLE 6 FOREIGN WORKERS IN JAPAN (million)

Year	2015	2016	2017	2018	2019
Foreign worker number	0.9	1.1	1.3	1.5	1.7
Year	**2020**	**2021**	**2022**	**2023**	**2024**
Foreign worker number	1.7	1.7	1.8	2.0	2.3

Source: Ministry of Health, Labour and Welfare, Japan.

28 Ministry of Foreign Affairs of Japan. What Is the SSW? | Japan Is Looking for Specified Skilled Workers! https://www.mofa.go.jp/mofaj/ca/fna/ssw/us/overview/, accessed June 2025.

29 X Wang, 2021, Japan's Economic Partnership Agreement Healthcare Worker Programs as a Tool for "Soft Diplomacy", Stanford Digital Repository. https://purl.stanford.edu/zk247jb3158, accessed June 2025.

30 Japan International Trainee and Skilled Worker Cooperation Organisation (JITCO). The Requirements Relating to 'Care Worker' Occupations. https://www.jitco.or.jp/en/regulation/care.html, accessed June 2025.

31 Japan needs to boost the number of foreign workers to 6.74 million by 2040 to sustain average annual economic growth of 1.24%. Reuters. 2022. Japan Must Quadruple Foreign Workers by 2040 to Meet Growth Target – Report. 3 February. https://www.reuters.com/world/asia-pacific/japan-must-quadruple-foreign-workers-by-2040-meet-growth-target-report-2022-02-03/, accessed November 2025.

32 "Electoral politics, which often avoids making hard decisions painful to voters, is a key impediment to addressing Japan's ageing crisis", according to Lam Peng Er, 2009. Declining Fertility Rates in Japan: An Ageing Crisis Ahead, *East Asia*. https://doi.org/10.1007/s12140-009-9087-y, accessed November 2025.

27. **Local governments have complemented national policies with region-specific adaptations.** For instance, Hokkaidō's Higashikawa initiative trains Southeast Asian eldercare workers and addresses language barriers through municipal Japanese-language schools and cultural integration programmes.[33] Similarly, rural areas facing severe labour shortages have partnered with Non-Profit Organisations (NPOs) to recruit foreign caregivers, offering scholarships tied to multiyear employment commitments in local facilities.[34] These efforts align with Japan's broader *Asia Health and Wellbeing Initiative,*[35] which promotes cross-border collaboration in ageing industries.

28. **The expansion of foreign labour has coincided with a political realignment.** This is evidenced by the upsurge in support for right-wing parties[36] in the July 2025 Upper House election, leaving the Liberal Democratic Party to lead a precarious minority government with Japan Innovation Party after Komeito's exit. To recapture right-wing support, Prime Minister Takaichi Sanae has adopted a harder line on foreign workers. Her proposals include stricter enforcement of existing laws, a "zero illegal migrants" policy, caps on foreign residency and the regulated admission of skilled workers to address labour shortages. Building on former Prime Minister Ishiba Shigeru's July 2025 "control tower" initiative, Takaichi appointed Onoda Kimi, a known hardliner, as Cabinet minister overseeing foreign-national policy. This shift leaves Japan at a critical crossroads: a harsher approach risks deterring the foreign talent needed to compensate for its low TFR and super-aged society, a self-inflicted constraint that likely further erodes Japan's decline in global nominal GDP rankings.[37]

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[33] Nippon Communications Foundation. 2025. Forward-Thinking Hokkaidō Initiative Meeting Eldercare Needs with Global Talent. https://www.nippon.com/en/japan-topics/b107011/forward-thinking-hokkaido-initiative-meeting-eldercare-needs-with-global-talent.html, accessed June 2025.

[34] International Caregivers Promotion Association. Scholarship Program. https://kaigo-fukushi.org/en/student-shien.html, accessed June 2025.

[35] Asia Health and Wellbeing Initiative. Home - Asia Health and Wellbeing Initiative. https://ahwin.org/, accessed June 2025.

[36] For instance, Sanseito.

[37] Some argue that India might be on track to surpass Japan as the world's fourth-largest economy by nominal GDP (USD) as early as 2026.

29. **Japan's experience with foreign labour offers a crucial, albeit cautionary, roadmap for other ageing Asian nations.** The positive lesson is the necessity of a structured, dual-level system: national frameworks like the Specified Skilled Worker visa create legal pathways, while local initiatives address language and cultural needs. The more critical implication, however, is the inescapable political trade-off between economic necessity and social resistance. Japan's struggle demonstrates that even well-designed policies risk fuelling right-wing backlash, forcing governments into a precarious balancing act. Ultimately, Japan's predicament shows that without a sustainable sociopolitical consensus on immigration, countries impose self-inflicted constraints on their labour force, directly undermining their economic future.

Building Age-Friendly Cities

30. **Japan addresses population ageing through integrated urban policies that combine legislative mandates, spatial redesign and community engagement (Table 4).** The 2006 Barrier-Free Act[38] mandated universal accessibility in public infrastructure, retrofitting subway stations and ensuring new constructions include low-floor transit to reduce senior mobility costs and fall-related healthcare burdens. Complementing this are compact city models like cluster housing, healthcare and retail near transport hubs, which mitigate isolation and optimise care delivery.[39] Financial incentives for home adaptations help delay costly institutionalisation while stimulating ageing-in-place technology markets.[40] Participatory governance, exemplified by Nagoya's elderly advisory boards, ensures infrastructure aligns with evolving needs.[41] Disaster resilience is strengthened through mandatory senior registries and retrofitted evacuation centres, minimising emergency risks and fiscal

[38] Nippon Communications Foundation. 2016. Barrier-Free Design in Japan. https://www.nippon.com/en/features/jg00087/, accessed June 2025.

[39] Institute for Global Environmental Strategies. 2018. Toyama City the Sustainable Development Goals Report - Compact City Planning based on Polycentric Transport Networks. https://www.iges.or.jp/en/pub/toyama-city-sustainable-development-goals-2/en, accessed June 2025.

[40] R Tsuchiya-Ito, S Hamada, B Slaug, A Ninomiya, K Uda and T Ishibashi, 2022, Implementation and Costs of Housing Adaptations Among Older Adults with Different Functional Limitations in Japan. *BMC Geriatrics* 22 (1): 444.

[41] City of Nagoya. SDGs IDEA FORUM. https://sdgs.un.org/partnerships/city-nagoyasdgs-idea-forum, accessed June 2025.

recovery costs.[42] This multilayered approach—anchored in national frameworks and localised solutions—balances welfare priorities with economic sustainability, transforming cities into adaptive ecosystems for ageing societies.

31. **Japan's age-friendly city policies offer a crucial lesson for Asia: effective ageing strategies require an ecosystem, not isolated projects.** This requires combining national legislative mandates with strategic spatial redesigns such as accessibility standards and compact, transit-oriented cities to enhance senior mobility, reduce isolation and generate long-term economic benefits by lowering healthcare and institutionalisation costs. Furthermore, Japan's model underscores that sustainability depends on participatory governance and community-led initiatives. The goal is to empower local communities and transform urban environments into adaptive, economically viable ecosystems, rather than applying piecemeal solutions.

Japan's Ageing Playbook for Asia – Without the High Socioeconomic Costs

32. **Japan's comprehensive, multi-pronged strategy demonstrates the immense value of proactive, systemic governance**. From pioneering healthcare and long-term care insurance systems to ambitious workforce and technology initiatives, these successes carry significant trade-offs: rising fiscal costs, widening socioeconomic inequalities for low-income groups, limited fertility-policy impact and a persistent gap between technological innovation and practical implementation. The lesson for Asian nations is to replicate Japan's foresight, not its policies, by designing systems that are fiscally sustainable, economically adaptive and socially equitable from the outset. This balanced approach is key to building resilient, prosperous ageing society without inheriting the costly burdens of the pioneer.

[42] City of Sendai, The Local Community Helps Residents in Need. https://sendai-resilience.jp/en/efforts/government/human/residents_in_need.html, accessed June 2025.

Appendix 1

The Nexus of Ageing and Socioeconomic Impact: A Theoretical Review

The Life-Cycle Hypothesis

1. **The Life-Cycle Hypothesis posits that ageing populations alter savings and consumption patterns, with long-term implications for economic growth.** Modigliani and Brumberg in 1954[43] argued that individuals save during their working years to smooth consumption in retirement, producing aggregate dissaving as retirees outnumber workers. This dynamic reduces national savings rates and slows capital accumulation and growth.[44] Yet, Summers (2014)[45] and Eggertsson et al. (2019)[46] counter that ageing societies may experience persistently high saving if longer lifespans induce precautionary saving while shrinking labour forces dampen investment demand. This mismatch—excess savings chasing limited productive investment opportunities—can depress interest rates and aggregate demand, a core tenet of secular stagnation. Similarly, the global "saving glut" hypothesis (Bernanke, 2005)[47] links ageing-driven excess savings in advanced economies to capital flows seeking higher returns, often into safe, unproductive assets (e.g. sovereign bonds), reinforcing low-growth equilibria.

The Demographic Dividend/Drag framework

2. **The Demographic Dividend/Drag framework highlights how age-structure transitions initially boost growth before imposing fiscal and productivity costs.** Bloom and Williamson (1998)[48] theorise that a rising working-age share (dividend) drives growth through labour supply and saving, as seen in East Asia's 1970–2000 boom (Bloom et al. 2003).[49] However, ageing transitions—marked by rising retiree shares—trigger a "drag" via shrinking labour pools and higher social spending (Lee

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43 F Modigliani and R Brumberg, 1954. Utility Analysis and the Consumption Function: An Interpretation of Cross-Section Data. *Franco Modigliani* 1 (1): 388–436.

44 D E Bloom, D Canning and J E Finlay, 2010. Population Aging and Economic Growth in Asia. *The Economic Consequences of Demographic Change in East Asia* 19: 61–89.

45 L H Summers, 2016. 2014: US Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound. In *The Best of Business Economics: Highlights from the First Fifty Years*. pp. 421–435. New York: Palgrave Macmillan US.

46 G B Eggertsson, N R Mehrotra and J A Robbins, 2019. A Model Of Secular Stagnation: Theory and Quantitative Evaluation, *American Economic Journal: Macroeconomics*. 11 (1): 1–48.

47 B Bernanke, 2005. The Global Saving Glut and the US Current Account Deficit (No. 77), Board of Governors of the Federal Reserve System (US).

48 D E Bloom and J G Williamson, 1998. Demographic Transitions and Economic Miracles in Emerging Asia. *The World Bank Economic Review* 12 (3): 419–455.

49 D Bloom, D Canning and J Sevilla, 2003. The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change. Rand Corporation.

and Mason 2010).[50] Lee et al. (2014)[51] estimate that ageing could reduce OECD annual growth by 0.3–0.6% post-2030. Critically, the drag's severity hinges on policy responses, such as pension reforms or immigration (Bloom et al. 2010).

Human Capital Theory

3. **Human capital theory underscores the productivity benefits of older workers' accumulated skills but emphasises challenges in sustaining their labour market participation.** Gary Becker's (1964)[52] theory posits that experience enhances productivity, yet ageing workforces face skill obsolescence without continuous training (Skirbekk 2004).[53] Studies show mixed outcomes: older workers exhibit lower turnover and mentorship value (Börsch-Supan 2003),[54] but health declines and mismatched training investments may offset these gains (Acemoglu and Restrepo 2017).[55]

The Structural Change Hypothesis

4. **The Structural Change Hypothesis links ageing's economic impact to shifts in technology and sectoral demand.** Acemoglu and Autor (2011)[56] contend that ageing economies risk growth slowdowns when institutional rigidities prevent reallocation of labour from declining sectors (e.g. manufacturing) to higher-productivity sectors (such as technology). Japan's "lost decade" exemplifies this dynamic: ageing coincided with stagnant innovation and labour-market mismatches (Yashiro 2018).[57] Conversely, nations like Germany mitigated structural risks through automation and lifelong learning programmes (World Bank 2018).[58] Thus the hypothesis holds that ageing's effects depend on institutional adaptability and skill-demand alignment. Eggertsson et al. (2019) argue that automation and AI can revive investment demand by creating new capital-intensive sectors. Similarly,

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50 R Lee and A Mason, 2009. Fertility, Human Capital, and Economic Growth Over the Demographic Transition. *European Journal of Population* 26 (2): 159.

51 R Lee and A Mason, et al, 2014. Is Low Fertility Really a Problem? Population Aging, Dependency, and Consumption, *Science*. 346 (6206): 229–234.

52 G S Becker. 1964. Human capital: A theoretical and empirical analysis with special reference to education, First Edition*: National Bureau of Economic Research*.

53 V Skirbekk, 2004. Age and Individual Productivity: A Literature Survey. *Vienna Yearbook of Population Research*. 133–153.

54 A Börsch-Supan, 2003. Labor Market Effects of Population Aging. *Labour* 17: 5–44.

55 D Acemoglu and P Restrepo. 2017. Secular Stagnation? The Effect of Aging on Economic Growth in the Age of Automation, *American Economic Review*. 107 (5): 174–179.

56 D Acemoglu and D Autor. 2011. Skills, Tasks and Technologies: Implications for Employment and Earnings. In *Handbook of Labor Economics* 4: 1043–1171. Elsevier.

57 N Yashiro, 2018. Dismissal Compensation and Labor Mobility in Japan. Severance Payment and Labor Mobility: A Comparative Study of Taiwan and Japan: 17–38.

58 R Bentaouet Kattan and H A Patrinos. 2018. Automation and Labor Market Outcomes: The Pivotal Role of High-Quality Education, *World Bank Policy Research Working Paper* 8474.

Acemoglu and Restrepo (2017) posit that ageing accelerates automation, substituting capital for labour.

Intergenerational Transfers theory

5. **Intergenerational transfers theory examines how ageing reshapes resource flows between families and states, with equity and efficiency implications.** Lee's (1994)[59] National Transfer Accounts reveal that ageing shifts public and familial transfers towards the elderly, often at the expense of youth investments. In high-income countries, pension systems absorb 10–15% of GDP, crowding out education spending (Börsch-Supan et al. 2003). Conversely, developing economies like India rely on familial support, straining household budgets (Drèze and Khera 2017).[60] Aboderin (2006)[61] warns that urbanisation and shrinking family sizes weaken traditional support systems, exacerbating elder poverty in sub-Saharan Africa. In China, for example, pre-emptive saving for elderly care has driven household saving rates above 30%, outstripping domestic investment capacity (Wei and Zhang 2011).[62]

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[59] R D Lee, 1994. Population Age Structure, Intergenerational Transfer, and Wealth: A New Approach, with Applications to the United States, *Journal of Human Resources*: 1027–1063.

[60] J Drèze and R Khera, 2017. Recent Social Security Initiatives in India. World Development 98: 555–572.

[61] I Aboderin, 2004. Decline in Material Family Support for Older People in Urban Ghana, Africa: Understanding Processes and Causes of Change. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences. 59 (3): S128–S137.

[62] S J Wei and X Zhang, 2011. The Competitive Saving Motive: Evidence from Rising Sex Ratios and Savings Rates in China. Journal of Political Economy. 119 (3): 511–564.