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Ageing and Depopulation in Japan

Understanding the Consequences for East and Southeast Asia in the 21st Century

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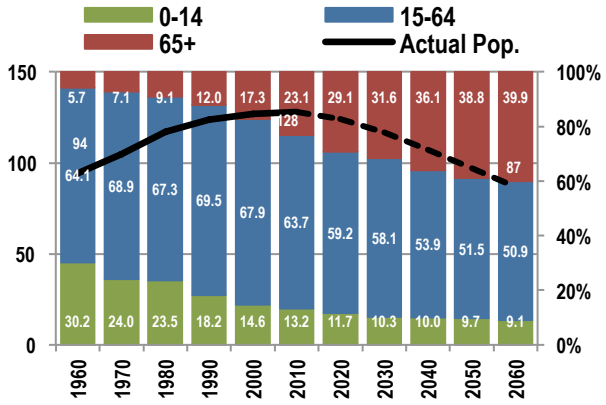
Ageing and Depopulation in Japan: Understanding the Consequences for East and Southeast Asia in the 21st Century

Peter Matanle

Introduction

Japan is one of the most rapidly ageing and depopulating countries in the world. Government projections indicate that Japan may shrink 32 per cent from the high of 128 million in 2008 to approximately 87 million by 2060, due to a sustained fall in rates of human reproduction. Whereas in 1947 each woman expected to give birth in her lifetime to 4.54 children, this had dropped below the population replacement rate of 2.1 children per woman by 1974, and remained at below replacement to stand at 1.39 children in 2010 (Figure 1).

Figure 1. Actual (1960-2010) and Projected (2020+) Population of Japan (left hand scale, millions) and by Age Group (right hand scale, %). (Source: Japanese government websites).



Overall, population reduction is probably good news for Japan, and possibly other countries too, in that it provides opportunities for reconfiguring living conditions and it may help to reduce human pressures on the natural environment. Nevertheless, ageing and depopulation bring with them consequences for affected regions, and policies may need to be developed to deal with these. What is interesting about Japan's situation as a pioneer shrinking society is how the outcomes of these processes and policies might inform us about the prospects for other East and Southeast Asian countries such as China, South Korea, and Thailand in the years and decades to come, as they too experience similar developmental pathways.

In this briefing paper I will outline the ways in which Japan's demography has been changing and make comparisons with China and South Korea. I will then describe some of the impacts in Japan's non-metropolitan regions, focusing on the issue of over-capacity. I will conclude by looking to the future.

Japan's Changing Age-Structure

Japan is in the midst of a dramatic century-long shift in the age structure of the population, from being a young country in 1960 to an old one in 2060 (Figure 1). Demographers have come to call these circumstances either a 'demographic dividend', due to the potential for a young population to deliver rapid economic expansion, or a 'demographic burden', because of the high economic costs of maintaining a hyper-aged society. Japan, moreover, is in a particularly difficult position, given that national debt in 2013 stands at approximately 240 per cent of GDP, with debt servicing swallowing around a quarter of the national budget, and an annual budget deficit of around 6 per cent.

When we compare demographic change in Japan with that of other countries in Asia such as China and South Korea, UN Population Division data, which are more conservative than the Japanese government's, show Japan growing by 82 per cent in the 75 year period up to its population peak in 2010, and project a 26 per cent shrinkage by 2085. The UN forecasts similar paths through for South Korea and China. South Korea is projected to grow and shrink 138 per cent and 26 per cent in the 75 and 70 year period either side of its expected peak in 2030, and China by 154 per cent and 33 per cent in the 75 year periods either side of its peak in around 2025.

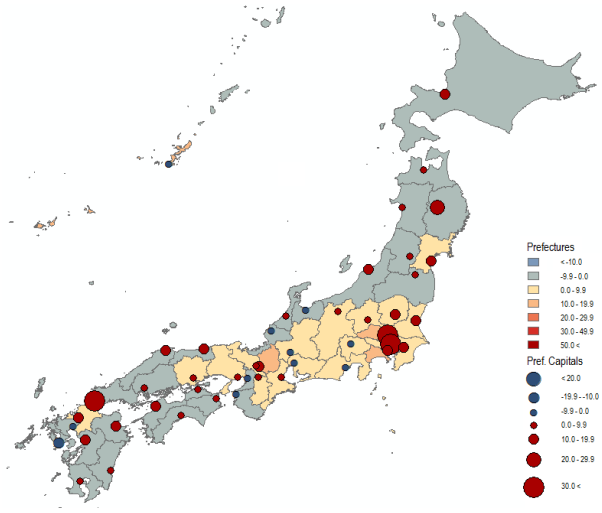
In all three countries projections for the dependency ratio between working and non-working people point to worrying consequences for the long-term stability of each nation's finances, for the continuation of growth-oriented economic regimes, and for maintaining community stability and resilience. In Japan the dependency ratio reached its most economically advantageous position in 1990, just as the economy tilted into the long stag-

nation known as the 'Lost Decade(s)'. Thereafter the proportion of the population dependent on working people has steadily risen and is expected to reach about one worker per dependent in 2055. China will reach its most advantageous ratio in around 2015 and South Korea in 2025.

The Changing Spatial Distribution of Japan's Population

Alongside ageing has occurred a dramatic shift in the population's spatial distribution due to the familiar processes of agricultural transformation, industrialization, and urbanization that accompany modern economic growth (Figures 2 and 3). Whereas 41 per cent of the population lived in urban areas in 1960, by 2010 this had increased to 67 per cent, with an increase in the total population over the same period of 73 per cent. This has placed enormous pressures on urban areas in accommodating ever rising demand for housing, infrastructure, and services. Less noticeable has been the stresses that population loss have placed on rural regions.

Figure 2: Population change in Japan by prefecture and prefectural capital 1990-2010 (Solid areas indicate growth, patterned shrinkage) (Source: National census data).

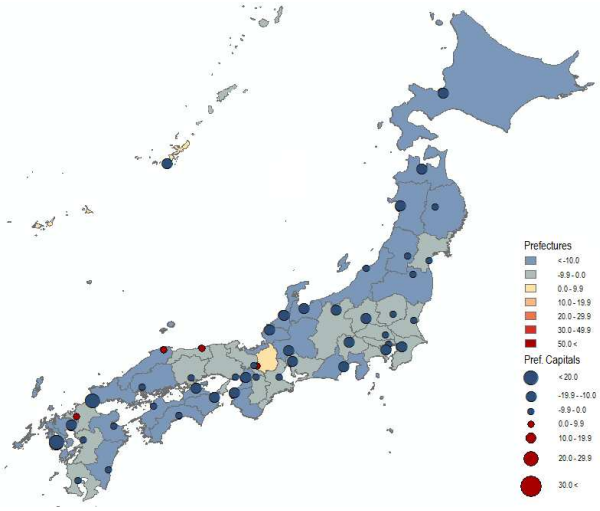


In general, internal migration in Japan can be understood as a movement by predominantly younger adults from rural to urban locations in search of more plentiful, varied, and higher quality education, employment, and social opportunities, and producing urbanization at four levels of geographical scale or distance:

- inter-regional (to metropolitan centres; Tokyo, Osaka and Nagoya),
- inter-prefectural (to regional centres; eg. Fukuoka, Sapporo and Sendai),
- inter-municipal (to prefectural capitals and core cities),
- and intra-municipal (to the municipal urban zone).

Within this spatial redistribution of population can be discerned some generalizable patterns, with similar patterns having been experienced in South Korea and China thus far.

Figure 3: Projected population change in Japan by prefecture and prefectural capital 2010-2030. (Source: National Inst. Of Pop. and Social Security Research).



First, rural locales are now widely recognized as being hyper-aged societies lacking the means to sustainably reproduce their own populations such that communities are declining in vitality and, in increasing numbers, even collapsing and disappearing altogether. Second, while urbanization was taking place against the backdrop of an expanding national population, metropolitan centres and prefectural capitals in particular expanded very rapidly, to some extent at the expense of rural shrinkage, such that there is now excessive over-crowding in some urban districts. However, and third, with depopulation now taking place at the national level nearly all settlements are now shrinking. Consequently, depopulation can no longer be considered an unfortunate rural expression of successful national economic development, as it once was, but also as an urban phenomenon and a condition affecting settlements of all sizes and concentrations. Accordingly, and fourth, depopulation is experienced spatially as a retreat from the peripheries of the archipelago, with the most remote hamlets collapsing first, and

progressively larger settlements being drawn into a recursive spiral of ageing, depopulation and decline, until almost the entire land area of the country experiences the impacts in some form or another.

Impacts of Ageing and Depopulation in Rural Japan

Ageing and depopulation are being felt in all areas of Japan's social, economic, political and cultural life. In this section I will focus on some of the more significant issues that rural communities have faced and which, with some reservations, as processes of ageing and depopulation become more widespread and severe in the near future, may also occur in urban settlements in the rest of Japan, as well as in other East and Southeast Asian countries.

In Japan a large number of rural communities are in decline and some are collapsing. This is what Japanese social scientists mean when they describe '*genkai shuuraku*', or 'communities on the edge'. In these there is virtually no economic activity between residents, few children are being born, an increasing proportion of the built environment is empty, idle and deteriorating, agricultural land is being abandoned, and forests are encroaching on human settlements. Such communities have little attraction for reinvestment or in-migrants and, in the course of time, some will disappear entirely. What are some of the conditions of living in such communities?

Figure 4: An abandoned elementary school in Niigata Prefecture, northwestern Japan. (Photo: Peter Matanle)

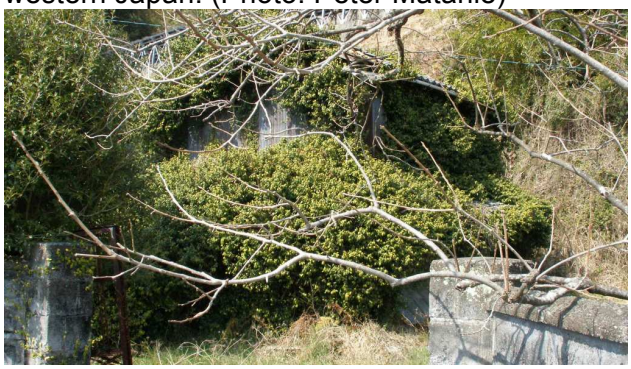
Beginning with employment, which is the foundation for any stable local economy, well-paid secure jobs that do not require physical labour is in short supply in rural Japan. Traditional routes into employment for eldest sons and daughters wishing to remain living in the family holding and care for ageing parents, such as family commercial enterprises, municipal administration and school teaching, are fast disappearing as economic functions in rural communities decline, and where public and private services are in retreat. For example, over-capacity in educational infrastructure due to fewer school age children means that schools are merging or closing down, leading to fewer teaching opportunities; and increasing numbers of empty school buildings dot the landscape, reminding residents of once thriving communities (Figure 4).

Similarly, rationalization of local authorities has led to a wave of municipal mergers. Few job openings are appearing in public administration or essential services as organizations remove duplication and slim workforces through retiree attrition. Moreover, the preference among urban Japanese for holidays overseas means that seasonal tourism related work is thin on the ground in previously popular domestic rural destinations, leading to the closure of hotels, facilities and shops (Figure 5).

Figure 5: An abandoned rural hotel in Niigata Prefecture, Northwestern Japan. (Photo: Peter Matanle)

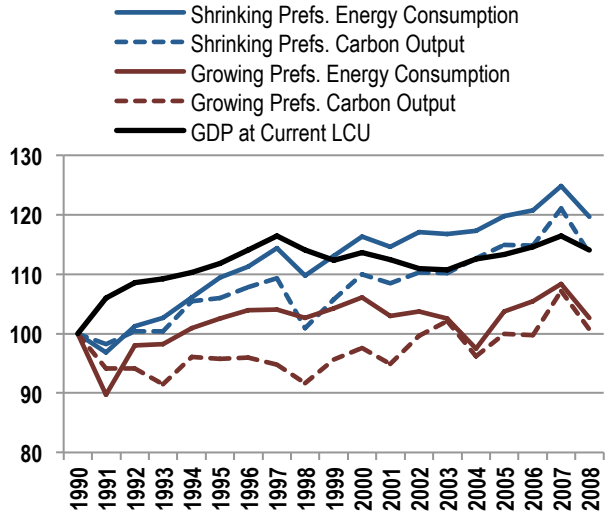
Municipal mergers have encouraged local centralization of administration, which in turn has generated the closure of public facilities in outlying areas. This has produced various consequences. First, services have become more distant from users; yet, reductions in subsidies combined with reduced demand means that public transport is also being cut back. Residents feel forced into cars, which disproportionately affects older people living alone, who require more frequent and easier access to services, but who may not be able to drive. Second, office and facility closures resuch as shops and restaurants – in surrounding neighbourhoods, reducing a community's economic vitality. Third, younger and middle-aged people remaining in rural communities are spending increasing resources and time helping and caring for elderly relatives and neighbours in compensation for reduced formal service provision. Although such kindness is admirable, it reduces the opportunity that able citizens have for economically productive activity.

Figure 6: Abandoned and overgrown farmhouse and farm in Kochi Prefecture, Southwestern Japan. (Photo: Peter Matanle)



Nevertheless, overcapacity is a serious issue in non-metropolitan regions, as communities empty out. Provincial real estate markets are failing as houses remain empty, and occupancy rates in apartment blocks reach alarmingly low levels. Property reinvestment is disappearing and the built environment looking shabby and derelict, further depressing the atmosphere and prices, and causing remaining residents to leave, if they can. Empty houses, or *akiya*, are becoming uninhabitable and unsellable due to colonization by fauna and flora (Figure 6). Ransacking and defacation by monkeys is a familiar blight. Although land prices in central Tokyo are rising again, this belies a collapse in market conditions in many rural areas.

Figure 7: Index of Total Energy Consumption and Carbon Output by Shrinking and Growing Prefectures in Japan, measured against GDP Growth, 1990-2008. Sources: Ministry of Economy, Trade and Industry, and World Bank.



Overcapacity in buildings and infrastructure increases per unit running costs, as buildings still require heating, maintenance and security, for example. Local tax revenues decline and contribute to further service consolidation. Moreover, evidence shows that, despite the expectation that depopulation would reduce resource consumption, for example, per capita energy use in depopulating prefectures is increasing more rapidly than in growing prefectures (Figure 7) due in part to processes outlined above. Deteriorating and underused buildings are inefficiently heated in winter, or residents are forced into cars and drive longer distances. Similarly, local services such as post, community nursing, food and heating oil deliveries, and emergency services travel longer distances per client. Such a phenomenon, if generalized out across China and the rest of Asia, may have important consequences for world energy demand and carbon output forecasts.

Conclusion: The Future for East Asia

While the future is always uncertain, China and South Korea will probably experience many of the outcomes of ageing and depopulation currently being faced by Japan, due to their similar patterns of demographic and economic change. Later in the century other countries in East and Southeast Asia, such as Thailand, Malaysia and Indonesia may follow.

East Asia will remain an economically dynamic world region. However, a deep cleavage is appearing there, between the large, vibrant, energetic and young metropolitan centres, such as Tokyo, Shanghai, Seoul, and Bangkok, and an increasingly old, shrinking, depressed and struggling regional periphery. Metropolitan centres are pulling away from the regional hinterland on which their continuing dynamism ultimately depends. How this tension between urban dynamism and rural decay will play out is uncertain. Nevertheless, the potential for disruption is present and, I argue, increasing. For example, even as urban demand for food expands, rural agricultural production decrease, leading to higher prices.

Not only is the number and size of marginal regional communities increasing, their exposure to risks is also expanding. Whereas in previous decades in Japan only the most peripheral hamlets were under threat, in the 21st century even provincial core cities are losing their vitality. With more than 90 per cent of Japan's municipalities now shrinking it is certain that the impacts of ageing and depopulation will spread to large regional and metropolitan settlements. For example, health and welfare costs are rising and the central government wishes to pass some

costs on to local authorities, with the result that the most vulnerable municipalities will bear a disproportionate economic burden.

Importantly, the March 11, 2001 tsunami in Northeastern Japan has shown how vulnerable ageing marginal communities are to extreme environmental disturbances. Climate change theory predicts extreme weather events of increasing frequency and intensity, and the Northwestern zone of the Pacific Ring of Fire appears to be experiencing an increase in seismic intensity. As East Asia develops, it is possible that extreme disturbances will also destabilize industrial facilities such as power stations and chemical plants, such as occurred at Fukushima in Japan.

It is my belief that a careful study of how economic and demographic change interact in present-day Japan will provide essential knowledge for responding to similar circumstances in the rest of East and Southeast Asia. In particular, how Japan responds to the intersection between the long-run endogenous 'disaster' of rural decline and the sudden exogenous 'disaster' of the 2011 Tohoku tsunami and nuclear crisis will be especially instructive for other regions in Asia as they traverse their paths through industrial and post-industrial development in the coming decades.

Summary

- Japan is in the midst of a dramatic century-long shift in the size, age structure and spatial distribution of its population.
- The impacts of ageing and depopulation are being felt in all areas of social, economic, cultural and political life.
- While community decline was confined to the most peripheral villages, even regional cities are now losing some of their vitality.
- Due to similar patterns of economic development and demographic change, what is currently occurring in Japan will likely occur in future in other countries in East and Southeast Asia.
- Although East and Southeast Asia will remain economically dynamic, a deep cleavage is appearing between still vibrant metropolitan centres and a struggling rural hinterland.
- Issues to watch: regional socio-economic sustainability, rural-urban bifurcation and disruption, health and welfare provision, resource consumption patterns, agricultural self-sufficiency ratios, potential impacts of extreme environmental disturbances.

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